

# **Increasing access for the poor to facility-based birth in Indonesia**

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## Abbreviations

ANC	Antenatal care
BPCR	Birth-preparedness, complication-readiness
BPJS	Badan Penyelenggara Jaminan Sosial
BPS	Badan Pusat Statistik
CBG	Case Based Group
DFAT	(Australian AID)
DHO	District Health Office
EDD	Estimated date of delivery
EMAS	Expanding Maternal and Newborn Survival
EMOC	Emergency obstetric care
GoI	Government of Indonesia
IBI	Ikatan Bidan Indonesia
Jamkesda	Jaminan Kesehatan Daerah (Local Government Health Insurance)
Jamkesmas	Jaminan Kesehatan Masyarakat (Community Health Insurance)
Jampersal	Jaminan Persalinan (Community insurance for antenatal, childbirth, and postnatal care)
JKN	Jaminan Kesehatan Nasional (Universal health coverage)
IDHS	Indonesian Demographic and Health Survey
LKBK	Lembaga Kesehatan Budi Kemuliaan
LB	Live birth
LT	Long term (contraceptives)
MMR	Maternal mortality ratio
MDGs	Millennium Development Goals
MoH	Ministry of Health
NGOs	Non-Governmental Organizations
PKK	Pemberdayaan dan Kesejahteraan Keluarga
Polindes	Pondok Bersalin Desa (Village Maternity Hut)
Posyandu	Pos Pelayanan Terpadu (Integrated Health Post)
Puskesmas	Pusat Kesehatan Masyarakat (Community Health Center)
Risfaskes	Riset Fasilitas Kesehatan
Riskesdas	Riset Kesehatan Dasar
SES	Socioeconomic status
TBA	Traditional birth attendant
TNP2K	Tim Nasional Percepatan Penanggulangan Kemiskinan (National Team for Accelerating Poverty Reduction)
UHC	Universal health coverage
WHO	World Health Organization

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## **Increasing access for the poor to facility-based birth in Indonesia**

### **Executive Summary**

**Introduction:** To achieve MDG 5 – improving maternal health - the Government of Indonesia has implemented policies and programs starting in 1987 following the launch of the global Safe Motherhood Initiative. With such focus, there has been progress: In 1990 there were an estimated 29,000 maternal deaths in Indonesia; twenty years later the estimate was reduced by nearly two thirds to 9,600 (WHO 2012). The maternal mortality ratio (MMR) has also declined—reaching 190 in 2013 from over 600 in 1990, according to WHO estimates. Yet to reach the MDG target of 2015 (102) or the future global target of <70 by 2030, Indonesia will have to increase its annual rate of reduction of the MMR.

Inequities play a role in maternal deaths: Those women who live in rural areas or are less educated are more likely to die than their educated, urban counterparts, according to DHS surveys. Poverty also plays a role in the maternal deaths, according to one study, as does home delivery: 29% of maternal deaths are in the home.

**Purpose:** The purpose of the assessment is two-fold: to understand why poor and vulnerable women do not access facilities for birth, and hence are likely to contribute a greater proportion of the maternal deaths; and to make recommendations on how USAID can be a catalyst to change this dynamic.

**Methods:** To underpin the assessment of the equity dimension in use of facility births, we used the three delays framework, a classic pathways-based conceptualization of access to Emergency Obstetric Care (EmOC). Data collection and analysis focused on the first two delays: (1) the recognition of the problem and decision to seek care; and (2) the journey to care, once a decision to seek care has been made.

Three streams of work were followed to assess the equity dimension of facility births:

- Data assessment and literature reviews, including in-depth analyses by provider type, facility type, delivery method, and socioeconomic quintile of the IDHS 2007 and 2012; and of the literature using search terms, including maternal mortality and poverty and Indonesia;
- Site visits to high maternal mortality areas of the USAID funded Expanding Maternal and Newborn Survival (EMAS) for interviews with postpartum and pregnant women as well as local stakeholders, providers, and insurance staff in Bandung, West Java, Serang, Banten and Deliserdang, North Medan.
- Interviews in Jakarta with MoH officials, professional associations, NGOs, researchers, EMAS leadership and sub-contractors, funders (e.g., Australian Aid [DFAT]), and multi-laterals.

### **Results:**

**Maternal mortality:** Data on the socioeconomic status of women who die are few. Most socioeconomic data of families/women are available in the Demographic and Health Surveys,

but the numbers of maternal deaths captured in the IDHS are too small to disaggregate by quintile with any confidence.

**Coverage data:** Since 1990, births in Indonesia have steadily shifted from home with no skilled birth attendant (64%), to facilities with professionally trained providers (64%) in 2012, a tripling of facility births over this period.

Amongst the poorest, however nearly three/fifths of the poorest still delivered in a low resource setting as of 2012-- their own or “other’s” home (IDHS 2012). Nearly 50% of the poorest delivering at home were with a skilled birth attendant—the village midwife or midwife. In total, 64% of the poorest were with a skilled birth attendant as of 2012.

Those in the second quintile now mimic their richer counterparts: They had a high level of births in the home in 2003 (>50%), but by 2012, the majority had moved to use of middle (e.g., health centers) (49%) and high resource sites (e.g., hospitals) (20%) for birth. 88% of the “poorer” (quintile 2) used skilled care by 2012.

All higher quintiles had the majority of births in middle resource settings by 2012, with an increasing percentage in the highest level over the decade--the richest having 43% in the highest level and 49% in the middle level; most were in the private sector. A third of the richest used high-level care (e.g., obstetricians), with less than 10% using low care (e.g., TBA or family/friend) by 2012.

Given the high expense of cesarean section, use of this delivery mode continues to be divided by quintile. Nearly a quarter of women in the highest wealth quintile delivered by C-section, in contrast to the low levels of use amongst the poorest: 3.7% in the five years prior to the 2012 survey. Risk of having a C-section actually doubled for those using the public sector over the private sector—although more women generally delivered in the private sector.

There are disparities between the poorest and those in other economic quintiles for use of other maternity services as well—antenatal and postpartum care: 87% of the poorest have any antenatal care but report not receiving as many services as their rich counterparts; and postpartum care use by the poorest is low—nearly 30% receive no such care whereas only 3% of the richest have no such care.

Indonesia’s total fertility rate has declined only modestly over the past two decades and plateaued at 2.6 since the 2002-3 IDHS (IDHS 2012). Women in the lowest quintile have a higher fertility rate (3.2) than their richest counterparts (2.2), shorter birth intervals (5.9% vs. 3.3% for the 7-17 month interval), and much higher early pregnancy (13.2% have had a child by the age of 19 vs. 1.9%). However use of modern methods by the poorest and richest are very similar at 53% and 55% respectively (IDHS 2012).

**Barriers to access of facility birth:** The following barriers to access according to type of delay were found in the literature and in interviews with women; these are general barriers—not necessarily only for the poorest:

*Delay 1: Recognition and decision making to access services:*

Normalcy if have been to antenatal care and no problems identified, late recognition of complication; preference for home delivery, lack of privacy, food, water, family support in facilities, perceived and actual poor quality and disrespectful antenatal and delivery care; lack of knowledge of insurance, especially re free care for the poor; lack of information about delivery among unmarried youth; stigma if unmarried; shame of poorest.

*Delay 2: The journey to care*

Lengthy discussion re complication, facility, time of day, money, other children's care, who to make decision; time to find transport, arrange finances and paperwork (insurance card, card from desa leader), pack, organize the household/care for children, before leaving home; no knowledge of insurance, what is covered or how to use it, stigmatizing to use it; delay in contacting midwife or midwife.

*Constraints within the health system:* There are also constraints regarding referral from community level, as learned from interviews with providers, district and national MOH staff, and insurance staff:

Lack of list of pregnant women, estimated data of delivery (EDD) and address; lack of communication re transport, inadequate numbers of village midwives in rural areas, poor readiness of facilities at all levels, lack of communications between village care and back up (puskesmas/hospital), no referral information in clinic registers unless written on side.

*Constraints with the new health care insurance (JKN):*

Young women do not get cards; babies need a card if remain in a facility longer than 7 days post delivery; the specific referral pathway of insurance scheme may increase time to an appropriate facility; private bidans must form an association with a doctor in order to make claims for insurance coverage; confusion at provider level of the basic family planning care covered; incentive payment only for bidans who deliver a woman, not for referral; lack of clarity of the JKN role vs. Jamkesda in covering the poor; timeline in release of funds for payment for claims; no specific incentive to find the poorest women who are harder to convince to use the maternity services.

**Recommendations:**

Given that information specific to the poorest is not readily available outside of the IDHS, the assessment provides our findings generally with respect to barriers to use of services, and where data permit, it specifically focuses on the poorest. Recommendations follow this format: where possible we specify for the poorest, but most recommendations are for all women regarding facility delivery.

1. ***Financial accessibility for the poor***—advocacy for addressing this barrier

Advocacy at national level is much needed to ensure the new insurance, JKN, promotes timely responsive maternal care to all women. Specific JKN constraints are listed above. While IBI already knows about and is actively engaged in raising concerns about the referral mapping and need to form associations of private bidans under doctors, they could advocate for changes in the referral networks based on the clause that allows emergencies to bypass lower levels and proceed to any hospital (including private hospitals).

To promote such an effort, IBI (or other) needs **urgently** to determine the maternal care package (addressing the newborn at the same time) and who could best provide such care, and advocate for such with BPJS. It is not clear that IBI has organized yet to this level but their interest is obviously there. Ensuring family planning for all women, the young and the old, married and unmarried, and those post-delivery and post-abortion—needs also to be clearly incorporated without abusing the choices of women.

***2. Socialization at community level with information regarding JKN, planned childbirth, EDDs, free delivery, danger signs, papers needed, and where to deliver, including information on referral sites and transportation, to promote timely use of facilities for birth***

Both women and providers need more information about JKN –how to use it to access services, what services are covered, and how to navigate the referral system; this perhaps affects the poorest most specifically but the informational vacuum of JKN is fairly general. The Bidan di Desa are an obvious vehicle to provide information on JKN, danger signs, and local transportation, and develop planned childbirth including birthing plans with each woman during antenatal care. Yet the BDD themselves need more information on JKN as do their backup support at health center and hospital levels to provide the care needed, to expedite referrals and provide the needed information and guidance to women.

Studies on two specific barriers to access may improve socialization of JKN and timely use of services for birth:

- (deleted) illness recognition to understand how to communicate with women and their families about obstetric problems to improve their recognition of such when it is happening.
- Determine the timing of the delays to accessing facilities for delivery and their causes.

***3. Reaching the unreached***

Unfortunately we found little data outside the IDHS that provided information on the poorest, and specifically no current qualitative studies on the poorest and their access issues. How to draw them into care is likely to take a special initiative to find them—and work with them. Finding means of connecting with these women should build on qualitative information to determine their specific concerns and vehicles for accessing them (e.g., local leaders, local women’s groups).

USAID could provide vehicles to initiate such efforts:

- Advocacy efforts (deleted) could become a basis for such outreach to the poorest in rural areas
- Building on USAID TB and HIV efforts may also be useful as such women are known to have a higher risk of maternal mortality.

***4. Documentation and TA to districts to strengthen decentralized leadership and programming***

Before moving to programs that attempt to rectify a piece of a complex dynamic maternal health program at district level, it would be useful to document what is happening at that level—especially in those districts with low use of facilities for delivery (by the poorest) and high levels of maternal mortality. Such documentation could begin with:

- a. Registering pregnancies and following them to know where and with whom women deliver and why, referrals made, costs, knowledge and use of insurance, and outcomes.
- b. Measuring maternal mortality and newborn outcomes, and using confidential inquiries to know why and what happened, and/or follow up near miss cases of women or referral cases.
- c. Following budget/funding flows and determining whether the new insurance JKN continues to disincentivize midwives from serving the poor, or referring women upwards. Following the policy and budgeting of funds available and used for MH outside of JKN would also be useful—as well as documenting how programs are regulated and managed-- inputs and personnel, coordination between primary health care and hospitals, and the relation of such programming with outputs and outcomes. This could build on the important Jamkesda study on universal health coverage already underway.
- d. Diagnosing readiness of facilities to respond (HR, supplies/equipment) and their turnover and 24/7 availability would begin to determine program implementation issues.
- e. Provincial level involvement in guiding and supporting the MH programs at district level is unclear, but it is a potential point for coordination and scale up. Finding and documenting provincial –district interaction to assess potential and key points for program expansion would be helpful.

Moving from this knowledge base to productive technical assistance at district level would be useful to build new knowledge of how to work in this very decentralized and compartmentalized world of Indonesia.

### ***5. Improve village level care***

Given that the skill level of Bidan di Desa is likely low given the lack of births conducted during training and low numbers births in a village, and that the village level posting isolates her from improvement, it is time to advocate for changing the role of the BDD to one of recording, providing antenatal care to all, ensuring each woman has a childbirth plan (including knowledge and papers for JKN as needed), a support person and a facility delivery, appropriate and timely referral, and ensuring immediate postpartum maternal and newborn care/family planning care and follow up to all post-delivery.

The government is already discussing a new focus for midwifery—“4 hands at delivery” may become a new indicator. While this does not go so far as to say women should deliver in a functioning facility, it makes a step towards involvement of more than one midwife being present at delivery. Professional associations, such as IBI, may be the most appropriate for such advocacy.

### ***6. Strengthen facility-based supports for referrals***

The referral response is only as strong as the facilities the BDD refer to. Given that EMAS

already focuses 50% of its effort on referral (but only between facilities), it may be useful to augment their facility referral efforts to reach into the villages with necessary skills for the BDD to recognize women with a possible problem and women with obstetric complications—and the means to move that woman to a place that can respond.

### ***7. Capturing the equity dimension in data***

Given that segments of the population are still unreached -- those who are very poor and others-- having indicators of inequity is crucial. Gwatkin and Ergo (2010) stated that it is unreasonable to expect universal coverage to lead to health equity. Without commitment to identifying and including poor people from the beginning, universal coverage initiatives are very likely to leave the poor behind.

Other data needs include indicators to routinely monitor the quality of the referral process, pregnancy registration, and outcomes on a real-time basis. Potential groups to work with include TN2PK re equity, UI-CFW re maternal death estimation, and district statistic offices.

### ***8. Secondary data analyses***

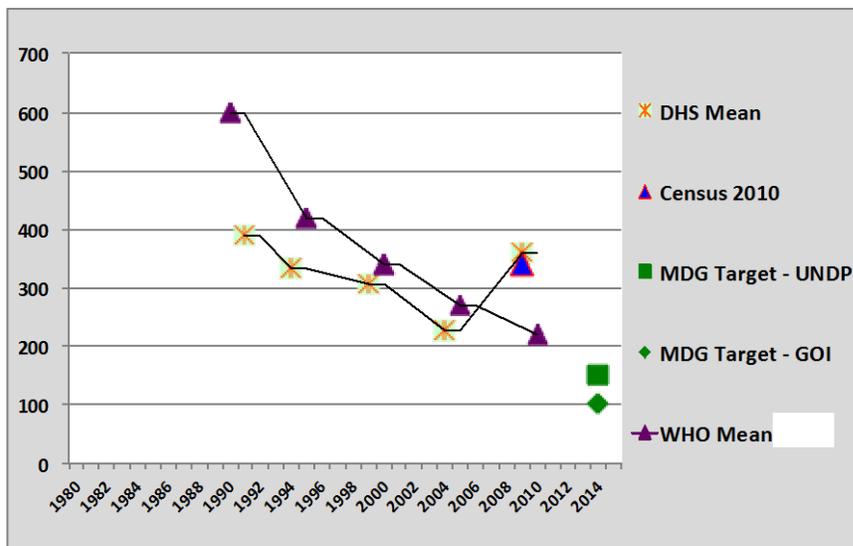
Existing data could be analyzed to better understand the maternal health situation for the poorest, including data from the Population Census 2010 and IDHS 2012. Data from the latest Riskesdas could be analyzed further to see, for example, use of insurance by type of cases, by outcomes (especially infant death, stillbirth, neonates/ENM), and by place of delivery (whether it is public or private and by urban/rural) (it is not clear if Riskesdas has quintile data).

## Increasing access for the poor to facility-based birth in Indonesia

### 1. Introduction

With 2015 fast approaching, there is continued concern about achievement of the UN Millennium Development Goals (MDGs), particularly MDG 5 aimed at improving maternal health, which has made the least progress globally. In Indonesia, the Government has provided significant policy and program inputs to achieve MDG 5, starting in 1987 following the launch of the global Safe Motherhood Initiative. There has been progress: In 1990 there were an estimated 29,000 maternal deaths in Indonesia; twenty years later the estimate was reduced by nearly two thirds to 9,600 (WHO 2012). This reduction in deaths is due in large part to the fertility decline in Indonesia. The maternal mortality ratio (MMR) that reflects deaths during pregnancy through the postpartum period has shown a slow decline based on estimates (WHO 2012; Hogan et al 2010), surveys (IDHS 1994, 1997, 2002-3, 2007, 2012) and the 2010 census data. As of 2013, the MMR is estimated at 190 per 100,000 live births although the precise level is hard to determine (WHO 2014; see Figure 1, Adapted from Terry Hull 2014).

#### Maternal Mortality Ratio Estimates - Indonesia



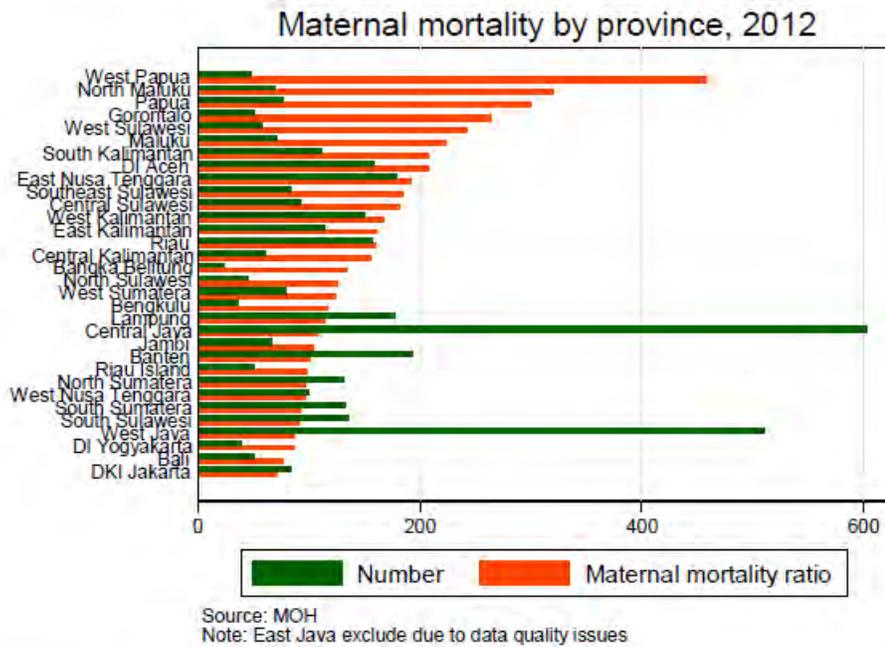
Data source:  
Country data: Indonesia DHS 1991, 1997, 2003, 2007, and 2012  
WHO estimation: Proposed estimates from TAG

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**Figure 1 Comparing MMR Estimates, Indonesia 1980-2010**

There are significant regional and geographical variations of the MMR and maternal deaths across Indonesia (Fig 2). The numbers of deaths are significantly higher in the most populous provinces (e.g., East, West Central Java and Banten) whereas the eastern islands (e.g., West Papua, Papua, and Gorontalo) and others (West Sulawesi, North Maluku) suffer with a high MMR.

**Figure 2. Maternal mortality by province 2012 (Source: NIHRD et al, 2014)**



**Figure 2: Number of maternal deaths and maternal mortality ratio by province in Indonesia**

That poverty plays a key role in maternal mortality globally and in Indonesia, specifically, was reported initially in 2004 (Graham 2004). In two districts in Banten, a more detailed study confirmed the contribution of inequity to the Indonesian MMR. Among the 33% of women who gave birth with assistance from a health professional, there was an overall MMR of 435 per 100,000 live births (LB) in 2004-6. Maternal mortality was extremely high among those in the lowest wealth quartile (2303 per 100 000 LB) and remained high in the lower middle and upper middle quartiles (1218 and 778, respectively). Even amongst the richest, the MMR remained high at 257. Deaths among women who were not assisted by a health provider were lower for all quartiles except the richest, leading the authors to surmise, “Women, especially among the poor, may have sought help only once a serious complication had arisen” (Ronsmans 2009). That the rich also had a relatively high MMR points to quality of care issues even when women access care quickly.

The two major causes of maternal death, based on verbal autopsies of maternal deaths identified in the 2010 population census, are hypertensive disorders of pregnancy (32%) and postpartum hemorrhage (20%), with 23% from indirect causes (NAS and AIPI 2013). While questions of data completeness must be kept in mind when using the 2010 census data, characteristics of women who died include: 65% in the most fertile years-- women aged 20-35 years; 96 % married; 28 % of women had 3-4 children, and 61 % with a primary school or less education. Nearly two-thirds were women residing in rural areas. 29% of all maternal deaths were in a home, with such deaths twice as prevalent among those in rural areas (36 percent) as those in urban areas (18 percent) (NAS and AIPI 2013). No data were provided for the quintile levels of the women who died.

Based on the National Academy of Sciences report (NAS and AIPI 2013) and the Banten in-depth study of equity and maternal mortality (Ronsman 2009), available data point to home delivery, especially in rural areas, and to inequity as contributors to the relatively high MMR in Indonesia. The assessment builds on this assumption that increasing access to health facilities by the poor and vulnerable for deliveries will help decrease maternal and newborn mortality.

## 2. Purpose

The purpose of the assessment is two-fold: to understand why poor and vulnerable women do not access facilities for birth, or do so only once there is complication, and hence are likely to contribute a greater proportion of the maternal deaths; and to make recommendations on how USAID can be a catalyst to change this dynamic (*Annex I—SOW*). Of particular interest are:

- a) **Referral** from the community or “the two delays”;
- b) The impact of **social health insurance** on access by the poorest of the poor – both historical and prospective; and
- c) **Cultural, bureaucratic, or other factors** which contribute to why so many women deliver at home and die at home from maternal causes.

## 3. Methods

### a. Overarching framework: The first 2 delays

The three delays framework of Thaddeus and Maine (1994) is a classic pathways-based conceptualization of access to Emergency Obstetric Care (EmOC), specifically focused on the perspective of the service user. It is concerned with timely treatment of obstetric complications to prevent deaths, and posits that delays may occur in one or more of three ‘phases’: a) the recognition of the problem and decision to seek care (phase 1); b) the journey to care, once a decision to seek care has been made (phase 2); and/or c) in receiving good quality care when a facility has been reached (phase 3).

The assessment focuses on phase one and phase two delays. Phase one delays are typically related to recognition problems, distance, cost and (perceived) quality of services, women’s autonomy, economic status, education, illness and cultural factors. Phase two delays refer to obstacles in reaching health facilities. This includes the distribution of facilities, travel distances and transport—and the lack of coordination with referral systems.

### b. Approach

Three streams of work guided the assessment:

- i. Data assessment and literature reviews
- ii. Site visits to high maternal mortality areas of the USAID funded Expanding Maternal and Newborn Survival (EMAS) for interviews with local stakeholders, providers and postpartum and pregnant women
- iii. Interviews in Jakarta with MoH officials, professional associations, NGOs, researchers, and funders (e.g., Australian Aid [DFAT]), multi-laterals.

### **i. Data assessment and literature reviews**

Indonesian Demographic and Health Surveys from 2007 and 2012 were analyzed by quintile for types of birth attendant, places of delivery, and type of delivery (e.g., normal, Cesarean section). More specific analyses were done on the 2012 IDHS, for all births during the 5 years prior to the survey, for numbers of births by type of birth attendant and place of delivery (home, public/private; type of facility), by quintile. Tom Pullum, DHS, performed all analyses.

For both IDHS surveys, birth attendants were grouped by skill level as conveyed by training: high skill (obstetrician), medium skill or those trained in performing deliveries (doctor, midwife, village midwife), and low skill (those not trained for performing deliveries such as nurses, traditional birth attendants, relative/friend, other, no one, don't know). While there is debate about the skill level of village midwives, we have maintained them in the medium skill category based on their training for performing deliveries.

Place of delivery was categorized by level of expected resources: High (public or government hospital/clinic, private hospital, private maternity hospital, private clinic, obstetrician); medium (public or government health center, public delivery post, other public sector, private maternity home, general practitioner, private midwife, private village midwife, other private sector) (2007 IDHS also included private clinic, other private medical, delivery post, other), and low (respondent's home, other home, public or government village health post, private nurse) (2007 IDHS included health post).

Using PubMed, the literature was reviewed using keywords, "Indonesia and poverty and maternal mortality; Indonesia and poverty and birth; Indonesia and poverty and birth attendant." These same key words were used minus Indonesia.

Researchers within and outside of Indonesia who have conducted such research in Indonesia were canvassed for information (persons and websites), including those at the University of Indonesia, the London School of Hygiene and Tropical Medicine, University of Aberdeen, University of Sydney, the World Bank, and DFAT.

### **ii. Site visits**

#### ***Selection of sites***

In accordance with USAID's focus on areas in Indonesia with high population numbers and thus, high numbers of maternal deaths, field visits were conducted in EMAS program areas. Three districts of EMAS were selected to represent districts with high home deliveries (e.g. Serang), with high facility deliveries (e.g. Bandung) and a district in-between (e.g. Deli Serdang) (See Table 1 for an overview of the infrastructure and coverage statistics in the three districts).

Table 1: Infrastructure and coverage statistics in the three districts (Ref: EMAS, perscomm)

<b>Infrastructure</b>	<b>Deliserdang</b>	<b>Serang</b>	<b>Bandung</b>	<b>National</b>
<b>Population</b>	1,788,351	1,358,089	3,120,329	246,884,191
# Expected births/year	41,311	29,803	64,674	4,611,000
<b>Community level:</b>				136,000-250,000
# Bidans (pub &priv) in District	302	433	444	
# privbidans	237	283	250	
#Bidan in Village		249	228	
<b>District level:</b>				About 8000 (World Bank 2014)
# Puskesmas-non-PONED	25	23	58	
<b>District level:</b>				2037 but only
# Puskesmas-PONED	8	7	4	1,429 active (World Bank 2014)
<b>District level:</b>				
# Public hospitals (note C,B, or A)	1	1	4	
# Obgyns	6	1	2	
<b>District level:</b>				
# Private hospitals	1	0	3	
# Obgyns	12	0	3	
<b>District level:</b>				
• Percent of Skilled birth attendance (SBA) in 2012 and 2013	92.3%	70.39%	70.6%	83% (IDHS 2012)
• Percent of facility delivery in 2012 & 2013	52%	38%		63% (IDHS 2012)
• Percentage C-section in 2012 and 2013				12.3% (IDHS 2012)
• JKN coverage (TPN2K 2014)	440,000 (Medan)	1,154,000	426,904	40% of population

The first visit was conducted in Bandung to a puskesmas with high and increasing numbers of facility deliveries. The result of this first visit was used to inform the interview process in Serang and Deli Serdang. In each district, visits were conducted in a puskesmas considered representative of the district according to EMAS staff (*Annex 3-- site visit schedules, trip notes*).

#### ***Access issues--interviewees***

To determine access issues, interviews were conducted with pregnant women, postpartum women who used health facilities, postpartum women who did not use health facilities, and MCH motivators. Health center staff selected the informants (not a random selection).

Interviewers' guidelines were developed for each type of informant. The questions for women aimed to determine their preference on site of delivery and reasons for such. We also gathered information on their knowledge of normal conditions and danger signs during pregnancy,

delivery and the postpartum period, and knowledge of and use of health insurance for the poor (*Annex 4-- Questions for women*).

### ***Intervention and implementation issues—interviewees***

Stakeholders at district and sub-district (health center) level provided information on interventions, as well as on access issues. Informants included heads of district health offices and their staff in the three districts, heads of health centers, midwife coordinators and village midwives. Interviews were also conducted with stakeholders at hospitals--the director of the hospital, staff of the obstetrics and gynecology ward and others, as well as members of civil society forums. An additional interview was conducted with the head of the new health insurance, the BPJS office of Medan area.

Question topics for interviewees re intervention and implementation issues included the following (for more detailed questions, *see Annex 5 Questions for stakeholders*):

- Referral barriers
- Budgetary issues—which budgets/ when available/difficulties for budgets post insurance/ out-of-pocket payments (OOP)/who sets priorities/actual expenditures
- Activities to promote Jampersal (i.e. facility delivery); now JKN
- Incentives for BDD to work
- Public-private facilities/providers
  - ✓ Relationships—dual practice
  - ✓ Hours of work in public/private
- The involvement of private hospitals in providing free delivery services.

### **iii. Interviews in Jakarta: Systems and implementation issues**

Interviews were held with those involved in running programs that could improve access for the poor in the present or past, or who were doing research on these issues. These interviews included questions on their experience of planning, implementing, and the results of their efforts. Interviewees included staff of MOH-MH, BPS, BKKBN, PKK, the World Bank, UNFPA, DFAT, Litbangkes, UI, TN2PK, AIPHSS, IBI, HOGSI, Muhammadiyah, MerciCorps, World Vision (see *Annex 6* for a list of the interviewees).

## **4. Results**

### **a. Coverage Data: Access to maternal care by the most poor**

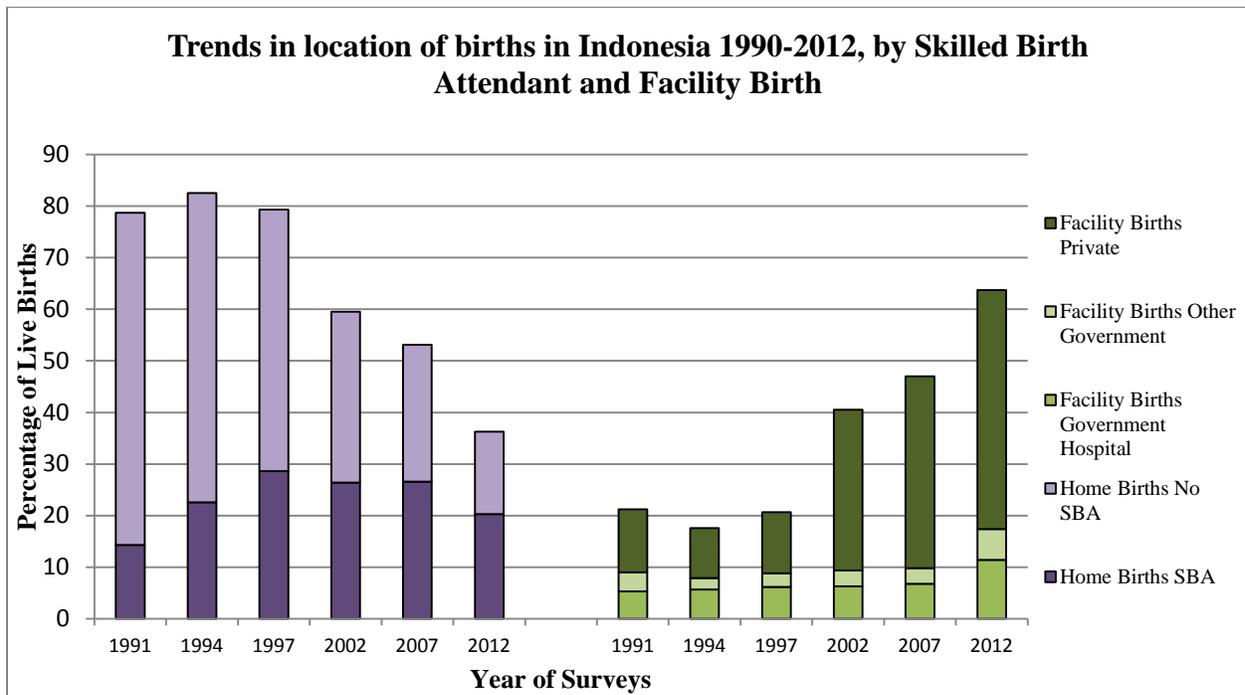
#### **i. Delivery care--where and with whom?**

As most maternal deaths from direct obstetric complications occur during labor and delivery or in the immediate postpartum period, knowing with whom and where the woman delivers is crucial. Since 1990, births have steadily shifted from home with no skilled birth attendant (64%), to facilities with professionally trained providers (64%) in 2012, a tripling of facility births over this period (Figure 3).

The poorest have made the smallest gains, however, with only 30% delivering in a facility in the five years preceding 2012, versus 88% amongst the richest. 70% of the poorest continue to give

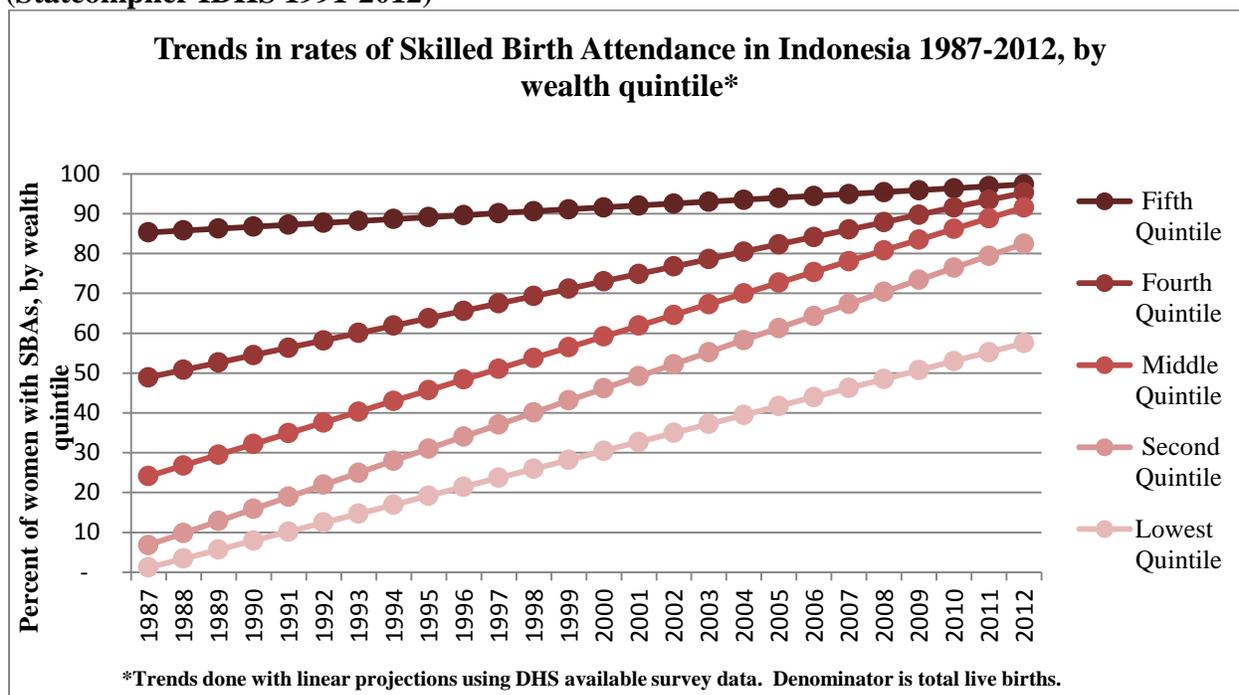
birth at their own or “other’s” home (IDHS 2012), including 53% of those in urban areas and 73% in rural areas in the five years preceding 2012.

**Figure 3. Trends in births, by skilled birth attendant and facility, public/private/home, Indonesia, 1990-2012**



*Many of those who deliver at home are with a skilled birth attendant—the village midwife or midwife; for the poorest that is about 50%. Hence from the perspective of “delivery with a skilled birth attendant”, the gap in professional care at birth is decreasing between the rich and the poorest—from about an 85% point difference in 1987 to only about 36% percentage points in 2012 (Figure 4).*

**Figure 4: Trends in rates of Use of Skilled Birth Attendance, 1987-2012, by wealth quintile (Statcompiler IDHS 1991-2012)**



Further analysis of IDHS data by each of the five years prior to the 2007 and 2012 surveys gives a decade of trend data by quintile for the pattern of use of birth attendant by skill level and of place of birth by resource level. The poorest (lowest quintile) use of attendants with low or no skills-- nurse, traditional birth attendant, relative/friend, other, or no one-- steadily declined from over 60% in 2003 to about 36% in 2012. Their use of medium level attendants (doctor, midwife, or village midwife) increased over the decade, from about 37% to 54%; the percentage with an obstetrician increased to approximately 10% (Fig 5A). *As of 2012, 64% of the poorest were with a skilled birth attendant.* (Note: all quantitative analyses carried out by Tom Pullum, ICFI, are located in *Annex 2*)

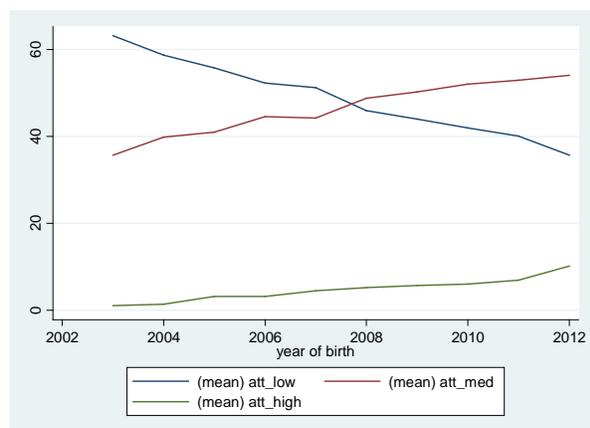


Figure 5A.

5A. Delivery by category of provider among the poorest, 2002-2012

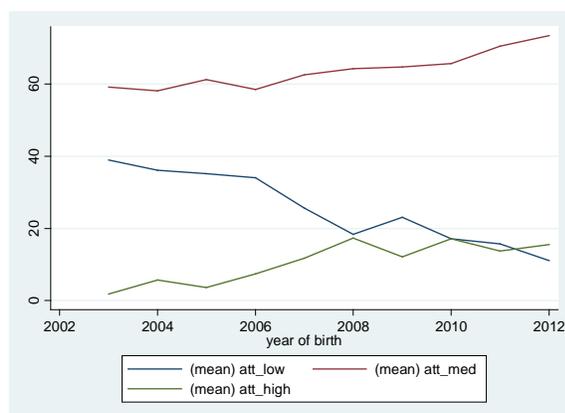


Fig 5B.

5 B. Delivery by category of provider among the poorer (second quintile), 2002-2012

Categories of providers:

High skill level: obstetrician

Medium skill level: doctor, midwife, and village midwife.

Low skill level: nurse, traditional birth attendant, relative/friend, other, no one.

Those who are poorer (second quintile) had a different pattern of delivery care in 2003 than the poorest (Fig 5B): their use of medium skilled personnel was nearly 60% in 2003 and increased to 73% by 2012; 15% used high level care by 2012, increasing from about 1% in 2003. Thus by 2012, 88% of those designated as “poorer” already used skilled care. This pattern of care is similar to the higher quintiles although a third of the richest used high-level care in 2012, with less than 10% using low care, even in 2003.

The trend for place of birth is somewhat different than that for the skilled birth attendant (SBA) for the poorest over the decade 2003-2012 (Figures 6 A and B). *Amongst the poorest (Figure 6A), the percentage of births in the low resource category (homes, village health post or with a private nurse) declined from nearly 80% to 58%, and the percentages in both of the other categories, middle and high, increased by 2012 to nearly 28 % and 14% respectively.* Thus in 2012, nearly three/fifths of the poorest still delivered in a low resource setting. Those in the second quintile also had a high level of births in low resource sites in 2003 (>50%), but moved to have the majority in middle (49%) and high resource sites (20%) by 2012. Similarly, by 2012 all higher quintiles had the majority of births in middle resource settings, with an increasing percentage in the highest level over the decade--the richest having 43% in the highest level and 49% in the middle level.

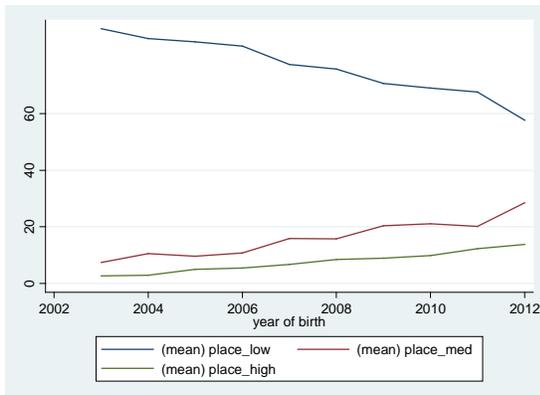


Figure 6A

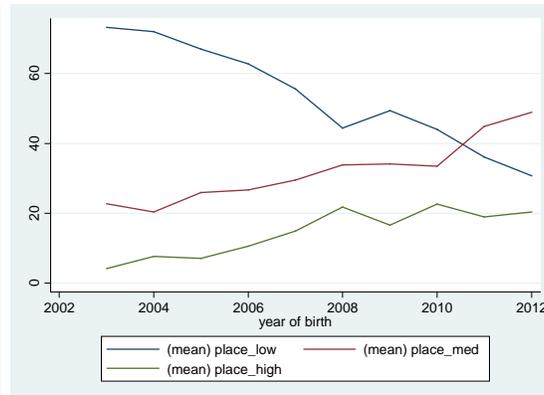


Figure 6B

Figures 6 A: Use of facility for birth--Poorest Quintile

Figure 6 B: Use of facility for birth –Poorer Quintile (second quintile)

Place of delivery in the 2012 survey:

High resource: public hospital/clinic, private hospital, private maternity hospital, private clinic, and obstetrician

Medium resource: public health center, public delivery post, other public sector, private maternity home, general practitioner, private midwife, private village midwife, other private sector, other

Low resource: respondent’s home, other home, public village health post, private nurse

Categorizing facilities by home, public or private follows a similar pattern. The poorest delivered mostly at home in 2003 as well as in 2012 (57%) with public and private sector use nearly equal (24 and 19% respectively, 2012). The poorer (second quintile) used the home for

birth at high levels in 2003, but by 2012 used the private sector at 43% while those in public facilities was 27%; 30% were in the home. As economic status increased, use of the private sector increased, to 80% amongst the richest with only 7% at home and 12% in public facilities in 2012 (see *Annex 2* for graphs).

From the detailed analysis of all births in the 5 years prior to IDHS2012:

- Amongst the poorest in this detailed analysis of births up to 5 years prior to IDHS 2012:
  - ✓ 48% delivered with a midwife or village midwife, 33% with a TBA and 8% with relative/friend/other.
  - ✓ In the rural areas, 36% of the births were amongst the poorest --nearly twice the quintile level-- and they delivered with a TBA solely (34%) or with a midwife or village midwife present (50%).
- Among all who delivered at home--47% used a TBA and 47% a midwife or village midwife with about 6% with relative/friend/other; 1% with a nurse.
- Those who delivered in a public facility—65% were in a public hospital/clinic (44% with an obstetrician present) and only 27% at a health center (*puskesmas*) with a midwife; very few delivered at the village post or public delivery post.
- Of the 16% who specified a private facility, 76% were in a private hospital or private maternity hospital, primarily delivered in the presence of an obstetrician (80%).
- Amongst those who did not state a specific facility (30%), almost all were with a midwife or village midwife (97%). This could be a relatively well-resourced clinic of a private midwife, or it could be a low resourced place—home.

## ii. Coverage: Delivery care by Cesarean Sections

Use of emergency obstetric care, (e.g., Cesarean sections) has risen from a low of 0.8% in 1986-89 to over 12% in the five years preceding the 2012 survey (Figure 7), with growth primarily in the private sector since 1998. Women most likely to deliver by Cesarean section (C-section) are those of higher age 35-49 (15 %), those with first-order births (14 %), women in urban areas (17 %), women with secondary and higher education (19 and 25 %, respectively), and women in the highest wealth quintile (23%)(IDHS 2012). *The high level of use of Cesarean for delivery amongst the wealthiest, probably for reasons of convenience as well as medical need, is in contrast to the low levels of use amongst the poorest: 3.7% in the five years prior to the 2012 survey (Figure 8).* This pattern of use is common to many countries, as Cesarean sections are typically the most costly of delivery procedures.

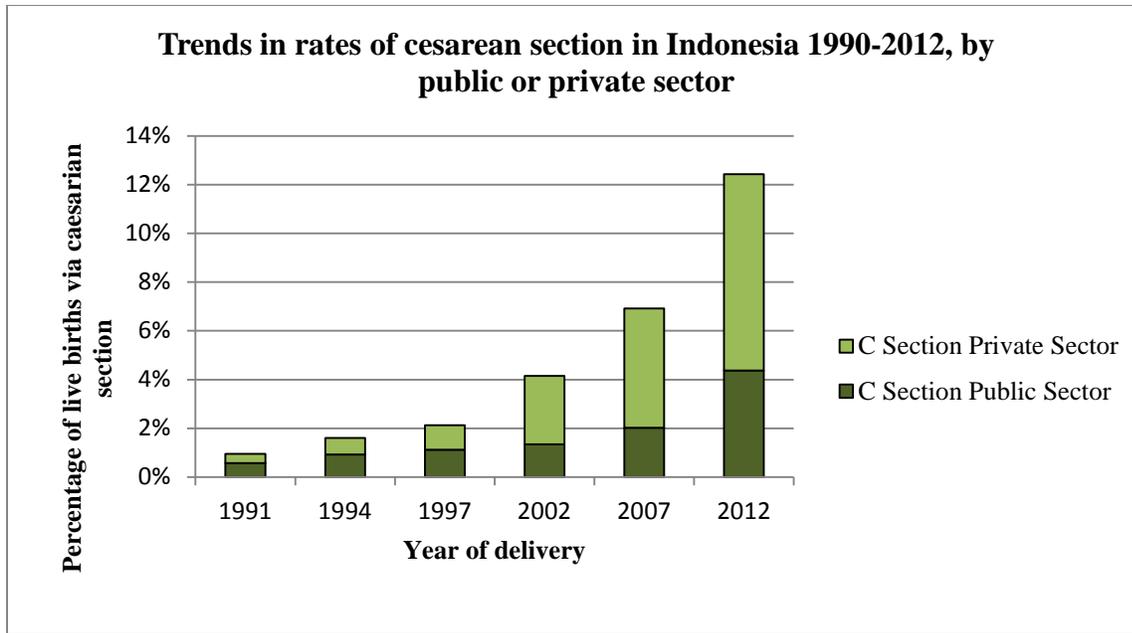
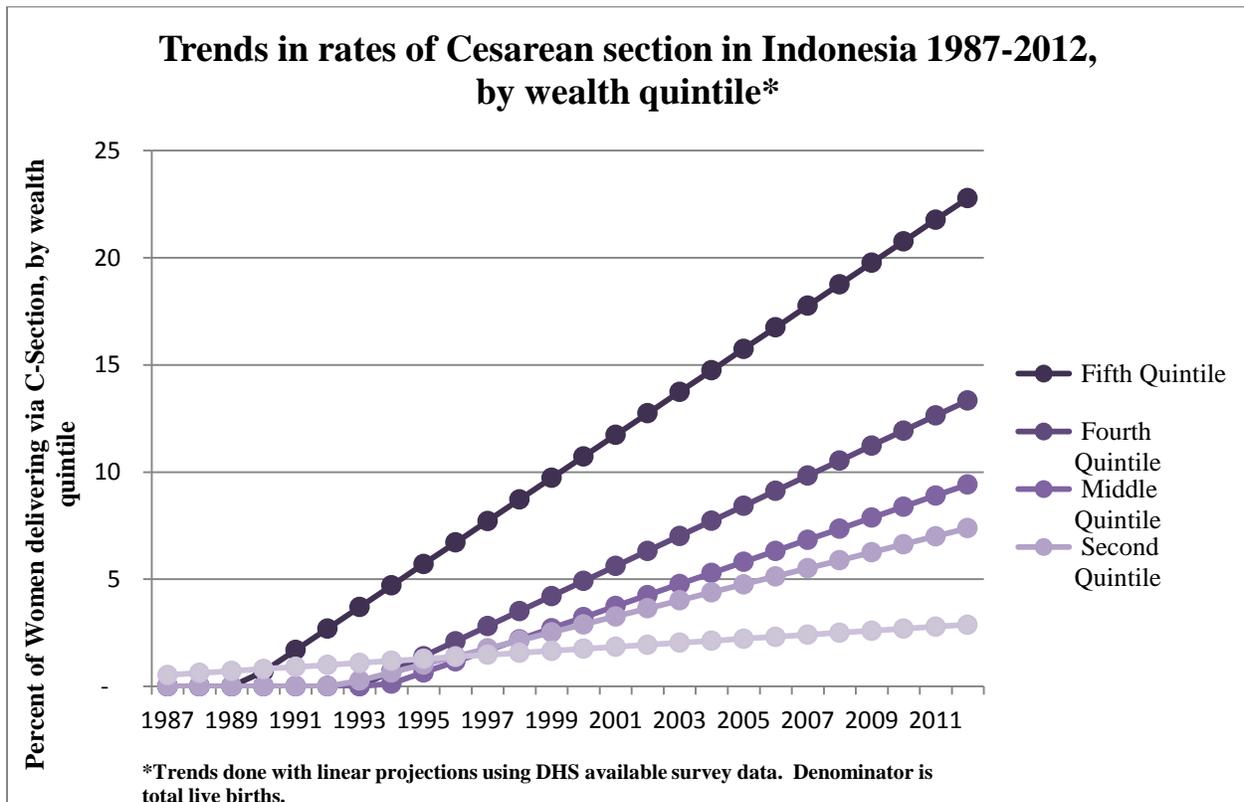


Figure 7: Trends in Cesarean section, 1990-2012, by public and private sector

Figure 8: Trends in rates of Cesarean sections, by wealth quintile, (1987-2012)



Though the highest number of births, and therefore the highest number of C-sections, is in the private sector, the likelihood of having a C-section is highest in public sector facilities for all

wealth quintiles. Amongst the poorest who delivered in a public facility, there were 17% who had a C-section, while amongst the richest who delivered in a public facility 32% had a C-section. Amongst those delivering in the private sector, 8% of the poorest had a section and 25% of the richest had a C-section (see *Annex 2, Table D*).

Of facility births taking place in urban areas, 5% of the poorest had a C-section versus 25% of the richest; and among births in rural areas, 4% of the poorest had a C-section vs. 15% of the richest (see *Annex 2, Table E*).

### **iii. Antenatal care use**

Antenatal care use is very high and has been high for at least the last 10 years in Indonesia. In the five years prior to the 2012 survey (IDHS 2012), 96% of pregnant women received antenatal care from a skilled provider: 75 percent from a nurse, midwife, or village midwife; 19 percent from an obstetrician, and 1% from a doctor. Even amongst the poorest 86% have had ANC with a skilled provider—primarily a nurse-midwife or village midwife.

The ANC visit pattern follows that promulgated by the Ministry of Health's maternal health program for 74% of women, with at least four antenatal care visits during pregnancy, according to a 1-1-2 schedule, i.e., at least one visit in the first trimester, at least one visit in the second trimester, and at least two visits in the third trimester (Ministry of Health, 2012). Pregnant women in urban areas are more likely than those in rural areas to have 1-1-2 antenatal care visits (80 and 68 percent, respectively).

Where the equity gap is apparent, is in the content of the antenatal care that a mother reports having received. For example, only 42% of the poorest state they had their urine sampled, versus 56% of the richest. Use of iron folate was reported by only 62% versus 85% of the richest (IDHS 2012).

### **iv. Postnatal care use**

Most women, 80%, received postnatal care for their last birth within the critical first two days following delivery; only one in nine women had no postnatal checkup. Even amongst the poor, coverage was high although not as high as their wealthy or highly educated counterparts: Forty-eight percent of mothers with no education and 29 percent of mothers in the lowest wealth quintile had no postnatal care compared with less than 5% of mothers with more than secondary education or in the highest wealth quintile (IDHS 2012).

### **v. Family Planning**

Much of the impact of contraception to prevent maternal death comes simply from reducing the number of births. However, preventing pregnancy also reduces the MMR because higher risk births (e.g., pregnancy before the ages of 18 and after 34; among women with higher parity) and unsafe abortions are more likely to be prevented. Unmet need for modern family planning (e.g., women want to avoid pregnancy but are not using modern contraceptives) also contributes to maternal death.

Indonesia has been a model of success dating back to its strong family planning program under BKKBN in the 1970s and 80s (NAS and APIA 2013)—and continues to have relatively low fertility when compared with other countries in the area, according to IDHS 2012. However, the total fertility rate has declined only modestly over the past two decades and plateaued at 2.6 since the 2002-3 IDHS (IDHS 2012). Those women in the lowest quintile have a higher fertility rate (3.2) than their richest counterparts (2.2), shorter birth intervals (5.9% vs. 3.3% for the 7-17 month interval), and much higher early pregnancy (13.2% have had a child by the age of 19 vs. 1.9%). About 55% of the poorest and the richest women use modern contraceptives (IDHS 2012).

#### vi. **Outcomes**

The IDHS 2012 reported 181 stillbirths and 268 early neonatal deaths, giving a perinatal mortality rate of 26 per 1,000 pregnancies in Indonesia. This figure is almost the same as the level observed in the 2007 and 2002-2003 IDHS (25 deaths and 24 deaths per 1,000 pregnancies, respectively). Infant and under-5 mortality have also declined only slightly over the last two surveys. There is no report by equity status of the mother.

### **b. Health-care seeking behavior of pregnant Indonesian women and the referral process:**

#### **i. Literature review and studies funded by USAID, DFAT, Gates**

Several Indonesian studies have explored health care seeking behavior and the barriers women generally face in accessing health care during pregnancy, delivery and post partum. *None of these studies specifically focus on the poor.* In Serang and Pandeglang districts (2004-5) care seeking was studied both for normal and emergency deliveries and maternal death reviewed (D'Ambruoso 2009; Scott 2013). In one sub-district of East Nusa Tenggara, Belton *et al* (2014) interviewed eleven families who reported on cases of maternal deaths. In South Kalimantan MotherCare studies provide both qualitative research on each of the first two delays as well as results of interventions aimed at improving access (Marsaban and Zizic 1996). Pambudi (2011) describes factors related to utilization of rural health facilities in Sampang District, by interviewing post-partum mothers selected randomly in two sub-districts of Sampang District. A baseline study on referral prior to implementation of the EMAS program based on record reviews and observations also provides some data on the delays in referral (EMAS 2010). In addition to those studies, Thomas and Yusran describe barriers to accessing MNH services based on field visits in NTT, NTB, East Java, and Papua and a secondary data review (2013).

#### ***Maternal death follow up***

Based on interviews with 104 families with a maternal death in Serang and Pandeglang, D'Ambruoso *et al* (2009) found that delays in the decision to seek care were reported by nearly half the respondents, and delays in reaching care were reported by two thirds of respondents. A main cause of the first delay is ***a common belief that if a midwife established a pregnancy as 'normal' during antenatal care, then the delivery is presumed to be uncomplicated.*** Midwives were thought to be unnecessary for 'normal' deliveries and were only called when a complication arose. One informant stated:

Interviewer: “Did the midwife recommend having the delivery with the midwife or at hospital?”

Father: “No, she was healthy”. [Case 543215, Hemorrhage]

A second dominant theme was ***the failure of the health insurance scheme for the poor to enable access*** once the decision to seek care had been made (D’Ambruoso et al 2009). The study was conducted during the Jamkesmas insurance period necessitating presentation of a Jamkesmas card. In the majority of cases, poor families had not been identified and issued the green JPS health insurance card; thus they had to arrange insurance at the time of the emergency based on a Surat Keterangan (SKTM) letter issued by village authorities. In many cases, ***arranging the letter introduced or exacerbated delays. In addition, the stigma of health insurance and its negative effect on quality of care were repeatedly reported (ibid).***

Further exploration of the 2004-2005 IMMPACT studies in Serang and Padeklang districts, followed 474 maternal deaths and 1,234 women who survived birth. Analysis by Scott et al (2013) shows that overall only 32.8% (95% CI: 27.7-38.3) births were attended by a health professional. For women assisted by a health professional the odds of dying increased with increasing distance from a health center (adjusted ORs per 1km increase; Indonesia: 1.07, 95% CI: 1.02-1.11). The odds of death increased among women who lived greater than 5km from a health center compared to those who lived within 5kms of a health center (adjusted OR: 2.2, 95% CI: 1.09-4.5, P=0.03). This was not the case for women who delivered with non-skilled birth attendances. ***Women only seek professional care in an emergency and thus are unable to reach adequate care in time due to distance to a health facility (ibid).***

Based on interviews with eleven families with maternal deaths in one sub-district of East Nusa Tenggara, Belton et al (2014) reported that in almost all cases there was a combination of delays. There were two types of first delay (delay in seeking care): delays in recognizing the need for emergency care and delays in deciding to seek care. Examples they found for the delay in recognizing the need for emergency care was ***‘severity of bleeding or infection not recognized;’ while stigma associated with unmarried pregnancy is the example for delays in deciding to seek care.*** The types of the second delays were: ***delays in delivering the request for care (e.g. no phone and walking to the midwife); and delays in help arriving (e.g. the midwife or ambulance being unavailable).***

### ***Health care seeking for facility deliveries***

From observations of health facilities, 24 focus groups and 180 individual in-depth interviews in three districts of South Kalimantan in 1996, it was reported that pregnancy is considered a natural phenomenon that needs some attention for improved nutrition, and that complications such as prolonged labor, retained placenta and bleeding were known and considered dangerous. ***Awareness of and recognition of these and other complications when they happen however are two different matters, and women stated they rely heavily on their provider (usually a TBA at that time) to inform them of the complication happening.*** If costs were involved in moving to a health facility, then the husband and mother/mother-in-law played major roles as the price increased. ***Referral to a hospital involved a lengthy discussion,*** a “musyawarah,” with family members, neighbors, and with local birth attendants (TBAs and village midwife), to discuss the seriousness of the problem, traditional beliefs, preference for delivery at home, care of children,

packing of clothes, payments required, location of transport, where to go, lack of confidence/comfort in the health facility, and resignation about neonatal death. The lengthiness of the decision making process could be due also to the stage of the complication, the time of day (related to difficulty in obtaining transport), and the reluctance of the husband for referral.

In response to these findings, posters, radio spots, flyers for women/families re recognition of problems and need for referral, and contingency planning booklets for families, were distributed through and in coordination with the village heads, bidan di desa, PKK, and marriage registration sites/people, and resulted in increased knowledge of danger signs and use of trained providers. The increase in use in comparison with neighboring districts without such efforts was due in part to the materials but also to the emphasis placed on strengthening the village role of the BDD and her relationship with the TBA (Zizic et al 1999).

Based on record analyses and interviews, the EMAS program baseline referral study (2012) found that *the community generally understood danger signs in pregnancy, delivery, post-partum period and newborns*. However, *gender inequity was found in some communities, where women, especially those with a low education level, could not make decisions regarding their own health needs. Delivery at home was preferred to health facilities due to convenience and comfort*.

In most areas, social insurance schemes increased the number of obstetric and neonatal cases treated at health facilities. *People typically were knowledgeable about the social insurance schemes (i.e. Jamkesmas, Jamkesda and Jampersal), although there were both mothers and husbands who did not know about Jampersal. Their information sources were primarily village midwives through dissemination at the sub-health center, maternity huts or health centers, and from television. Although they knew about the social insurance schemes, people generally did not have a clear understanding of the aspects that might be covered by each scheme, the differences between the schemes, or their rights in using the social insurance schemes. For example, the informants reported that some mothers and husbands had to pay for medicines, anesthetic drugs, and blood tests, while other mothers did not have to pay for the same components*.

Pambudi (2011) found twelve factors significantly associated with use of a health facility for birth in two sub-districts of Sampang District with high rates of facility delivery: planned place of childbirth, nearest MCH care from home, suggested about place of childbirth during ANC, labeled with birth-preparedness, complication-readiness (BPCR) sticker, TBA involved during decision making, perception on safe delivery, knowledge on safe delivery, frequency of ANC, place of ANC, parity, living child, and husbands' education. Using multiple logistic regression three "best predictors" included: *planned place of childbirth, perception of safe delivery and the nearest MCH care from home*.

Thomas and Yusran (2013) in their review of secondary sources, state that the barriers faced by poor and vulnerable women in accessing MNH services are multiple and interconnected, including gender, financial, traditional and cultural beliefs, and lack of information. The *Gender constraint* is in regard to the decision making process. In Papua, for example, *the decision-making process is complicated*, as families of both the husband and wife have to be involved in deciding if they would seek care outside of the village, and to accept the treatment being offered

once they have been to a health facility. ***On the supply side, facilities may be poorly staffed, poorly located and inadequately designed to cater to women's basic needs such as functioning and accessible clean toilets, and screens for maintaining privacy. In addition, practitioners may lack the skills and knowledge to respond to the women special maternal needs.***

Women also faced financial barriers in accessing care-- lack of awareness of health entitlements (Jamkesmas and Jampersal), lack of confidence that providers would not demand additional expenses, and ineffective targeting (many vulnerable people were not covered, while many wealthier people get the benefit). Thomas and Yusran (2013) argue that Jamkesmas left many poor and vulnerable people unprotected while wealthier households received benefits they were not entitled to based on *The World Bank Jamkesmas Health Fee Waiver Review* (2012): Jamkesmas coverage of the bottom 30% of the population ranged from 39-50% while coverage of the top 60% ranged from 7% to 6%. In addition, providers continued to charge for 'uncovered items', such as the mattress cover of a bed, and drugs that were out of stock.

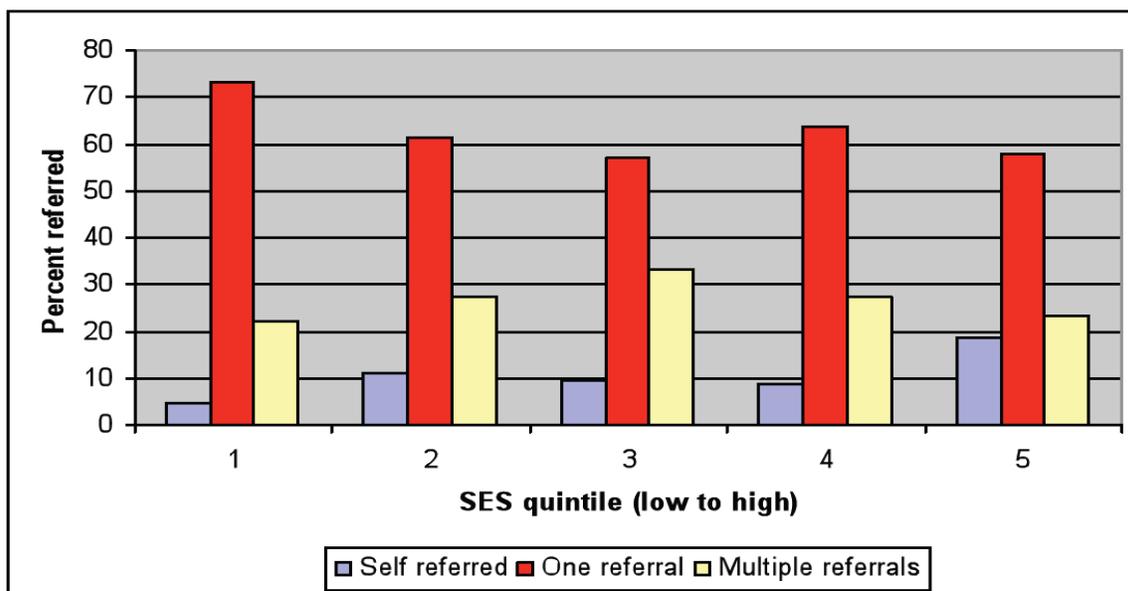
Traditional and cultural beliefs and customs, varying across ethnic, tribal and social groups, can also be barriers. For example, restrictions during pregnancy are common, as taboos exist. In NTB, East Java and Papua, for example, women tend to keep their pregnancy secret until their bellies visibly showed, thus delaying antenatal care. For pregnancy outside of marriage, *malu* or social shame can lead to isolation of young, unmarried pregnant women which can have implication on lower take up of pregnancy care and facility delivery (Thomas and Yusran, 2013).

### ***The Referral Process***

Data from the 2009-10 prospective Quapac study in Malang and Pasuruan, East Java (Adisasmita A2011, unpub) found that midwives most frequently saw women on their first visit to a health care provider. But midwives referred to the district hospital less frequently than clinics, doctors, or other hospitals did (66%, 89% and 87.5%, respectively). According to Adisasmita, this may be due to the standard hierarchical system of referrals. However, the number of referrals was directly related to the severity of illness in this study, although the type of care provider was not. ***Type of insurance influenced the referral pattern:*** Women with private or work related insurance went directly to the hospital more frequently (27%) than women with insurance for the poor (12.2%) or those who paid out of pocket (6.6%). Women who saw a health care worker first, were referred directly to the district hospital (71%) if they paid out of pocket, had insurance for the poor (57%) or other insurance (48.6%). Those with insurance for the poor experienced more referrals as only 69% reached the hospital after the 1<sup>st</sup> referral while 76% of those with other insurance and 77.7% of those who paid out of pocket reached the hospital with  $\leq 1$  referral.

***Socioeconomic status (SES) and urban/rural status affected the number of referrals each woman experienced.*** As expected, the wealthiest SES group (5) and those in urban areas were more likely to go directly to the hospital than women in the poorest socioeconomic group (Figure 9, Quapac study 2010).

**Figure 11. Association of wealth (SES quintile) with number of referrals to two district hospitals in East Java during April 2009-March 2010. N = 511**



*Timing of referral affected outcomes* (Table 2, Quapec study 2011). *After deciding to seek care, the time to reach a district hospital was long for women who did not go directly—11.3 hours—versus those who went directly—1.5 hours. Women who went through the referral system took nearly 10-20 hours more, a very wide range—and this is post-decision to seek care.* There were no significant differences in timing by number of referrals, although there was a trend toward longer time intervals with increasing number of referrals

Table 2. Time to reach district hospitals from time of decision to seek care, by maternal status on admission and number of referrals, East Java, April 2009-Mar 2010; N= 618

**Table 8. Time to reach district hospitals in East Java during April 2009-March 2010 from time of decision to seek care, stratified by maternal status on admission and number of referrals. N = 618**

Maternal status on admission	Mean (+/- SD) travel time from point of seeking care to hospital (hrs)				
	Self referred (n=64)	Directly referred (n=346)	Twice referred (n=143)	3 times or more referred (n=8)	Total (n=561)
Normal cases (n=47)	0.84 ± 0.63	8.01 ± 12.54	16.36 ± 17.98	NA	9.22 ± 14.01
Complication, Non-near miss cases (n=481)	1.70 ± 4.67	9.78 ± 14.57	19.42 ± 29.80	14.82 ± 12.34	11.47 ± 19.73
NM admission at (n=33)	0.99 ± 0.37	10.35 ± 15.85	28.44 ± 46.72	3.48 ± 1.92	12.31 ± 27.49
TOTAL	1.52 ± 4.1	9.66 ± 14.43	19.73 ± 30.17	11.99 ± 11.7	11.33 ± 19.83

For women who did not go directly to the district hospitals, the study found a large gap between the time of the 1<sup>st</sup> delay (from decision to seek care and departure from home) —nearly 10 hours-- and that of the 2<sup>nd</sup> delay--about 1hour for travel time from home and the first point of care (Table 3Quapec study 2011). Unfortunately no information was collected about the time of the first delay: Adisasmita hypothesized that it could include *time to find transport, arrange finances and paperwork (insurance card, card from desa leader), pack, and organize the household before leaving home.*

Table 3: Travel time to hospital and time from decision to seek care and departure from home for women admitted to two district hospitals, East Java, April 2009-Mar 2010;N= 618

**Table 9. Travel time to hospital and time from decision to seek care and departure from home for women admitted to two district hospitals in East Java during April 2009-March 2010. N = 618**

Maternal status on admission	Travel time to hospital (hr)		Time from decision to seek care and departure (hr)	
	Self referred (n=64)	Total (n=544)	Self referred (n=62)	Total (n=484)
Normal cases (n=41)	0.46 ± 0.32	1.12 ± 0.91	0.38 ± 0.32	6.24 ± 10.20
Complication, Non-Near Miss (n=469)	0.67 ± 0.59	1.24 ± 0.92	1.04 ± 4.73	10.43 ± 20.23
NM at admission (n=34)	0.85 ± 0.39	1.15 ± 0.83	0.14 ± 0.17	7.89 ± 23.03
TOTAL	0.68 ± 0.55	1.22 ± 0.91	0.85 ± 4.13	9.97 ± 19.82

Times between the first and second referral points and from the second to the third referral point were also long (Table 4). Time decreased after the third referral. Adisasmita suggested that evaluation time by the health care provider in each site, excessive time delays (unclear in whether this refers to admittance, diagnosed, or treated), availability of transport at the provider, and travel time between providers could contribute.

Table 4: Elapsed travel time between points of referral for women admitted to two district hospitals, East Java, April 2009-Mar 2010;R= 618

**Table 10. Elapsed travel time between points of referral for women admitted to two district hospitals in East Java during April 2009-March 2010. N = 679**

Mean (+/- SD) travel time (hrs)			
First provider to 2 <sup>nd</sup> (N=528)	2 <sup>nd</sup> provider to 3 <sup>rd</sup> (N=142)	3 <sup>rd</sup> provider to 4 <sup>th</sup> (N=8)	4 <sup>th</sup> to 5 <sup>th</sup> N=1
9.76 (18.97)	7.02 (14.56)	1.80 (2.96)	1.00

Distances to the hospital did not seem to contribute to differences in maternal condition, and total distances were statistically equivalent regardless of the number of referrals for those who did not go directly to the hospital. The average distance traveled by women to reach the district hospital was 20.82 +/-19.1 km.

## ii. Interviews with women

### *Barriers to care*

During the field visits in the three districts of the EMAS program, interviews were conducted with 13 women--four post-partum women who delivered at home, five post-partum women who delivered at a health facility and four pregnant women (see Table 5 for women's characteristics). Barriers to accessing a health facility for delivery mentioned by the women include financial barriers, convenience, influence from others (especially mother/mother in law and husband), and the feeling of shame.

Three women who delivered at home mentioned that they did not have money at the time of delivery. In addition, two of them were still very young when they delivered (15 and 16 years old), so that they did not have any card (ID card, Jamkesmas card) that they thought was needed to access free delivery care (such cards are issued at the age of 17).

One woman who delivered at home with a TBA mentioned that there was not enough time for her to go to a health center to deliver. The term used is '*keberojolan*,' a Sundanese term which can be translated as 'the baby came out too fast.' However, further interview revealed that the baby delivered about 2 hours after the first contraction, while the distance from the house to the health center is only about 15 minutes. She later mentioned that the TBA is her grandmother and that her mother convinced her to deliver with her grandmother, the TBA.

Involvement of other people (in this case, mother of the pregnant woman) is an important factor in the decision to seek care. This is the case not only for those who delivered at home with a TBA but also for a woman who delivered in a health facility. The mother's involvement in decision-making was not only in selection of the provider (or place of delivery) but also in the payment method.

A prior bad experience with delivery can also be a barrier for women in accessing health services, according to a woman who had just delivered her second baby in a health facility. Her first delivery was in a hospital where she had a traumatic experience including being pinched by a health provider; she stated that the health providers were '*galak*' (English: cruel). The woman delivered her second baby at a health facility due to long labor and referral by a health center midwife. She used the Jampersal scheme, but she got the information about Jampersal on the delivery day. So, the delivery in the facility was not planned before; she even said that she did not want to deliver in hospital anymore, even when she was told that she might be referred to hospital if her delivery process was not progressing.

Similar to the above barrier, services provided in public health facilities were not considered good. An informant said that people consider the services given in public health facilities as '*asal*' ('careless').

Reasons mentioned by informants on why women might not want to deliver in a health post (poskesdes), include firstly that there is no privacy; many people can see the process so that women would feel uncomfortable delivering in the facility. The second reason is that there is no water available in the poskesdes. It is not convenient to deliver there, as compared with delivery at home where they can get water and food easily.

In addition, other informants mentioned that at home there are many relatives around to accompany them. As mentioned in the IDHS 2012, “going alone” is the most important barrier to health seeking behavior generally. In the context of delivery, having relatives close by is important.

A woman who was pregnant eight times and in her eighth month of her present pregnancy has not yet made a plan about the place for delivery. ‘Just wait when the time comes,’ she said. The reason why she is doubtful about delivering in a health facility is because there will be no one with her children at home if she delivers at health facility.

Feeling shame to visit a facility can also be a barrier for facility delivery. This is the case for very poor women: A very poor woman who just delivered her 6th baby at home with a TBA mentioned that she feels shame to come to the health facility, because she does not feel that she belongs there. For the interview, a health kader (local health volunteer) accompanied her to the health center. The kader said that she convinced the woman again and again for her to join posyandu activity (monthly village efforts with health personnel for immunization, nutrition, and family planning), or to visit the health center (for her TB treatment) etc. She said in a very low voice: ‘*saya malu*’ (English: I feel ashamed).

Adolescent pregnancy can also be a barrier for facility delivery. This is not only related to feelings of shame due to premarital pregnancy, but it is also related with the fact that the women might not have an identity card yet to access free delivery care. In addition their knowledge about pregnancy (e.g. normal conditions, danger signs) is limited. Most young women interviewed could not name any danger signs of pregnancy, delivery and post partum period. They also relied very much on their mothers’ decision for provider selection and payment methods.

In selection of a health facility, familiarity is a factor that influences their decision. Replying to the interviewer’s question about the reason why they select to deliver in the health facility, one woman said that she used it before. Close distance is also a factor.

Table 5. Characteristics of women interviewed, January-February 2014

Name	Age (years)	Obstetric history	Education	Husband's age	Husband's Education	Husband's occupation	Household size
<b>Bandung District</b>							
Mrs AK	31	Post partum-delivery with TBA at home, two children	ES	-	JHS	-	15 people - at parent house
Mrs Ri	18	Delivered her first children two years ago (when she was 16) at home with TBA	JHS	23	SHS	Unemployed	15 peoples - at parent house –Mrs AK's sister in law
Mrs St	22	Post partum-delivery at HC, first baby	SHS	24	SHS	-	3 – temporarily staying at parent's house
<b>Serang District</b>							
Mrs TP	15	Post partum-delivery at home with TBA, first baby	JHS	21	JHS	Unemployed	8 people
Mrs SR	35	Post partum-delivery at HC. First baby	ES	31	JHS	Factory worker	7 people
Mrs Sa	Don't know	Post partum-delivery at home with TBA and relatives, baby number 6	No school	Don't know	JHS (not finished)	Becak driver	10 people
Mrs M	± 40	Pregnant woman, pregnancy number 8, 8 months	ES	± 45	JHS	At garden (was ojek driver)	9 people
Mrs Y	33	Pregnant, second pregnancy	JHS	37	SHS	Construction	3 people
Mrs H	33	Post partum, 2nd baby, delivery at HC	SHS	32	SHS	Assistant at Car service	8 people
<b>Deli Serdang</b>							
Mrs SH	19	Post partum 1st baby, at Poskesdes	SHS	23	SHS	Entrepreneur	6 people
Mrs Su	19	Pregnant 1st pregnancy	JHS	25	JHS	Entrepreneur	4 people
Mrs SW	26	Pregnant, 2nd pregnancy, 5 month	SHS	29	SHS	Policeman	-
Mrs NP	39	Post partum, 3rd baby, with midwife	SHS	42	SHS	Entrepreneur	-

### ***How women are connected/get information***

How women are connected and get information varied by site. In Bandung District, for example, the woman who just delivered at home due to 'keberojolan,' (the baby came too fast) said she had been involved in mothers' classes. In Serang, the women interviewed seem to be very separate/isolated: They do not know about mothers' classes and some had not visited a posyandu or health center for ANC. In other sites, most women knew about the posyandu and health kaders. Desa Siaga was known in some areas, but in most cases it was considered not-active (without "bite").

Even amongst women who attended posyandu, few understood about Jampersal. Socialization of Jampersal varied. In Bandung, for example, health center staff stated they did the socialization by sending 10 staff to each village in March 2013; for other health centers, socialization of Jampersal was weak. A woman in Serang mentioned that she received information about free delivery care on the day she was referred to the health center. One MCH motivator and one member of civil society forum mentioned that people did not know about Jampersal until they explained it.

Thomas and Yusran (2013) stated that social structures in some areas, such as in Sumba Island (NTT), leave women very separated. They do not have space to come together, receive new information, dialogue with peers, and build solidarity and self-confidence. This is not the case for women in the Highlands of Papua, where women's groups linked to the church tend to meet regularly. However, Thomas and Yusran (2013) also mentioned that even where women's groups are functional, women are generally not involved in community level discussions and decisions. Village Musrenbang tend to be male dominated and hardware oriented.

### **iii. Policies and efforts to increase access to health facilities by the poor**

#### ***The Bidan di Desa Program: Literature review***

To improve access to safe delivery, the Government of Indonesia (GoI) launched their Safe Motherhood Initiative in the late 1980s with the main focus on a rapid scale-up of access to professional care through the *Bidan di desa (BDD)*, the village midwife program. The midwives were (and continue) to provide a range of primary care services including antenatal, labor, delivery, and postnatal care, family planning promotion and services, and other basic primary health care services for newborns and children. In malaria endemic areas, their services include routine malaria screening/treatment and provision of long lasting insecticide treated nets. In high-risk areas for sexually transmitted infections and HIV, they also provide screening, treatment and PMTCT.

By 1996/7, 54,000 midwives had been trained through a one-year midwifery-training course for graduates of the three-year nursing and midwifery high school (Makowiecka 2007) and 20,000 village maternity clinics had been established. Initially their service performance was considered wanting (McDermott 2001; Makowiecka 2007) and social acceptability low (D'Ambruso 2008); the bidans themselves found rural postings isolating leading to low retention, motivation and job satisfaction. While authorized to manage normal deliveries at first (Sadjimin, 2003), this was revised in 1998 to allow life-saving functions and the midwifery curriculum was extended from a one year (D1) to a three-year diploma course (D3).

A major question is how to incentivize and retain midwives in remote areas? Despite the original intention of the Bidan di Desa policy to service rural areas, midwives, particularly those that are

more experienced, prefer to move to urban areas to practice. In Serang and Pandeglang, Makowiecka et al (2007) reported that while in urban areas around 10% of communities had no midwife resident, in remote areas this figure rose to more than 60%. In the same areas, Ensor et al (2008) suggested the need for rapid, cheap transport in remoter areas, perhaps not to bring the midwives out, rather to bring women from the areas to the midwives.

The increased supply of midwives has paralleled and contributed to increased use of professional maternity care, but persistent poor quality of care is well documented (Shanker 2008; Hull 1998; Hennessy 2006, Ronsmans 2009; WHO/HOGSI 2014, pers comm). Confidential inquiries in Banten found village midwives' emergency diagnostic skills accurate, but clinical management of complications wanting (D'Ambruoso 2009). Based on a sample of 104 cases in Serang, the BDDs were found to make correct diagnoses, recognized danger signs, made referral decisions rapidly and appropriately, and reduced delays in reaching health facilities. But they made contraindicated and unnecessary vaginal examinations, missed vital signs, and did not use magnesium sulphate or diazepam to treat eclampsia, infection prevention, correct recovery positioning or active management of the third stage of labor.

Reasons behind poor performance of village midwives are partly due to deficiencies in the basic training consequent to the pace of scale up and partly to the deployment strategy. The poor competency of the midwives was recognized early on and led to a thorough review of the basic training in the mid-1990s, when the standard one-year curriculum was transformed into a three-year program.

The deployment strategy of village midwives only exacerbates poor midwife competency. Most village midwives are isolated--deployed as the sole provider in a village, in remote postings, or in private practice. They are expected to develop their own client base, they state they order their own drugs (due to preference, quality, as well as can charge for them), and must establish their own housing cum delivery post (polindes), possibly with the help of village leadership. One study reported that at the polindes or puskesmas, 90% lacked a sterilizer or resuscitation equipment and 80% lacked magnesium sulphate (AIPMNH 2008). If a midwife helps with birth in a household, known to happen in about 50% of the poorest women who deliver at home (IDHS 2012), the power of decision-making is largely in the hands of the family who may disagree with the midwife's management of the delivery or referral.

Back up support for the village midwife is variable although in most places village midwives (those that are public or dual practice) will spend some days per month (about 1 day/week) providing service at the local puskesmas. Beyond service time at a puskesmas, connectedness of a village midwife with puskesmas staff appears low based on our field observations/discussion—with little to no supervision or mentoring from puskesmas midwifery staff at the polindes.

Even if a village midwife is connected with her local puskesmas, the puskesmas itself may not be service-ready (National Institute of Research and Development 2014). According to Rifaskes data (2011), of the nearly 9000 health centers nationwide, only 45% met the personnel requirement to provide Basic Emergency Obstetric and Neonatal Care (BEmONC), 12% had the required equipment, and 28% could provide 24 hour services. In North Sumatra for example, general service readiness is ranked at 57% in its 506 puskesmas. Particularly disturbing is the lack of life saving drugs for maternal survival at puskesmas level in North Sumatra: only 11.4% had oxytocin available, 15% ergometrine, 24.5% injectable antibiotic, and only 40% injectable magnesium sulphate. While pre-eclampsia and eclampsia, are known as the main killers of

pregnant women, testing for hypertension and preeclampsia is made difficult as more than 80% of puskesmas in North Sumatra do not have a urine test available. Nationally, the lack of urine testing is low with nearly 60% of non-PONED and about 35% of PONED puskesmas lacking this test (National Institute of Research and Development 2014); note that the national facility survey, the Rifaskes, does not distinguish urine tests for glucose or for protein, so the % presented is optimistic. Classification of a puskesmas as PONED or not is nearly meaningless with nearly 40% of PONED facilities not having staff trained in PONED in the previous two years, similar to the 50% in non-PONED facilities and 30% in public hospitals) (National Institute of Research and Development 2014).

Higher referral facilities are also not service-ready. In 2011, while 83% of the nearly 700 public hospitals had access to at least one obstetrician, only 21% met the nine Comprehensive Emergency Obstetric and Neonatal Care (CEmONC) criteria, including a 24 hour operating room, blood, laboratory and radiology services, and a team available 24 hours a day. Less than half could provide comprehensive maternity services due to lack of qualified human resources, equipment and blood. Only about half of the public facilities reported having blood transfusion services available. In North Sumatra, the mean Comprehensive Obstetric Care Index is 73 for its 54 public hospitals with 88.9% essential CEmONC staff, but only 30% had a trained midwife on CEmONC, 15% a trained nurse on CEmONC, and 24% a trained doctor in the emergency room; it is not clear how they could have such a high level of “essential CEONC staff”(National Institute of Research and Development 2014).

#### ***The Bidan di Desa Program: Interviews with Providers***

From observations and discussions with bidans and a bidan di desa, communications between village midwives and their back up care depends primarily on personal relations and cell phone availability/connectivity. This can result in referral delays in cases of emergency. However a ***major disincentive to referral is the lack of receipt by the bidan of insurance funds per birth***(described in Universal Health Coverage below).

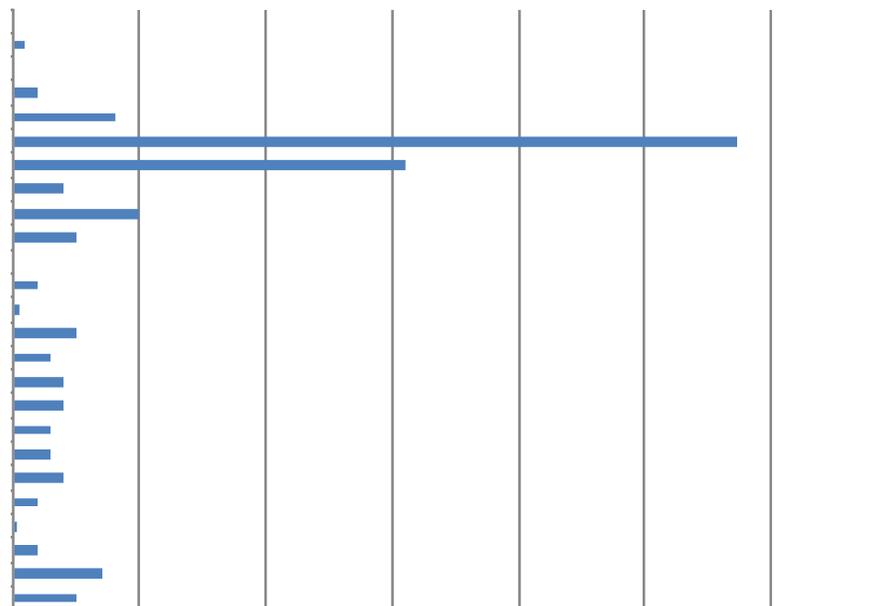
Specific referral data are not readily available: in facility registers, it may or may not be noted that a woman was referred (no specific column for such); outcome is typically not written down. Puskesmas births are relatively low. For example, HOGSI/WHO recently found an average of 40 deliveries/year/HC in the 40 HCs observed in 10 provinces/2 districts (Dr Ovi, perscomm). An EMAS baseline report found that the total number of visitors at health centers per year is typically low and the % referred varied by area. In Serang, for example, the total number of visitors for obstetric and neonatal care per health center per year is only 196, or less than 1 visitor per day. The average numbers in Deli Serdang and Banyumas are less than the number in Serang. Of these low numbers of maternal and neonatal cases, those referred attend PONED Puskesmas more than non-PONED health centers— in Serang District, for example the number was 107 per HC in a year. ***The referral system (or lack thereof) from village to Puskesmas is not documented (e.g., who is referred); procedures for community referral were not available.*** This was the case in the areas visited, even though the Local Area Monitoring and Tracking System (LAMAT) has been policy for some time.

#### ***The Bidan di Desa Program: Interview with the Indonesian Midwifery Association***

Midwifery academies have proliferated since the early founding of the bidan di desa program and in 2014, there are over 750 schools, some graduating 400-600 in a class (IBI perscomm 2014). Reports of the numbers of midwives varies –ranging from 136,917 midwives (BBPSDM, MOH [HRH Board]2014) to over 250,000 (IBI perscomm 2014). Given these estimates, a bidan

would cover between 10 to 20 births a year (based on the 2012 IDHS report that midwives/nurses covered 62% of all births or 2.76 million births/year). IBI estimates that the 40,000 private bidans each cover about 20-30 births/year and the 210,000 others deliver only 2-5 births/year each. Based on either estimation, the level of birthing per bidan is likely to be too low to maintain skills. The WHO benchmark for midwives is 175 births/year (WHO 2005) or 6 midwives/1000 births (Figure 10). Note that Indonesia far exceeds all other LMIC countries in terms of numbers of midwives per/1000 births (Campbell, Jim pers comm 2014); unfortunately there is no such table comparing quality of care provided. Even with so many midwives, about 30,000 of Indonesia's 78,000 villages are reportedly without a midwife (IBI perscomm, 2014).

Figure 10. Number of Midwives per 1000 live births per country, USAID MCH priority countries 2011-2014



ndia, Kenya, and Nigeria

The speed and scale of expansion of midwifery academies over the last 15-20 years has meant that clinical training sites and qualified clinical teachers cannot match need and midwives reportedly graduate without actively assisting at childbirth (IBI perscomm 2014). A regulation pursued by the Indonesian Midwifery Association now (as of October 2013) ensures that all midwifery graduates must reach at least a 40.17% competency level in a written test (there is no skills testing) or continue their education. In the one area/school where this was implemented in late 2013, it resulted in only about half the class graduating. Quality improvement cycles and maternal and perinatal audits were introduced nearly two decades ago but to-date are not implemented regularly (EMAS 2<sup>nd</sup> annual report 2013).

Employment status of midwives varies—from civil servants (PNS) to short-term contract staff

(local or national, PTT), to private practitioners. Amongst the 210,000 public or dual practice bidans, IBI estimates that only 10% are employed locally; most are hired by the central MOH. Since the beginning of the Bidan di Desa program (early 1990s), midwives have been allowed to work in both the public and private sectors; from our field interviews few at village level work solely as either. If assigned to a village by the Ministry of Health in collaboration with the Provincial and District Health Offices, midwives have the possibility of three three-year salaried contracts with the Government to practice publicly. (Note that in 2010, the government put a freeze on government employment decreasing the chances for many of those recently trained to gain such employment.) Midwives graduating in 2013-14 are in such large numbers that they may also volunteer for internships at health centers to gain experience (IBI per comm 2014).

While IBI has tried to stipulate that bidans can only move to private practice after 2 years of experience, it is not clear that this is followed. The possibility to earn more in the private sector likely draws many bidans. According to a World Bank 2010 report, there is a salary differential between public sector midwives with a D1 degree and those with lengthier training (D3). Yet in the private sector, midwives charge similar tariffs and receive payment, irrespective of their educational background and training.

The 2014 government salary of a public sector bidan is about 1.7 million RP/month (or about \$140), according to IBI. A 2004-6 study in Serang/Pandeglang found that private payments contributed nearly 60% of a bidan's annual income (government salary at the time was 1.4million RP). The Askes insurance for the poor, then in place, reimbursed a bidan at too low a level and too late to focus bidan's attention on the poor—and they continued to preferentially seek private income, which was more per birth and received more quickly. Ensor et al (2008) concluded, "...Askes funding appears to have had some success at targeting the poor, but does not yet ensure that women are encouraged to utilize services. Further enhancing this mechanism is likely to require that funding adequately reflects the cost of care. It may also require some additional incentives so that midwives actively seek to provide ante- natal and delivery care to poorer women." (pg 392).

### ***Social Insurance: From Jamkesmas and Jampersal to JKN, Universal Health Coverage Interviews with stakeholders***

**Background:** On Jan 1, 2014, Indonesia initiated Universal Health Coverage with JKN, and ended Jampersal, the maternity benefit for all pregnant women. The history of JKN began in 1999 with an amendment to Indonesia's constitution including the universal right to health care. In 2004 the SJSN Law (Sistem Jaminan Sosial Nasional) formed the legal basis for attaining several social protection objectives of the country. In a follow-up law in 2011, the government provided for the administrative and implementation arrangements in the Badan Penyelenggara Jaminan Sosial (BPJS Law-2011 law #24). In 2014 consolidation of the various contributory and non-contributory social health insurance schemes formed JKN (World Bank perscomm; TNP2Kperscomm). However the technical and business guidelines for JKN were only determined mid-January 2014 —and thus were not available to give out when the program was initiated.

The JKN that ensures universal health coverage for the poor and non-poor alike depends on a data base that integrates population data drawn from the census (2010) and household spending divided by the number of HH members (using a proximate means test). Based on a MOH issued decree, SE 148, each District head received a list of the poor; verification by the Bupati resulted in about 5-6% of the names being changed. That there are issues with this database are well-

known, including its basis being the 2010 census, inclusion of only those with a residence, automatic enrollment for government employees (ASKEN), Army, police, and those enrolled in Jamkesmas, and exclusion of those in prison, orphanages, and other non-residential persons; women who move (e.g., with marriage) will be picked up in the next review of the databases. The result is that 40% of the population or over 96.7million individuals have been designated as poor or near poor and should have access to free health care. Approximately 11.9% were previously considered poor; that level is now 11.4%. Even so, protests and demonstrations have taken place in some areas, including in North Sumatra, because of people's exclusion from receiving free care under JKN. In Medan, the lists of names/addresses of people were distributed in April 2013 to Dinkes who was to send them to people. According to Dr. Maharama, BPJS Chief of Medan, the names/addresses are to be reviewed every 6 months; other names can be proposed if some have died or others become rich.

While provision of health services is free for the 40% considered poor and near poor, the premium for health care for the non-poor per person/month is low:

- Class I, 59,500 INRP
- Class II, 42,000
- Class III, 19,225 (about \$1.6).

For the poor not covered by JKN, the district Jamkesda may be used if the district Bupati (or parliament) so decides (it was suggested by a BPJS official that the district should integrate their system with JKN/BPJS).

The database for JKN is also the basis for many pro-poor programs: Jamkesmas, conditional cash transfers (PKH-the lowest 7%; CCT 2014 will include 3.2 million of the poorest), Raskin (rice subsidy). Budgeting is now underway for a review of the future database.

Table 6 presents the packages and payments by type of social insurance, starting with Jamkesmas, by provider and type of facility (public/private).

**Table 6: Social insurance with target population and service packages/payment by provider and type of facility**

<b>Insurance</b>	<b>Target population</b>	<b>Service package and payment: Bidan Polindes/Puskesmas</b>	<b>Public hospital</b>	<b>Private facility/bidan</b>
<b>Jamkesmas-</b> (2005?) Social insurance for poor/near poor Jamkesda at district level if not enough funds to cover poor (district determination of poor)	30% of pop—76.4 million; Need Jamkesmas card from National Gov or SKTM from village head	Service package covered: ANC (4), normal L/D, Vaginal delivery with complication within PONEC competency, PNC (4) for mother and newborn care, family planning See World Bank 2010	CBGs- C-section Blood transfusion	

<p><b>Jampersal</b>— 2011 -2013</p>	<p>HH and individual ID needed + pregnancy</p>	<p>-Service package covered: ANC (4-20,000 each), normal L/D (500,000), Vaginal delivery with complication within PONE competency (PPH-650,000), PNC (4-20,000 each) for mother and newborn care, long term family planning method (IUD,implant-60,000; injection-10,000 each) -Transport between facilities (based on Gen'l Cost Standard) -Covers all pregnancies (no limit on number of children) NTT—only health center/hosp; not polindes  Referral: Bidan only receives transport allowance if refers to hospital (in Ciparay)</p>	<p>CBGs: -ANC for high risk pregnancy -Normal delivery500,000(2013) -Complicated delivery-Csection3 million  -PNC for high risk preg -LT family planning</p>	<p>Bidan and priv hospitals:  MOU (renewed yearly) to claim directly from DinKes To participate: Bidan requirement is STR and SIPP (license and Puskesmas permission)</p>
<p><b>JKN</b>- universal health coverage; started Jan 1, 2014</p>	<p>Covers all medical problems for all people  Care paid by Govt for 86 million</p>	<p>Capitation amount based on population in area estimated to be pregnant  -Claim for delivery—700,000RP/case -ANC/PNC—use capitation—per woman 3000-6000 RP/visit based on quality of services and infrastructure of PKM (higher if lab etc)  FP—Basic FP for all beneficiaries</p>	<p>Amt paid to Doctor for C-section only 5% of unit cost of C-section  -Payment for C-section based on CBG and type of hospital</p>	<p>Private providers (eg., midwives) must apply as group under a doctor or dentist (family doctors can apply alone)  -Private doctor gets 30% of unit cost(C-section) -Normal birth: 600,000 for birth and 25,000 per ANC and PNC visit</p>

**Implementation and use of JKN:** To use JKN, people should have an identity card sent out by the MOH for Jamkesmas or a BPJS card sent out last April. These cards can be used in all of Indonesia.

It is known that only 80% of those on the list actually were sent/received cards. Just where the other 20% is a sensitive issue. The Ministry of Home Affairs (MOHA) has agreed to distribute the remaining cards via the sub-district leader (Camat) and in some places, action has been taken; in others, it was not done thinking that the district should distribute the cards.

Three types of primary health care facilities can provide services and make claims to BPJS: a puskesmas, pustu/polindes under a puskesmas, and private midwives (minimum of 10 bidans together with a family doctor). Previously private bidans received funds for claims directly from the district finance office without a tax being charged; this required that they sign an annual MOU with the District Health Office (DHO). Under a 2010 law on Praktek Kedokteran, primary care should be provided by doctors or dentists; only they can form private primary care networks and be reimbursed for claims. Thus under JKN, private midwives must form networks under a doctor in order to submit claims for care. However the capitation fee for the private sector has increased, from 1000 to 10,000 Rp per month—a ten-fold increase. This will apply primarily in Java, Sumatra and Bali where there is a thriving private sector.

Funds per year per Non-BLUD puskesmas (PKM) (only about 10% of 9800 PKMs are BLUD meaning they can raise and manage their own funds), are based on a puskesmas' budget per person in their catchment area. The capitation amount was also increased for these PKM but from 3000 to 6000—a six fold increase only over that used in Jampersal.

According to Dr. Prastuti of TN2PK, there are several known issues with JKN. For example, previously the Ministry of Finance (MOF) gave the MOH funds for 76.4 million Indonesians for Jamkesmas, plus a spare budget pool for 4.4 million others. Within this pool, the care of healthy babies was provided. This pool for unanticipated “others” no longer exists under JKN given auditors' concerns. For JKN, the MOF will give the MOH funds for 86.7 million people by name and address known to the implementing agency, BPJS. The baby of a woman covered previously by Jamkesmas is now covered under a recent decree (SA 31-32, 2014) that states that a baby of an insured woman must be covered; according to Dr. Maharama of BPJS, Medan, such a baby is covered for 7 days, after that it must have its own insurance. For those with Askes, their children are covered only until the 3<sup>rd</sup> child; parents must pay 1% of her/his salary as premium for child 4 and 5.

Referral mapping is specific for JKN: care must be provided according to the structural referral system of the MOH –polindes/poskesdes should refer to their designated puskesmas, then to a puskesmas PONED before being sent to a Level C hospital, and then onto higher referral hospitals (level B and then A) through that hospital. To be referred upwards typically requires a letter from the previous site, except when the case is clearly in need. In Serang, referral of those on JKN must be through hospital type C to B. As there is no type C hospital in Serang, the thinking is that women must go to Pandeglang (a nearby district) to a type C hospital or the provincial hospital (which has subspecialties and hence may soon become a type B).

In Medan, a governor's regulation (Peraturan Gubernur) provides the referral regulation—e.g., Adam Malik Hospital, the regional hospital, can only receive patients from 2 Type B hospitals (Haji and Pringadi). But according to the BPJS official in Medan, emergency cases, including complicated deliveries, can bypass that system and access any public hospital.

Joining JKN in North Sumatra are 48 hospitals with a MOU; 32 of these hospitals are private, 8 are public hospitals, 4 are for the Army and one for the police. For those hospitals without an MOU, the hospital must treat BPJS patients and can submit a claim.

**Accountability:** There are many concerns about how JKN payments will be used and claims verified. For example, in discussions with those observing and researching the insurance system,

- JKN payments are only based on capitation (for primary care) and on CBGs (for hospitals), based on facility type, not on quality of care provided. Ensuring good quality care remains an issue for the future. Although there is the Bidan Delima program for bidans (a Bidan Delima certificate means the bidan has been trained, tested and passed for quality care), the numbers of Bidans involved remain small.
- For hospitals, the protocols for the hundreds of CBGs have not been passed out and each hospital must determine how to claim for a case. Verification will not be possible (Langenbrunner J perscomm).
- For primary health care, once funds are distributed to districts, tracking of funds is difficult as districts are in charge, specifically the Bupati.
- Following a Presidential decree made in January 2014, half of the primary care funds are to go to the private sector. BPJS has set up virtual contracts online with associations of providers (no validation of who they are!).
- Soft-openings (e.g., pilots) of JKN were tried in 6 sites, including Yogja, Jakarta, W Sumatra, on information systems, card distribution, referrals and payments, but no data from these trials are yet available.

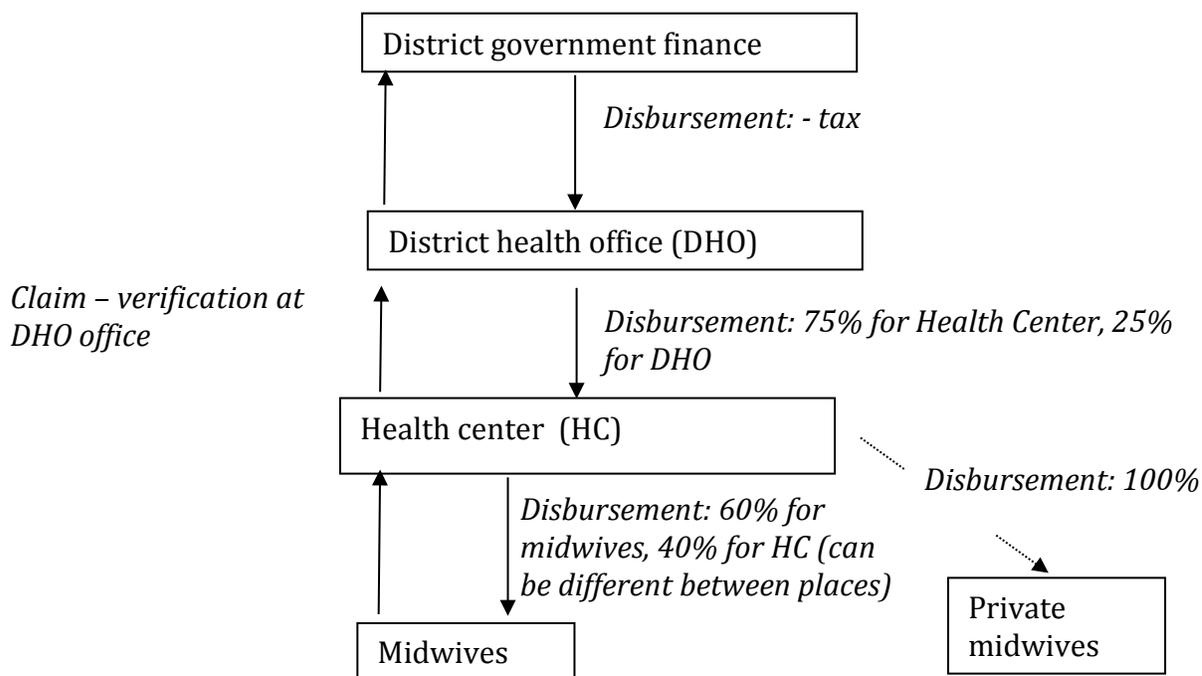
**Socialization of JKN:** BPJS is implementer of the UHC regulations but district health offices (Dinkes) needs to be in charge of the socialization specific for maternal health, according to Dr. Maharama, Chief of BPJS in Medan.

In Medan, BPJS has socialized JKN (generally) with DinKes and health facilities, the Parliament of the district, Army, and police (TOT in JKT Dec 2013); it has also used radio, TV, and newspapers, and has a classroom available if needed by others. Dr. Maharama, Chief of BPJS of Medan, feels that others now need to socialize JKN.

**Funding Flows for Social Insurance:** It is anticipated that the funding flow for JKN will follow that previously used for Jamkesmas and Jampersal (see Figure 13). The level of funds budgeted for a District Health Office is based on capitation—e.g., for maternity cases, the number of expected pregnancies in that district (see Table 6 for payment by type of service). BPJS will pay hospitals directly.

However, cash flow for claims experienced about a 6-month delay last year. According to TNP2K, to rectify this, the President stated in early February 2014, that funds must be used immediately and fully. Yet according to Dr Ovi, HOGSI, no cash has yet begun to flow this year.

**Figure 13: Jampersal Insurance money flow**



Under Jampersal, health center claims were based on the real number of antenatal (ANC) and postnatal (PNC) visits (20,000 /visit), and deliveries (initially 500,000) (healthy newborn) and verified by DHO staff. Bidans with polindes' births made claims through the Puskesmas (but not for home deliveries although some may have made such claims e.g., Medan).

At a health center, the staff divided up the funds amongst those involved (or in some places according to the Bidkor's direction). In one site it was stated that the 400,000 RP was given to the leader of the delivery—and she divided the money for the team. Private bidans, on the other hand, could claim directly—and received the full amount.

At Puskesmas/Bangun Purba—a subdistrict of Deliserdang, claims were put in every month, and it took typically 3 months for reimbursement. If BDD/puskesmas has a delivery, then she is reimbursed 100% (400,000RP) after reductions (district finance office in Bupati's office- Kas Daerah).

***Decentralization: Interviews with researchers***

Districts are clearly now in charge. Funds are sent to the districts (Bupati's office), but district priorities may not be MCH. Districts need not adopt national policies. Working with and through the Bupati and raising the level of knowledge with the local Parliamentarians are primary keys to district budgetary flows (UNFPA, Langenbrunner J. Prastuti S, Budiharsono M perscomm 2014).

While previously donors could provide funds to district governments, this is now not allowed. Funds can be passed via the Finance Ministry (but only for reimbursements as with JKN), through line ministries (but DinKes needs commitment of the central MOH which is reluctant to funnel funds due to accountability issues) or through third parties (e.g., NGOs). The issue of the latter is sustainability.

Local Statistical Offices still have a line office (BPS) but use of data has been problematic. Dr. Budiharsono stated they should be more engaged as a good source of data on program coverage and outcomes at DinKes level.

***Family planning: Interviews with policymakers and stakeholders***

Many interviewed voiced concern about the present family planning program—arguing for a focus on specific areas where religious groups, both Muslim and Christian, promote larger families, and on adolescent pregnancy, which they state, is on the rise. The 2012 IDHS findings show that 10 percent of adolescents have started childbearing: 7 percent have had a live birth, and 3 percent are currently pregnant with their first child. Since the 2007 IDHS, there has been a small increase in the proportion of adolescents who have begun childbearing, from 9 percent to the current level of 10 percent. Teens in urban areas and those with higher education, as expected, have fewer children at earlier ages. By wealth status, the proportion of teenagers who have begun childbearing varies from a high of 17 percent among those living in households in the lowest wealth quintile to a low of 3 percent among those in the highest quintile. The impact of adolescent childbearing on increased prematurity and neonatal mortality has been reported (N Walker. Perscomm).

Contraceptive use rate is high at 62 % of currently married women, with 58% using modern methods and 4 percent relying on a traditional method. Injectables are the most commonly used method, followed by the pill (32 percent and 14 percent, respectively). According to UNFPA, the drop out rate is too high—20% in the first year. Unmet need for family planning is 9 percent and has remained the same since the 1997 IDHS.

BKKBN, while not what it used to be in the 70s through the 90s, has trained on LT methods (60,000 midwives and 20,000 doctors) but according to an UNFPA evaluation, the training module was not followed and skills of the trainees is not up to standard.

Almost all women, currently married women, and currently married men in Indonesia know at least one method of family planning (98 percent, 99 percent, and 97 percent, respectively). Much of the information is garnered from television or radio, as well as from the midwife.

JKN, like Jampersal before it, is to cover “basic FP” (there is a question how this is interpreted— all mFP or only pills, condoms, injectables?). As private bidans were the primary family planning providers before, there will likely be issues, as they must form an association with a doctor to make JKN claims from now on. Problems of stockouts at polindes and puskesmas (70% if choice is the standard) have been noted.

## 5. Summary of findings:

- a. **Maternal deaths:** Based on the census, the National Academy of Sciences (NAS & AIPA 2013) reported that nearly two-thirds of maternal deaths were of women residing in rural areas. 29% of all maternal deaths were in a home, with such deaths twice as prevalent among those in rural areas (36 percent) as those in urban areas (18 percent) (NAS and AIPI 2013). No data were provided for the quintile levels of the women who died.
- b. **Coverage of care:**
  - i. **Delivery care**
    - **Poorest:** In 2012, 58% of the poorest quintile delivered at home and about 50% of these women delivered with a TBA/relative/friend—making them the most vulnerable. The trend over the decade preceding 2012 is promising: steady increased use of facilities with better resources than those at village level and with medium level trained birth attendants (midwives, village midwives, doctors, obstetricians).
    - **Poorer** (second quintile): In 2012, only about 30% delivered in home, and 12% were with unskilled care. The progression towards these 2012 figures is steadily moving towards increased use of facilities for birth with skilled birthing care.
    - **The problem of access to skilled providers in medium/high resource facilities is primarily a problem of the poorest.**
  - ii. **Caesarean section—emergency obstetric care**
    - **Poorest:** In the five years prior to 2012, only 3.7% of the poorest women had a C-section, lower than the WHO level of 5-15% considered needed for births. This rate is very slowly increasing.
    - **Poorer:** The poorer are using C-section in the 7-8% range—with steady progression upwards. C-sections among the richest at 23% are already way over the level considered necessary for obstetric reasons.
    - Trends of C-section may need to be watched carefully for overuse, especially in the private sector where most births occur although the highest risk of having a C-section is in the public sector. Amongst the poorest who delivered in a public facility, 17% had a C-section, versus 8% of the poorest in private facilities.
  - iii. **Antenatal care:** The poorest accessed ANC at 86%, most with the MOH 1:1:2 visit pattern by trimester, but they reported receiving the least antenatal services (e.g., iron folate, urine test) when they accessed such care.
  - iv. **Postpartum care:** Nearly a third of the poorest did not have PPC within the first 2 critical days post-delivery.
  - v. **Family planning:** The poorest women have a higher fertility rate (3.2) than their rich counterparts (2.2), shorter birth intervals (5.9% vs. 3.3% for the 7-17 month interval), and much higher early pregnancy (13.2% have had a child by the age of 19 vs. 1.9%) (IDHS 2012).

**c. Delays in Care Seeking—Issues/constraints and potential responses (Table 7)**

Based on the literature, site visits and interviews, the following table summarizes what we learned about the first two delays (Delay 1-recognition/decision making; Delay 2-move to facility for care). The table also lists potential responses that might address the issue/constraint faced in the delay. Note that as most studies and interviews have not provided information based on the assets of individuals, this table reflects general barriers and potential responses of women regarding accessing facilities for birth; only the IDHS has a means of determining the socioeconomic standing of individuals.

**Table 7: General delays, issues and constraints with potential responses to health care seeking during delivery, especially for the poorest, Indonesia 2014**

<b>Delays</b>	<b>Issues/Constraints</b>	<b>Response</b>
1: Recognition and decision making	<ul style="list-style-type: none"> <li>• Normalcy if have been to ANC and no problems identified</li> <li>• Late recognition of complication; severity not recognized</li> <li>• Lack of privacy, food, water, family support in facilities</li> <li>• Perceived and actual poor quality of ANC and delivery care</li> <li>• Lack of knowledge of insurance, especially re free care for the poor</li> <li>• Lack of information to pregnant and unmarried youth</li> <li>• Stigma if unmarried</li> <li>• Shame of poorest—nothing to wear</li> <li>• Quality of care-Disrespectful</li> </ul>	<ul style="list-style-type: none"> <li>• Socialize that women need to deliver in a facility (with more than one midwife); no delivery at home</li> <li>• Socialize about mother’s classes and ensure mother’s classes help mothers to plan for delivery, including recognition of complications and where to go for appropriate care</li> <li>• Ensure women/families can recognize problems when they happen (may require a support person; communications program through BDD)</li> <li>• Desa Siaga revitalize</li> </ul>
	<p><b>Constraints:</b></p> <ul style="list-style-type: none"> <li>• Lack of list of pregnant women, estimated data of delivery (EDD) and address</li> <li>• Lack of communication re transport</li> <li>• Not enough BDD in rural areas</li> <li>• Poor readiness of facilities</li> <li>• Lack of communications between village care and back up (puskesmas/hospital)</li> <li>• No referral information in clinic registers unless written on side</li> <li>• Administrative barriers</li> </ul>	<ul style="list-style-type: none"> <li>• District diagnosis of readiness (drugs/equipment/personnel/ 24/7) of all levels of facilities to provide care (hospital, puskesmas, puskesdes/polindes) and ensure adequately readiness</li> <li>• Ensure connectedness between village homes/BDD and puskesmas/hospital for referrals; community referral procedures need to be developed</li> <li>• Provide women with telephone numbers of BDD, puskesmas, transport</li> <li>• Improve quality of space for care (e.g., privacy)</li> <li>• Improve respectful care</li> </ul>

<p>2: Move to care</p>	<p>Insurance:</p> <ul style="list-style-type: none"> <li>• No knowledge of insurance</li> <li>• No card</li> <li>• No diagnosis papers</li> <li>• Stigma</li> <li>• Lack of clarity about what is covered</li> <li>• Ineffective targeting of the poor/near poor</li> </ul> <p><b>Constraints:</b></p> <ul style="list-style-type: none"> <li>• Young women do not get cards</li> <li>• Babies need card if later than 7 days post delivery</li> <li>• Referral pathway of insurance scheme may increase time to appropriate facility</li> <li>• Private bidans must form an association with a doctor in order to make claims for insurance coverage</li> <li>• What basic FP care is covered?</li> <li>• Lack of clarity of the JKN role vs Jamkesda in covering the poor</li> </ul>	<ul style="list-style-type: none"> <li>• Socialization about insurance package (post on puskesmas, hospitals) to providers as well as to families (e.g., via mother's classes, posyandu, mKIA)</li> <li>• Advocacy to improve JKN for maternity care (e.g., opening up the referral pathway; cards for babies available easily; pay for transport from home to referral site)</li> <li>• District diagnosis on knowledge of JKN and maternity services of families and of providers, the referral pathway (and time needed to go between levels of care as well as time for decision making), transport; impact of JKN on provider referral patterns due to possible disincentives to refer; impact of JKN on provider incomes to diagnose perverse effects; impact of JKN on patterns of MH and family planning care, given that private bidans and private facilities may not sign up/be eligible for JKN; impact of JKN on quality of care at hospital/puskesmas as may increase patients, thus decreasing quality due to limited HR/service readiness; JKN funding flow pattern and impact on care provided.</li> </ul>
	<ul style="list-style-type: none"> <li>• Delay in contacting midwife or midwife coming to home</li> <li>• Time to find transport, arrange finances and paperwork (insurance card, card from desa leader), pack, organize the household/care for children, before leaving home.</li> </ul>	<p>Socialize planned childbirth during ANC (or earlier?), provide women with EDDs and telephone numbers of BDD, puskesmas, nearest appropriate hospital</p>
	<ul style="list-style-type: none"> <li>• Preference for home delivery</li> <li>• Lengthy discussion re complication, facility, time of day, money, other children's care, who to make decision</li> <li>• Women feel shame</li> <li>• Influence of mother/Mother-in-law</li> </ul>	<p>Document at hospital level timing of decision making, first delivery site, time between sites needed if referred; Site response to complicated cases</p>

## 6. Recommendations to USAID

Since the late 1980s national plans and policies in Indonesia have focused on improving maternal health, emphasizing midwives in every village as the major strategy. To-date, the government is committed to identifying and addressing ongoing challenges as they arise. Studies abound, both qualitative and quantitative, including five successive Demographic and Health Surveys, multiple national surveys (Riskesdas, Risfaskes and Susenas), and a census, that provide needed information on service readiness and coverage, plus several estimates of the maternal mortality ratio.

Even so, a good proportion of the poorest still remain outside of facilities for delivery—and most likely contribute to the continued relatively high levels of maternal mortality in Indonesia. But information specific to the poorest is not readily available outside of the IDHS. Given this, the assessment provides our findings generally re barriers to use of services, and where possible, specifically about the poorest, based on literature reviews, interviews with women who have or have not used facilities for delivery, and with stakeholders at national and district levels who are engaged and interested to improve Indonesia's maternal health program.

Given USAID's comparative advantage to fund advocacy at national level, implementation programs at district level, as well as studies needed for clarification, we commend the following to address this need:

**a. *Financial accessibility for the poor***—advocacy for addressing this barrier  
JKN, the new social insurance for all, provides much promise as well as anxiety. How can it's promise of health care for all be achieved without guidelines for any level, without protocols for CBGs, with online sign up for the private sector, and some specific guidance that could cause maternal mortality to increase, rather than decrease. Referral mapping and the requirement for private bidan associations under the guidance of doctors are two specific concerns requiring ***urgent response before they become a disincentive of the social insurance scheme***. Just informing DinKes and health facilities (public and private) available about the maternal health package such that services are provided when women seek them would be a major step forward as we met with such confusion and in some cases, providers who had stopped providing services due to the confusion.

While IBI already knows about and is actively engaged in raising concerns about the referral mapping and need to form associations of private bidans under doctors, they could advocate for changes in the referral networks based on the clause that allows emergencies to bypass lower levels and proceed to any hospital (including private hospitals).

To promote such an effort, IBI (or others) needs **urgently** to determine the maternal care package (addressing the newborn at the same time) and who could best provide such care, and advocate for such with BPJS. Ensuring family planning for all women, the young and the old, married and unmarried, and those post-delivery and post-abortion—needs also to be clearly incorporated without abusing the choices of women.

***b. Socialization at community level with information regarding JKN, planned childbirth, EDDs, free delivery, danger signs, papers needed, and where to deliver, including information on referral sites and transportation, to promote timely use of facilities for birth***

While the above effort to advocate for a more responsive JKN maternal coverage may assist at

policy level, it does not address the vacuum that exists at community and health system levels. Also the JKN will not fulfill its potential to address the cost barrier that the poorest feel, unless there is more information available at community level. Both women and providers need more information about JKN –how to use it to access services, what services are covered, and how to navigate the referral system; this perhaps affects the poorest most specifically but the informational vacuum of JKN is fairly general. The Bidan di Desa are an obvious vehicle to provide information on JKN, danger signs, and local transportation, and develop planned childbirth including birthing plans with each women during ANC (given the high levels of the poorest women accessing ANC this would reach all but about 14%). Yet the BDD themselves need more information on JKN as do their backup support at health center and hospital levels to provide the care needed, to expedite referrals and provide the needed information and guidance to women. According to the interviews, the Desa Siaga and PKK are less viable vehicles to reach isolated women. If religious groups are involved, it needs to be all religious groups.

Studies on two specific barriers to access may improve socialization of JKN and timely use of services for birth:

- (deleted) illness recognition to understand how to communicate with women and their families about obstetric problems to improve their recognition of such when it is happening. Studies in the past have found that women, who are aware of such problems and can recite them, are not the only ones who need to be alert at the time the problem happens. Their families must be part of this effort—even better is to designate a person to support the pregnant woman in labor and accompany her to the facility for care. Such recognition of danger signs may also vary across areas; hence having more than one study site is probably useful (e.g., in Serang women are quite separate whereas those in Bandung have more social support).
- Determine the timing of the delays to accessing facilities for delivery and their causes. For example, we do not know why women take so much time to go from delay 1 to delay 2 and 3, and what might lessen these time delays. This is a critical step toward ensuring women reach needed services in time. Such an effort should be part of the district documentation discussed in 3 below.

### ***c. Reaching the unreached***

The focus of this assessment is the poorest of the poor and the vulnerable—including the very young and unmarried, those in remote corners, and those stigmatized by disease, poverty, type of employment (informal sector) or other. Unfortunately we found little data available outside of the IDHS that provided information on the poorest, and specifically no current qualitative studies on the poorest and their access issues. How to draw them into care is likely to take a special initiative to find them—and work with them. Finding means of connecting with these women should build on qualitative information to determine their specific concerns and vehicles for accessing them (e.g., local leaders, local women’s groups).

USAID could provide vehicles to initiate such efforts:

- Advocacy efforts (deleted) could become a basis for such outreach to the poorest in rural areas
- Building on USAID TB and HIV efforts may also be useful as such women are known to have a higher risk of maternal mortality.

***d. Documentation and TA to districts to strengthen decentralized leadership and programming***

Indonesia obviously has a complex and layered health system structure, with variation in programming possible in each of the 500+ districts and municipalities, little local data available to guide or monitor programs, perhaps little knowledge of program leadership and management at district level, and little encouragement to reach across domains of service to work together (e.g., for Dinkes to work with local transport and roads, those in the private sector, those in Home Affairs or Women's Empowerment). This situation is compounded by the slow release of funds to districts on a yearly basis, the varying laws/regulations that guide each district's use of funds, and the lack of district accountability including lack of upward reporting on results. At midwife level, the lack of cohesion and coordination continues--among the providers and between the levels of providers, likely stimulated by disincentives from the various insurance schemes, and multiplied by varying skill levels and infrastructure to support them. And it is the woman and her family who are left to navigate this system—especially left out are the poorest and the least educated.

While complexity seems to be a norm in Indonesian governance, especially since decentralization, this is not a normal year. It is an election year—and JKN for Universal Health Coverage has been initiated without guidance (and possibly funding) —and Jampersal stopped abruptly.

Before jumping to programs that attempt to rectify a piece of this puzzle, it would be useful to document what is happening at district level—especially those districts with low use of facilities for delivery by the poorest and high levels of maternal mortality. Such documentation could begin with:

- i. Registering pregnancies and following them to know where and with whom women deliver and why, referrals made, costs, knowledge and use of insurance, and outcomes. This may require strengthening the LAMAT system.
- ii. Measuring maternal mortality and newborn outcomes, and using confidential inquiries to know why and what happened, has proved extremely useful (see D'Ambruso 2009; Qomariyah et al 2010)—and is already policy in Indonesia (e.g., Maternal Perinatal Audits). In other contexts, follow up of near miss cases has proved a valuable tool with some advantages over maternal death audits. A near miss is defined as “a woman who nearly died but survived a complication that occurred during pregnancy, childbirth or within 42 days of termination of pregnancy” (Say 2009; WHO, 2009). Such cases are more common than maternal deaths and provide powerful information on the pathways that lead to maternal deaths. Near miss reviews are also less threatening for the health care providers because the women survived (Ronsmans and Fillipi, 2004). In addition, the larger number of cases allows further disaggregation of data, for example across geographical or other relevant sub-groups and so helps to identify those areas in greatest need of interventions.

A specific focus on referral follow-ups has not been published but methods could easily be developed using the near miss method by selecting only those near miss cases who were referred. And if referred, it would be useful to know the timing from home to the various referral sites, time from admission to diagnosis to treatment, providers seen and treatments provided.

- iii. Following budget/funding flows and determining whether the new insurance JKN continues to disincentivize midwives from serving the poor, or referring women upwards, as reported by Ensor et al 2009, would be timely. Following the policy and budgeting of funds available and used for MH outside of JKN would also be useful— as well as documenting how programs are regulated and managed-- inputs and personnel, coordination between primary health care and hospitals, and the relation of such programming with outputs and outcomes. This could build on the important Jamkesda study on universal health coverage already underway.
- iv. Diagnosing readiness of facilities to respond (HR, supplies/equipment) and their turnover and 24/7 availability would begin to determine program implementation issues. Doing observations along the lines of D' Ambrusio would begin to understand the quality perceived and provided, and the referral process at work.
- v. Provincial level involvement in guiding and supporting the MH programs at district level is unclear, but it is a potential point for scale up. Finding and documenting provincial –district interaction to assess potential and key points for program expansion would be helpful.

Moving from this knowledge base to productive technical assistance at district level may be a further step, similar to that tried with UI in a 2010-11 project in Bandung and Bogor (see World Bank, *The Journey*, 2011). Ending before it had a chance to grow due to lack of resources, this action TA project was a first in trying to work within the confines of DinKes to move local programming towards reducing maternal deaths without added resources. Building on this effort may result in new knowledge of how to work in this very decentralized and compartmentalized world of Indonesia.

***e. Improve village level care***

The goal behind the Bidan di Desa program has now become a hindrance: providing a midwife for every village has resulted in the burgeoning of private midwifery academies, and too many bidans per births with too few skills. There are too few clients to train with and too few clients in a village to maintain any skills that were learned. Indonesia tops all countries in terms of numbers of midwives per birth—with more than 30 midwives/1000 births vs. the WHO benchmark of 6/1000 births.

Secondly, the Bidan di Desa' deployment strategy has isolated the village midwife, rather than extended the reach of the puskesmas. Typically the BDD interaction with puskesmas staff is only during monthly meetings or their rounds on staff at the puskesmas. Mentoring and supervisory visits appear low to non-existent with funds not available to transport the Bidkor on village rounds.

Given these concerns it is time to advocate for changing the role of the BDD to one of recording (registering women when pregnant, her place of delivery and referral, and outcomes of pregnancy—including stillbirths, deaths and newborn birth weight), providing antenatal care to all, ensuring each woman has a childbirth plan (including knowledge and papers for JKN as needed), support person and a facility delivery, and ensuring immediate postpartum maternal and newborn care/family planning care and follow up to all post-delivery. IBI may be the best candidate to take up this agenda.

BDD have played a key role in initiating referrals for women and this should be strengthened— with a specific referral strategy (including communications and transport payments to the BDD)

and where to refer given specific problems (e.g., normal deliveries women and those with low level risk to puskesmas; obstetric complications and those women with hypertension, anemia and twin (or more) births direct to appropriate hospitals). Incentives for sending women for facility births, rather than keeping the births in the village, may accelerate facility (minimally puskesmas level) delivery. Note that the government is already discussing a new focus for midwifery—“4 hands at delivery” may become a new indicator. While this does not go so far as to say women should deliver in a functioning facility, it makes a step towards involvement of more than one midwife being present at delivery.

Building respectful care is much needed—focus on respectful care should be considered as a potential vehicle to understand how to influence providers to respect women (and vice versa).

***f. Strengthen facility-based support for referrals***

The referral response is only as strong as the facilities the BDD refer to. The World Bank, the NIHR and HOGSI reports, have all found specific problems of inadequate staffing, equipment and supplies at facility level—whether at hospital (PONEK or non-PONEK) or puskesmas levels (PONED or non-PONED). Ensuring a system of referral that can provide support and be funded by JKN is much needed—starting at community level. At least one facility in each of the high maternal mortality districts needs to have adequate infrastructure and staffing for life saving maternal/newborn skills. Given that EMAS already focuses 50% of its effort on referral (but only between facilities), it may be useful to augment their facility referral efforts to reach into the villages with necessary skills for the BDD to recognize women with a possible problem and women with obstetric complications—and the means to move that woman to a place that can respond.

***g. Capturing the equity dimension in data***

Given that segments of the population are still unreached -- those who are very poor and others--having indicators of inequity is crucial. Gwatkin and Ergo (2010) stated that it is unreasonable to expect universal coverage to lead to health equity. Without commitment to identifying and including poor people from the beginning, universal coverage initiatives are very likely to leave the poor behind.

The need to monitor and evaluate referral systems is also key to lowering the maternal mortality ratio, yet there have been no indicators routinely monitored to assess the quality of the referral process; there is no standardized form to even record referral processes in facilities at all levels. Where data on referral has been recorded, utilization is found not optimal (i.e., EMAS referral study).

Pregnancy registration, which could be the basis (denominator) for coverage and impact rates and is needed for good programs (who is pregnant, her address and her EDD; educational status or other proxy for equity), is not yet available. The only available data on pregnancies relies on the report of the village midwives; how many women are left out is not known. For women already recorded (i.e. the rate of first ANC visit is more than 90% according to the IDHS 2012), outcomes of their pregnancy are not necessarily known.

One possible way to capture who is pregnant and where she is located, is using community informants, such as marriage registration, kaders, and heads of neighborhood units. The LAMAT effort may already provide such a starting point although it was not evident in the field.

Another possibility is to work with TN2PK which already has a database based on insurance data that includes those who are poor. Working with TN2PK to enhance their system with improved maternal health indicators would provide useful data on use of services by the poorest; they also need help to ensure their data analyses are current. Two possible indicators for inequity proposed are: C-section by the lowest quintile, and place of births in lowest quintile(s).

A method to capture all maternal deaths in a specific area was developed and piloted in two districts of Indonesia (Qomariyah et al, 2010). It is an efficient method as it uses community informant networks to capture the data, instead of doing house to house survey. This method can be adapted to be used to capture information on pregnancy. Moreover, involving community informants can be an advocacy tool as well as a milestone for the development of vital registration system, a mandate of international bodies. For women who are already recorded by the health providers (midwives) through the ANC visit, there should be an obligation to report the outcome of pregnancy of all of those women.

Building the capacity of the district statistics office to ensure they provide support to collect such information and compile the rates would be one starting point—and would enable the Dinkes and Bupati's office with knowledge of how their programs are progressing.

#### ***h. Secondary data analyses***

Existing data could be analyzed to better understand the maternal health situation for the poorest, including data from the Population Census 2010 and IDHS 2012. There has been a census follow-up study conducted in Indonesia (by visiting families of about 4,000 maternal deaths) to collect information on causes of death and health seeking behavior patterns. These data can be linked with the main census data to have information on maternal mortality as well as health seeking behavior by quintiles. A similar analysis but with far fewer data points could also be done using the latest IDHS.

Data from the latest Riskesdas could be analyzed further to see, for example, use of insurance by type of cases, by outcomes (especially infant death, stillbirth, neonates/ENM), and by place of delivery (whether it is public or private and by urban/rural) (not clear Riskesdas has quintile data).

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## Annexes

### Annex 1 Scope of Work

The Purpose of the Assessment is to analyze why so many women who die from maternal causes still do so at home, without proper medical attention, and to make programmatic recommendations on how USAID could catalytically influence this.

Of particular interest are to give further insight into the issues of: 1) **Referral** from the community or “the two delays” (see Background description) including rejected referrals from health facilities; 2) the impact of **social health insurance** on access by the poorest of the poor – both historical and prospective; and 3) **Cultural, bureaucratic, or other factors** which contribute to why so many women deliver at home and die at home from maternal causes.

The primary objectives of the assessment are to:

1. Assess the contribution of the first two delays to the problem of persistent maternal mortality.
2. Describe and assess the scope of the problem of women being turned away from health facilities once they are referred (and why).
3. Identify key cultural, financial (HH, community, district), gender, logistic, governance or other barriers that contribute to the delays, and rank them in some order of importance.
4. Identify existing laws, policies, regulations or guidelines that support improved programming around village referral and how these are being implemented. Also identify if there are laws or policies that are barriers to access.
5. Assess the impact of social insurance on accessing services – historically (Jampersal, Jamkesmas and Jamkesda) and prospectively (anticipating universal health coverage).
6. Compile and group suggestions from stakeholder and local interviews with communities about recommended solutions.
7. Make recommendations on USAID’s comparative advantage in programming in this area – complementary to GOI, other donor, and EMAS efforts, within given cost constraints.
8. Identify the most catalytic areas for USAID to program work with a limited amount of funding, and which will complement the existing MCH activities, and fit within the current CDCS (USAID/Indonesia Country Strategy).

#### 1.a Background

USAID /Indonesia is committed to helping Indonesia reduce maternal and newborn mortality nationally by 25% respectively. Under Development Objective 2 of the USAID/Indonesia Strategy, USAID aims to decline preventable maternal deaths, by expanding essential services to the most poor and vulnerable. Women in the poorest quintile are disproportionately affected by maternal and newborn mortality. While many deaths happen in health facilities, even more happen at home. Those women who do access health services generally have higher education and wealth status. It is the poorest of the poor who are dying at home.

Current programming, through the Expanding Maternal and Newborn Health (EMAS) project focuses on the six provinces with the highest maternal and newborn mortality, and which

together represent more than 50% of national maternal and newborn mortality. The main focus of this project is to stabilize, refer and treat women with complications from the puskesmas to the appropriate higher level of care, and to go to scale with a model of facility-to-facility learning and mentorship. This project was designed based on several analyses of maternal mortality which indicated that up to 45% of women die in facilities.

Even more never reach a facility or are referred so late that the facility cannot help them - truly the “poorest and most vulnerable.” While “skilled attendance at birth” remains relatively high (83.1% in the 2012 DHS), this includes many home births with a midwife. Only 63.2% deliver in a “facility” and some of those facilities are inadequate, such as a midwife’s house. Current literature now demonstrates that only skilled attendance at an equipped and qualified facility will actually impact maternal mortality. Data show that birth at facilities is correlated with wealth quintile and education, with the poorest and least educated delivering outside a facility or with unskilled care. While most women start labor at home, there are multiple factors that determine if and when she is referred to a facility for care.

The “three delays” which contribute to maternal mortality have been well-documented and described<sup>1</sup>. These three delays, in summary are:

- 1) Delayed decision to seek care at the point where the woman starts laboring
- 2) Delays in accessing care once the decision has been made
- 3) Delayed response once the patient has arrived at the facility

EMAS is helping to address the third delay, but the first two delays still exist. It is unclear how much “decision making” – the first delay, contributes to delayed referral, or how much “logistical delays” (the second delay) contribute. Within the second delay there is also good evidence of women repeatedly turned away from facilities, so this is another aspect of the “second delay” that does not have a lot of evidence. There are also women who, for other reasons, referral is never an option, and so never get to the stage of “first delay.” These “pre-delay” women are likely the poorest of the poor, and their situation is largely undocumented. The 2012 DHS indicates that barriers to care (generally) for women include not wanting to go alone (23%), money (15.2%), distance (10.5%), and permission (5.1%), and that “younger women, women with no children, women who are never married, women who are not employed or employed not for cash, those who live in rural areas, women with no education, and women from the lowest wealth quintile were more likely than other women to say they would face at least one serious problem in accessing health care.” Indeed, only 29.7% of women in the lowest wealth quintile delivered in a health facility, compared to 88.1% in the top wealth quintile. The gap between the lowest wealth quintile and the second lowest is large – with 57.2% in the latter category delivering in a facility. This assessment will shed some light on the barriers to accessing care by the poorest and most vulnerable segment of the population and its contributing factors.

According to the 2012 DHS, 63% of women do not have health insurance. Indonesia will begin to roll out universal health care (UHC) on January 1, 2014, an opportunity that is expected to

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<sup>1</sup> Thaddeus S, Maine D. Too far to walk: maternal mortality in context. Soc Sci Med 1994; 38: 1091-1110

bring more people to health facilities by removing cost of services as a barrier, but which has risks as well of overwhelming the facilities; and of not being able to maintain or increase quality of care. USAID is supporting research for the Dewan Jaminan Sosial Nasional (DJSN) on how various Jamkesda (district-level health insurance) programs operate and could be incorporated into universal health coverage. The roll-out of universal health coverage – including decisions on who is covered (e.g., how will those in the informal sector be covered?), barriers to enrolment, what services are covered (contraceptives? all antenatal, delivery and postpartum care? Pregnancy-related morbidities? Post-abortion care? Ectopic pregnancies?), and how associated costs will be met (e.g., transportation, prescriptions, blood services), are imperative to increasing access by the poorest. A continuous source of assessments and local evidence to inform the evolution of universal health coverage will also be important on the policy-side towards ensuring increased access by the poorest women to emergency health services. This assessment will look at the potential for UHC to improve access to health facilities by the poorest and most vulnerable women, and what value-added role USAID could play to facilitate this.

Finally, the variability in culture and mores in districts across the country is not widely acknowledged by policymakers, but issues of trust between the most marginalized women – including adolescent or unmarried women may be problematic to accessing services in some areas. Responsive local policies to ensure the universality of services in the interest of public health and development are important local governance components to improving maternal outcomes. Maternal outcomes is also related to continuation of education, access to contraceptives, economic/job prospects for women, and women’s empowerment. This assessment will examine other options and opportunities – including cross-sectoral such as education or government accountability - that are not part of the mainstream conversation about barriers to care, and shed some light on what role they play in access to services.

While this assessment is not directly targeted at newborn mortality, USAID hypothesizes that the same interventions that bring women to a higher level of health services, will also help their newborns.

### **Indonesian Government’s Commitment to Reducing Maternal and Neonatal Mortality**

Indonesia is committed to achieving the MDGs, but is not on track to do so for MDGs 5 (maternal mortality). The DHS 2012 indicates that maternal mortality is increasing. While under-five mortality is declining, newborn mortality is not, and now represents over 50% of all under-five deaths. The government maintains a strong commitment to reducing MMR and NMR through increased maternal health and family planning programming.

A number of central level initiatives exist or are being developed to support improvements in the health sector. Existing programs include “Making Pregnancy Safer” guidance, the national P4K program. (Persalinan dan Pencegahan Komplikasi program), Desa Siaga, improved “AMP” (maternal and perinatal audit) policies, and Hospital Emergency Response Programs. New initiatives include laws on human resources at the puskesmas level, improved data collection systems, a “newborn health action plan,” a new “maternal handbook,” plans to better integrate planning, and improved emergency services. A new head of the Family Planning Board (Bkkbn) will also help revitalize family planning to reduce unwanted pregnancies, delay births in

adolescents, limit births for older women, and healthy spacing of births for women who want children.

However, each district remains vastly different from one another, and roughly 80% of the funds for health are at the discretion of the district. The vast majority of district funds are spent on personnel or administrative costs, and are not correlated with improvements in health outcomes.<sup>2</sup> Local advocacy remains an important element to achieving sustainable results.

### **Audience**

The audience for this assessment includes the USAID/Indonesia staff of the health office and the USAID Essential Services team. This assessment may also be shared with the Indonesian Ministry of Health; the World Health Organization; the UN Children's Fund; as well as other donors.

### **1.b Methodology**

The assessment team is expected to propose a combination of methodologies to USAID which must include document reviews and key informant interviews, and may also include focus groups with stakeholders to describe and assess current programs, their effectiveness and outcomes. The evaluation should include field visits to areas where EMAS has programs, and interviews or focus groups appropriate to making informed conclusions. The assessment team will review documents provided by USAID/Indonesia, and also conduct their own research, from peer-reviewed or otherwise reliable sources.

The assessment is expected to consult with all relevant stakeholders: Donors, central and local government, social insurance entities and experts, local service delivery providers, and community representatives (women and men). Gender sensitivity is as important in the methodology as it is in the recommended outcomes.

## **2. SCOPE OF WORK**

A staff from USAID/Washington will lead the assessment. The consultant will:

1. Review available materials related to maternal and newborn care, referral and mortality in Indonesia, including internal analyses, publications, laws and policies, program materials, data, etc.
2. Participate in a team planning meeting with USAID, including other stakeholders as required, to review and refine the scope of work, refine the outline for the final report, develop a detailed workplan and schedule of activities, detail the roles and responsibilities of the team members, and other preparations as needed
3. Review/refer to key peer-reviewed literature, country evaluations, and reliable country data related to MMR and referral; barriers and opportunities to program implementation; and scalable programmatic lessons learned from Indonesia or other countries as appropriate. Specifically, review EMAS program information, including data from assessments, monitoring data, and special studies. Review EMAS project documents

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<sup>2</sup> Lewis, Blane D. "Twelve Years of Fiscal Decentralizations: A Balance Sheet." (draft) Sept 9, 2013 forthcoming in *Indonesia Update*, 2014.

describing EMAS approaches and activities, especially those addressing the second delay.

4. Assist in developing questionnaires and tools for interviewing stakeholders and clients.
5. Interview stakeholders alone or with the team lead, including the Ministry of Health UNICEF, WHO, medical associations including IBI, POGI, health service providers (midwives, doctors, nurses), and community representatives, others as required.
6. Interview selected women/families and bidan di desa in up to six districts of two key provinces to help validate other findings related to why the poorest women continue to die at home. (nb, this plan would be refined in the planning meeting)
7. Review and analyze any maternal audits done by district health offices in visited districts – for completeness and for evidence of delays, insurance factors or other important links.
8. Analyze data quantitatively and qualitatively as appropriate to make conclusions and recommendations. Make recommendations for further investigations or research in this area.
9. Help team leader compile all relevant data, analyze and synthesize findings.
10. Make inputs to the final report to describe typical referral (or lack of) experiences of poor or vulnerable women – specifically the universe of barriers to seeking care.
11. Help complete a report based on these reviews and compiled information that will be appropriate to share with GOI, donor and implementing partners.
12. Make recommendations along with the team leader for addressing barriers to accessing care by the poorest women by category and potential scale of impact. Other factors such as estimated cost, timeline to impact, and feasibility should also be noted.
13. Participate in debrief meetings with USAID/Indonesia, the MOH, and possibly other stakeholder (MCHN Donor Group) on key findings.

### **Document Review**

Prior to conducting field work, the team will review various project documents and reports, including (but not limited to):

1. *D'amburoso, Lucia, Peter Byass and Siti Nurul Qomariyah, "Maybe it was her fate and Maybe she Ran Out of Blood": Final caregivers perspectives on access to care in obstetric emergencies in rural Indonesia.* *J Biosoc. Sci.*, (2010) 41, 213-241.
2. "...and then she died" Indonesia Maternal Health Assessment, February 2010 (MOH, WB, DFID)
3. <sup>1</sup> Lewis, Blane D. "Twelve Years of Fiscal Decentralizations: A Balance Sheet." (draft) Sept 9, 2013 forthcoming in *Indonesia Update*, 2014.
4. Jamkesda studies from TNP2K and Ascobat Gani
5. Evaluation of the Health Services Project (HSP) in Indonesia: Taking Stock and Looking Forward (2011)
6. EMAS baseline referral assessment, 2011
7. AusAID pre-published qualitative report on Health Seeking Behavior
8. DHS 2012
9. RisKesDas data online.

10. Iskandar, Meiwita B>, Budi Utomo, Terence Hull, Nick G. Dharmaputra, and Yuswardi Azwar, “Unraveling the Myseteris of Maternal Death in West Java,” Center for Health Research – Research Institute University of Indonesia. FINal Report February 9, 1996
11. Other relevant studies and materials from Indonesia or other countries related to referral, related program design, and evidence of best practices.

### **Field Visits and Key Interviews**

Suggested key partners to interview include:

- The Indonesian Ministry of Health
- The Indonesian Ministry of Women’s Empowerment
- District Health Officers
- EMAS
- WHO
- UNICEF
- AusAID/MoTFA
- Indonesian Association of midwives (IBI)
- Indonesian Association of OB/GYN (POGI)
- Muhammadiyah and Ayisiyah representatives
- Health facility doctors, midwives and administrators
- Community Representatives (women and men).

Data sources and collection methodologies should be noted in the final assessment report.

### **Assessment Report**

The team will prepare an initial draft report highlighting key findings, conclusions, and recommendations to the USAID Mission for review and comment. Subsequent drafts will also be provided for review and comments. A debriefing session on the assessment findings will be held in Indonesia with the USAID Mission. Finally, the consultants will prepare a final report that will be submitted to the Indonesia Mission.

A separate report will also be gleaned from the final report that will be a public document and shared with the Government of Indonesia and other stakeholders which does not include specific programmatic recommendations or other sensitive information. Presentation of this report will be organized to present to interested stakeholders.

A suggested outline for the report includes:

- Overview
- Comparative regional or global information
- Situation Analysis – including data and current programs and partners
- Evidence base for addressing stunting
- Gaps in programming
- Challenges associated with programming
- Opportunities (including sociocultural, political, financial, other...)

- Recommendations

All assessment tools as well as raw data will be given to the mission in hard and soft copy.

## **Debriefings**

The consultant team will debrief the USAID/Indonesia Mission as well as key stakeholders once the report is nearing the final stage. Appropriate executive summary material and corresponding graphics should be prepared for these presentations. The objective of the debriefing is to share the draft findings and recommendations, solicit comments and inputs, and clarify any remaining questions or issues.

### **I. Roles and Responsibilities**

USAID/Indonesia will support the assessment team with the provision of background documents to the extent possible, helping to identify key stakeholders, manage and support the activity, review and submit comments on draft reports, and organize de-briefings.

The main contacts at USAID will be:

Mildred Pantouw  
USAID/Indonesia  
Senior MCH Program Manager  
Tel: +62-21-3435-4319  
Mobile: +62-  
Email: mpantouw@usaid.gov

Rachel Cintron  
USAID/Indonesia  
Maternal and Child Health Team Lead  
Tel: +62-21-3435-9411  
Mobile: +62-811-940-2370  
E-mail: rcintron@usaid.gov

The consultants will be responsible for their own administrative support, and will manage their own logistics and transportation, including local travel, phone calls, e-mail communication, and submission of deliverables to USAID. They will also independently access background information as needed, and contact stakeholders.

USAID and the contracting partner are expected to work closely and collaboratively together towards the success of the assessment.

### **II. Team Composition and Skills**

#### **Assessment Team**

The assessment team will consist of two consultants. One consultant, Marge Koblinsky from USAID/Washington Bureau for Global Health will act as the Team Leader and will have overall management authority of the assessment. The Team Leader will be responsible for providing leadership, coordination, and facilitation of all assessment activities. The Team Leader, in consultation with the Senior Indonesia MCH Lead, will develop a work plan and timeline, to be shared with USAID/Indonesia for feedback and comments. The Team Leader will be required to

ensure quality of work and provide direction and coordination to the other team member. The Team Leader will coordinate the development of the outline for the draft report, present the report, and after incorporating the comments, submit the final report to USAID within the prescribed deadline.

### **III. Estimated Timeline**

The estimated timeline is based on a 5-day work week; exact timeline may be adjusted for travel or local holidays.

Initial briefing and consultations	1/2 working day
Literature review and work-plan development;	4 1/2 working days
Consultations, focus groups, information gathering. This may include travel/site visits as approved in the workplan.	14 working days
Data review and analysis	3 working days
Report drafting (including USAID consultation on first draft)	5 working days
Final briefings	1 working day

**Total: 28 days**

## Annex 2 Quantitative Analyses

### A. Tom Pullum, ICFI—Trends in birth attendants, place of delivery, csection by quintile and by public, private, home, based on IDHS 2003-2012

Prepared by Tom Pullum, The DHS Project, [tom.pullum@icfi.com](mailto:tom.pullum@icfi.com), February 14, 2014 at the request of Marge Koblinsky, USAID/MCH.

#### Objective

To use DHS data to describe trends in the quality of care at childbirth in Indonesia, as indicated by the skill level of persons present at the delivery and the resource level of the place of delivery. The focus is on differences by wealth quintile.

#### Data

The 2007 and 2012 DHS surveys of Indonesia. The reports on these surveys are available at <http://www.measuredhs.com/pubs/pdf/FR218/FR218%5B27August2010%5D.pdf> and <http://www.measuredhs.com/pubs/pdf/FR275/FR275.pdf>, respectively.

#### Indicators

Information about the types of birth attendants and place of delivery are available in these surveys for births occurring during the five years preceding the date of the woman's interview.

Types of birth attendants are recorded with a set of binary questions about each possible type, coded 1 if the specified type of person was present and 0 if not variables m3a through m3m). It often happens that two or more categories of attendants are indicated—for example, a doctor and a family member. These binary responses need to be recoded into a single categorical variable that identifies the highest level of the expertise that is present—for example, a doctor.

**Birth attendants** in the 2012 survey were recoded into three categories, indicating high, medium, and low skill levels. The categories were as follows:

*High skill level:* m3b (obstetrician)

*Medium skill level:* m3a (doctor), m3d (midwife), m3e (village midwife)

*Low skill level:* m3c (nurse), m3g (traditional birth attendant), m3h (relative/friend), m3k (other), m3n (no one).

**Place of delivery** in the 2012 survey (m15) simply requires a grouping of places into levels of resources available. Three categories were formed as follows, indicated by the value of m15 that was selected:

*High resource:* public hospital/clinic (21), private hospital (31), private maternity hospital (32), private clinic (34), obstetrician (36)

*Medium resource:* public health center (22), public delivery post (24), other public sector (26), private maternity home (33), general practitioner (35), private midwife (37), private village midwife (39), other private sector (40), other (96)

*Low resource:* respondent's home (11), other home (12), public village health post (23), private nurse (38)

Place of delivery in 2012 will also be grouped as follows:

10-19: Home

20-29: Public

30-40: Private

96: Other, coded "missing"

Some "places" were identified by types of attendants, e.g. "obstetrician". Such cases were assigned to the same level (high, medium, low) as was used for birth attendant.

The classification was essentially the same for the 2007 survey.

Birth attendants in the 2007 survey:

High skill level: m3d (obstetrician)

Medium skill level: m3a (doctor), m3c (village midwife), m3e (midwife)

Low skill level: m3b (nurse), m3g (traditional birth attendant), m3h (relative/friend), m3k (other), m3m (don't know), m3n (no one).

**Place of delivery** in the 2007 survey:

*High resource:* government hospital (21), private hospital (31), private maternity hospital (32), private obgyn (36)

*Medium resource:* government health center (22), other public (26), private maternity clinic (33), private clinic (34), private doctor (35), private midwife (37), private village midwife (39), other private medical (40), delivery post (51), other (96)

*Low resource:* respondent's home (11), other home (12), government health post (23), private nurse (38), health post (52)

Place of delivery in 2007 is grouped as in 2012:

10-19: Home

20-29: Public

30-40: Private

96: Other, coded "missing"

Each birth in the five years (60 months) before each survey could therefore be classified by calendar year of the birth, skill level of birth attendant, and resource level of place of delivery. Calendar year 2007 was included in both surveys. In the first survey "2007" refers to approximately the first half of that year, and in the second survey it refers to approximately the last half. Similarly, in the second survey "2012" is limited to approximately the first half of that year. Calendar year 2002 is not included here because there are only about a third as many births in that year as in the other years (an artifact of the data collection). Thus ten calendar years of birth are described here, 2003 through 2012.

## **Findings**

### **National level profile and trends**

The annual distributions by birth attendant and place of delivery show a steady progression toward greater skills and higher resources, respectively. The pattern for skill level is shown in tables 1 and 2 and figure 1. The percentage of births with a medium skill level stayed relatively flat, but the percentage with a low skill level showed substantial decline and the percentage with a high skill level showed a substantial increase. We interpret the trends as indicative of two kinds of shifts. First, births that would previously have had low skilled attendants shifted to medium skill, and those that would previously

had medium skilled attendants shifted to high skill. The combination of entrances into, and exits from, the middle skill level is responsible for the lack of change in the size of this category. Some mothers may have transitioned directly from low skilled attendants to high skilled attendants, completely skipping the middle category.

The trend for place of birth has been somewhat different. The percentage of births in the low resource category shows a very dramatic decline, and the percentages in both of the other categories, middle and high, increased substantially.

The steadiness of these trends within each survey and across the ten-year range is impressive. The transition from the period covered by the 2007 survey to the period covered by the 2012 survey is very smooth, and the estimates for 2007 arising from the two surveys can be safely pooled.

Table 1. Percentage of births that were attended by persons with low, medium, and high skills, in calendar years prior to the 2007 DHS survey of Indonesia.

Skill level	year of birth				
	2003	2004	2005	2006	2007
Low	31.5	31.0	27.2	24.7	23.5
Medium	57.9	56.4	60.6	61.5	60.3
High	10.6	12.7	12.2	13.9	16.2
Total pct	100.0	100.0	100.0	100.0	100.0
Weighted n	3,269	3,258	3,239	3,365	2,168

Table 2. Percentage of births that were attended by persons with low, medium, and high skills, in calendar years prior to the 2012 DHS survey of Indonesia.

Skill level	year of birth					
	2007	2008	2009	2010	2011	2012
Low	22.2	18.2	18.4	16.7	14.4	12.5
Medium	59.5	61.8	62.6	62.7	63.0	66.2
High	18.3	20.1	19.0	20.5	22.6	21.3
Total pct	100.0	100.0	100.0	100.0	100.0	100.0
Weighted n	1,649	3,375	3,256	3,411	3,634	1,514

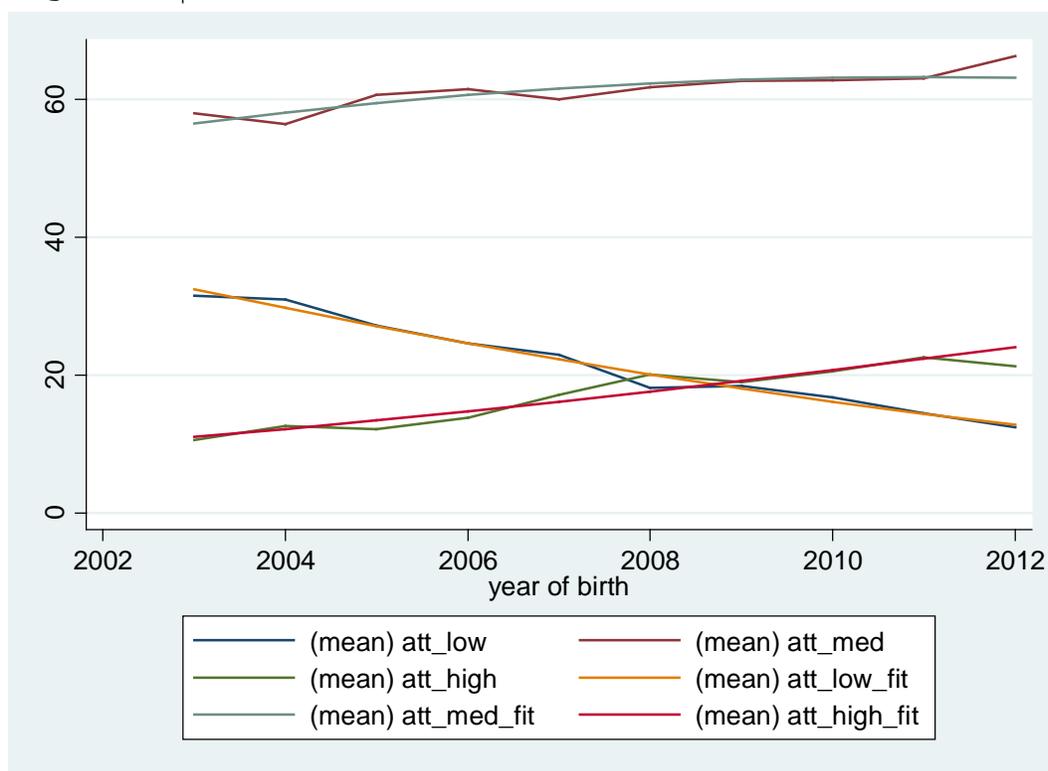


Figure 1. Trends in skill level of birth attendants in Indonesia from 2003 to 2012. Top line in 2003, relatively flat, refers to medium skill level. Middle line in 2003, with decline, refers to low skill level. Lowest line in 2003, with increase, refers to high skill level. For each level, the graph includes a smoothed line. The rate of increase is greater for birth attendants with high skill than with medium skill, but in 2012 fewer than a quarter of all deliveries had attendants with high skill.

Table 3. Percentage of births that were delivered in places with low, medium, and high resources, in calendar years prior to the 2007 DHS survey of Indonesia.

Resource level	year of birth				
	2003	2004	2005	2006	2007
Low	57.2	56.6	52.6	49.1	49.3
Medium	29.2	28.0	32.9	33.5	31.8
High	13.6	15.4	14.6	17.4	18.9
Total pct	100.0	100.0	100.0	100.0	100.0
Weighted n	3,244	3,226	3,219	3,361	2,161

Table 4. Percentage of births that were delivered in places with low, medium, and high resources, in calendar years prior to the 2012 DHS survey of Indonesia.

Resource level	year of birth					
	2007	2008	2009	2010	2011	2012
Low	42.9	41.8	38.6	36.4	31.5	27.0
Medium	34.0	32.3	36.5	36.5	39.1	45.2
High	23.1	25.9	24.9	27.1	29.4	27.8
Total pct	100.0	100.0	100.0	100.0	100.0	100.0
Weighted n	1,650	3,376	3,258	3,411	3,633	1,514

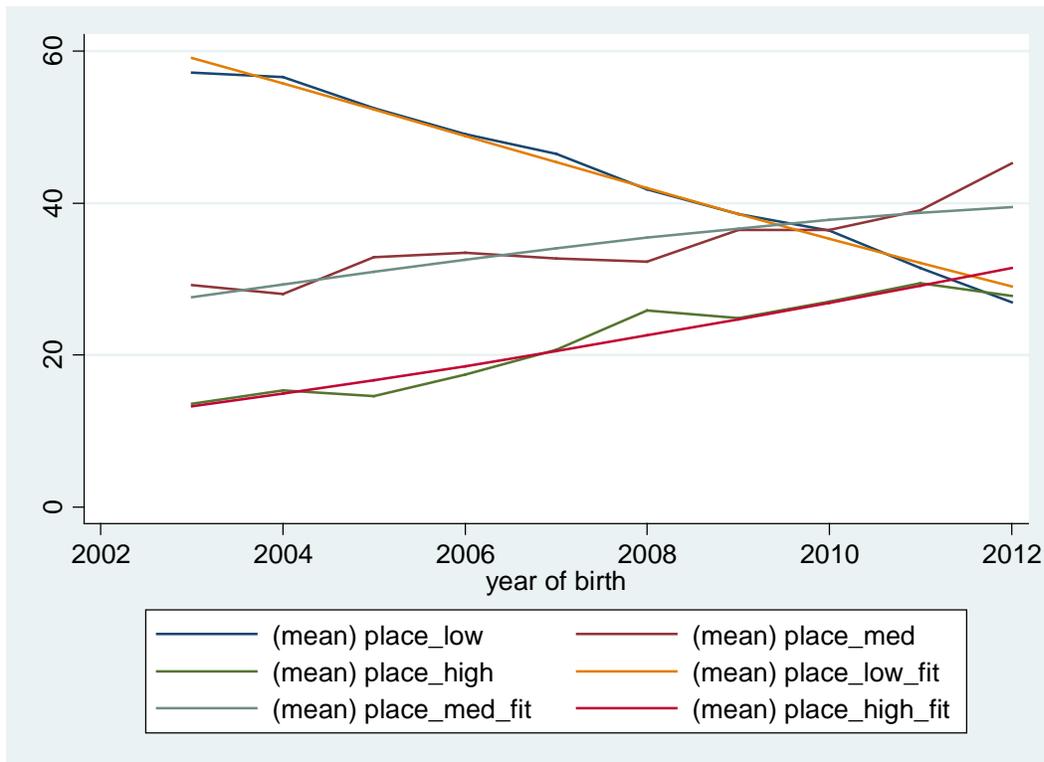


Figure 2.

Trends in resource level of place of delivery in Indonesia from 2003 to 2012. Top line in 2003, with decline, refers to low resource level. Middle line in 2003, with increase, refers to medium resource level. Lowest line in 2003, with increase, refers to high resource level. For each level, the graph includes a smoothed line. There is a steep increase in the use of medium and high facilities. The rate of increase is greater for high resource facilities, but in 2012 they still accounted for fewer deliveries than medium resource facilities.

Table 5. Percentage of births that were delivered in places classified as home, public, or private, in calendar years prior to the 2007 DHS survey of Indonesia.

Home, Public, Or Private	year of birth				
	2003	2004	2005	2006	2007
Home	57.1	56.7	52.7	49.3	49.4
Public	8.7	9.6	8.8	10.8	12.2
Private	34.1	33.7	38.6	39.9	38.4
Total	100.0	100.0	100.0	100.0	100.0
	3,220	3,209	3,199	3,334	2,145

Table 6. Percentage of births that were delivered in places classified as home, public, or private, in calendar years prior to the 2012 DHS survey of Indonesia.

Home, Public Or Private	year of birth					
	2007	2008	2009	2010	2011	2012
Home	42.8	41.7	38.3	35.9	31.1	26.4
Public	14.9	14.9	15.4	17.6	19.9	23.6
Private	42.3	43.4	46.3	46.5	49.0	50.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
	1,648	3,374	3,252	3,401	3,628	1,513

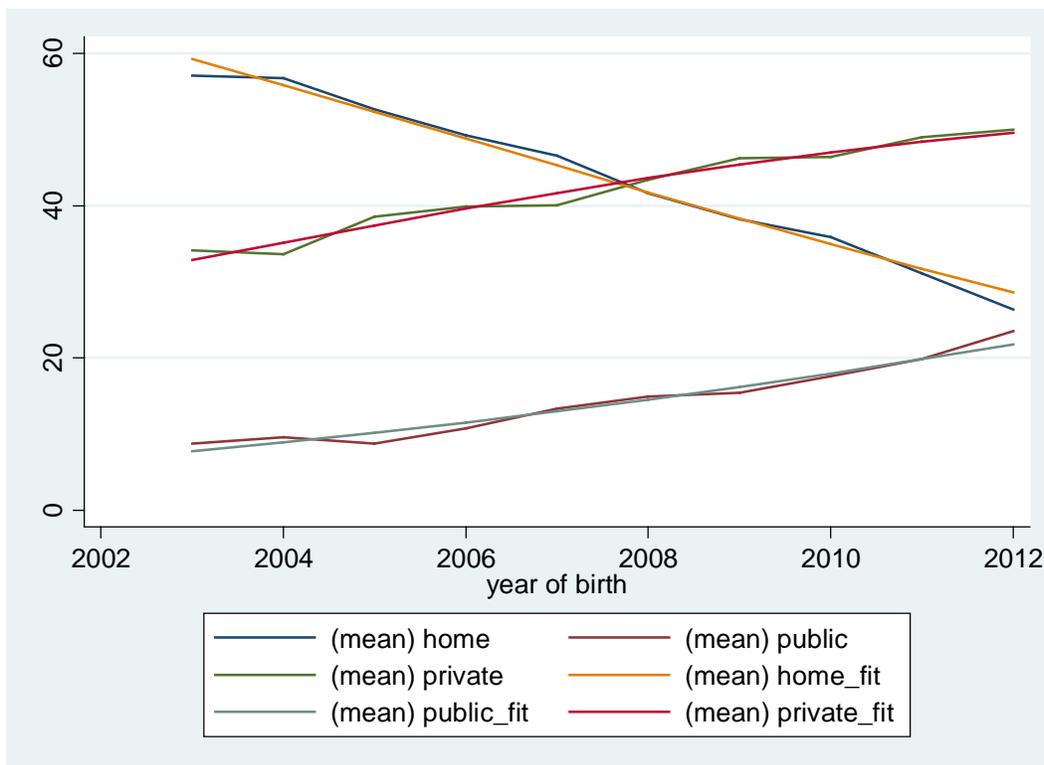


Figure 3. Trends in home, public, or private place of delivery in Indonesia from 2003 to 2012. Top line in 2003, with decline, refers to home delivery. Middle line in 2003, with increase, refers to private facility. Lowest line in 2003, with increase, refers to public facility. For each level, the graph includes a smoothed line. Both public and private facilities are increasing, but consistently about 26% more of all deliveries are private than are public.

## Differences by wealth quintile

Tables 7, 8, and 9 give the percentage distributions across the categories of birth attendants and place of delivery for births occurring in 2012, within wealth quintiles.

Table 7. Observed percentage of births at each level of birth attendants, in 2012, by wealth quintile. Indonesia 2012 DHS Survey. (Row totals are 100%)

Wealth	Birth attendants		
	Low	Medium	High
poorest	36	54	10
poorer	11	73	15
middle	10	70	20
richer	1	73	26
richest	1	62	38
Total	12	66	21

Table 8. Observed percentage of births at each level of place of delivery, in 2012, by wealth quintile. Indonesia 2012 DHS Survey. (Row totals are 100%)

Wealth	Place of delivery		
	Low	Medium	High
poorest	58	28	14
poorer	31	49	20
middle	25	46	29
richer	9	55	36
richest	8	49	43
Total	27	45	28

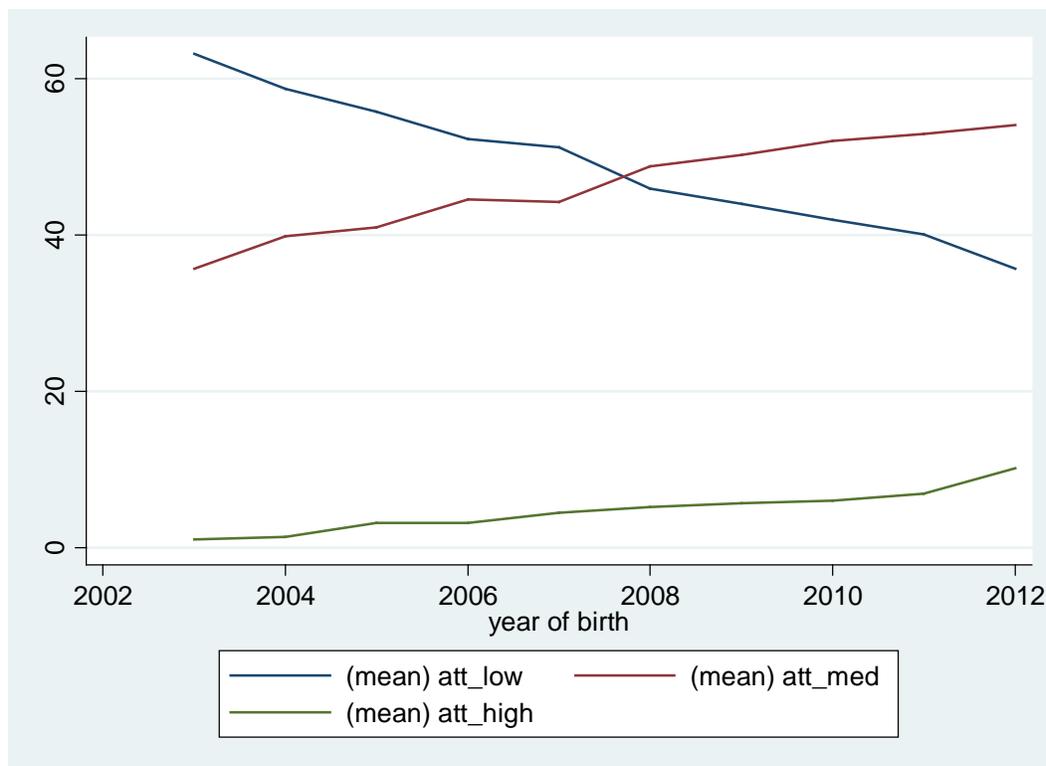
Table 9. Observed percentage of births by home, public, or private place of delivery, in 2012, by wealth quintile. Indonesia 2012 DHS Survey. (Row totals are 100%)

Wealth	Place of delivery		
	home	public	private
poorest	57	24	19
poorer	30	27	43
middle	25	27	49
richer	8	27	65
richest	7	12	80
Total	26	24	50

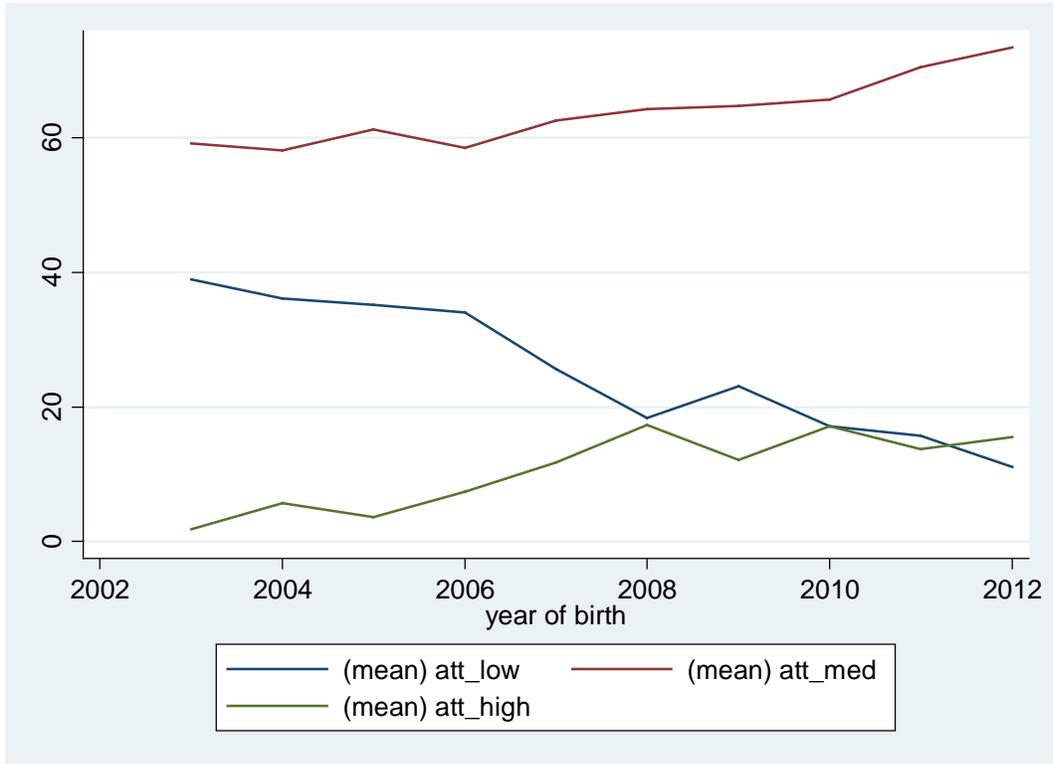
**Five figures for type birth attendants by wealth quintile, 2003-2012. 2007 and 2012  
DHS surveys of Indonesia**

**Blue line: Low skilled birth attendants**  
**Red line: Medium skilled birth attendants**  
**Green line: High skilled birth attendants**

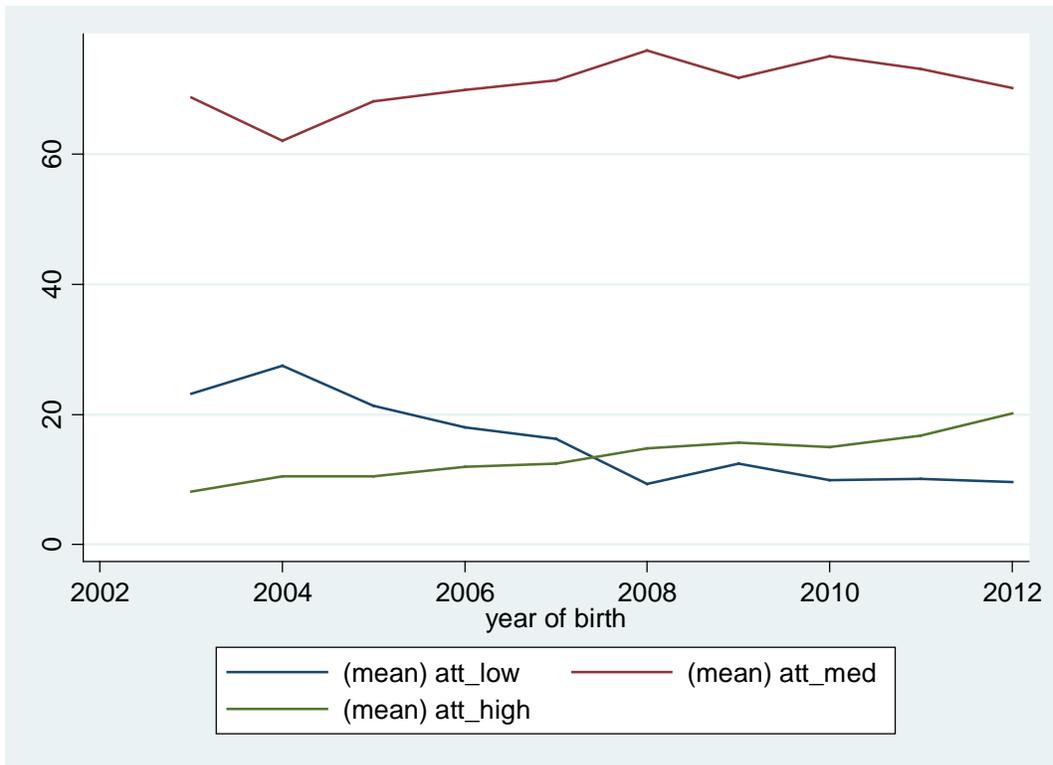
Poorest



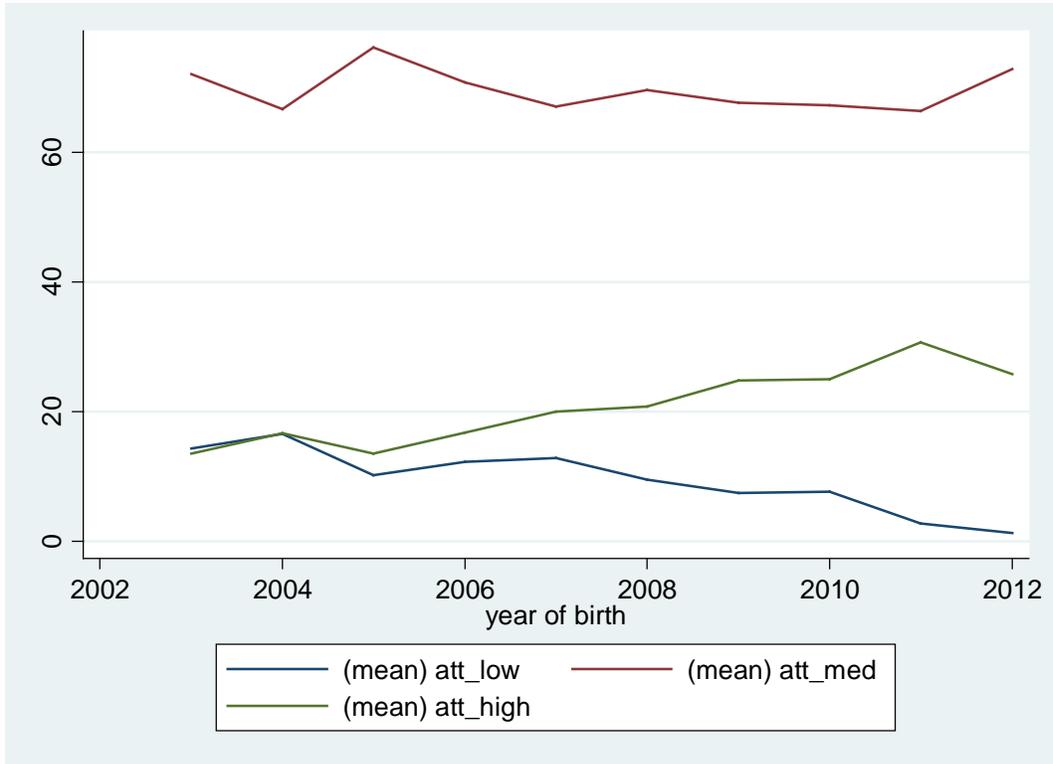
### Poorer



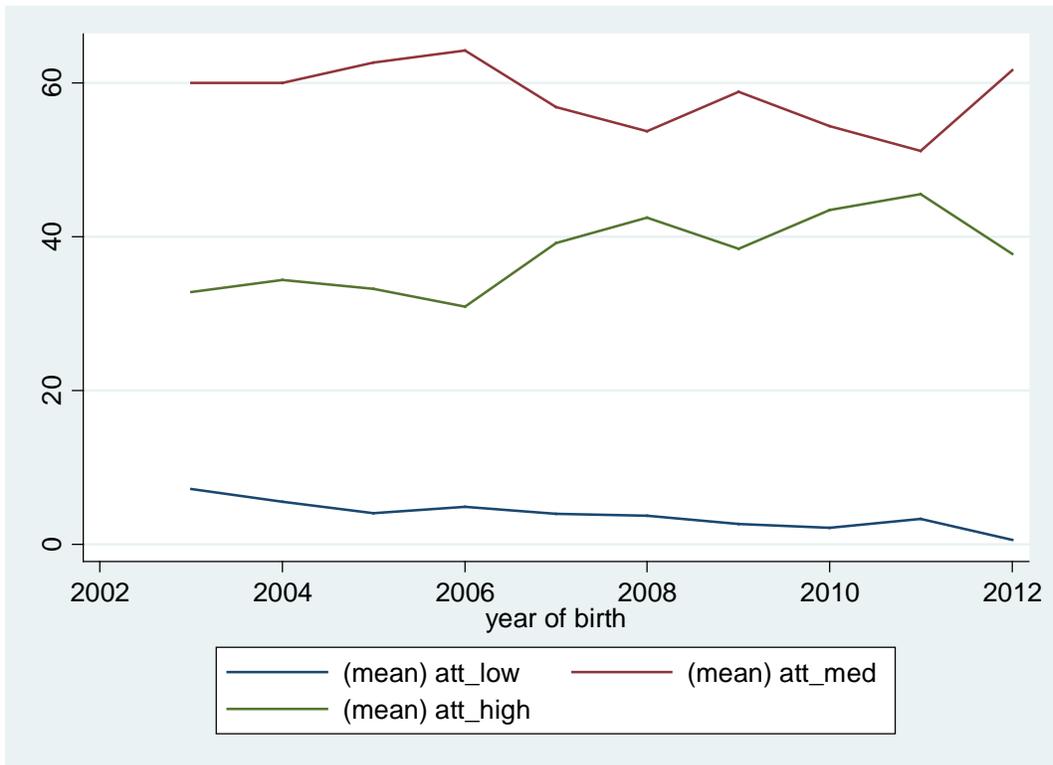
### Middle



### Richer



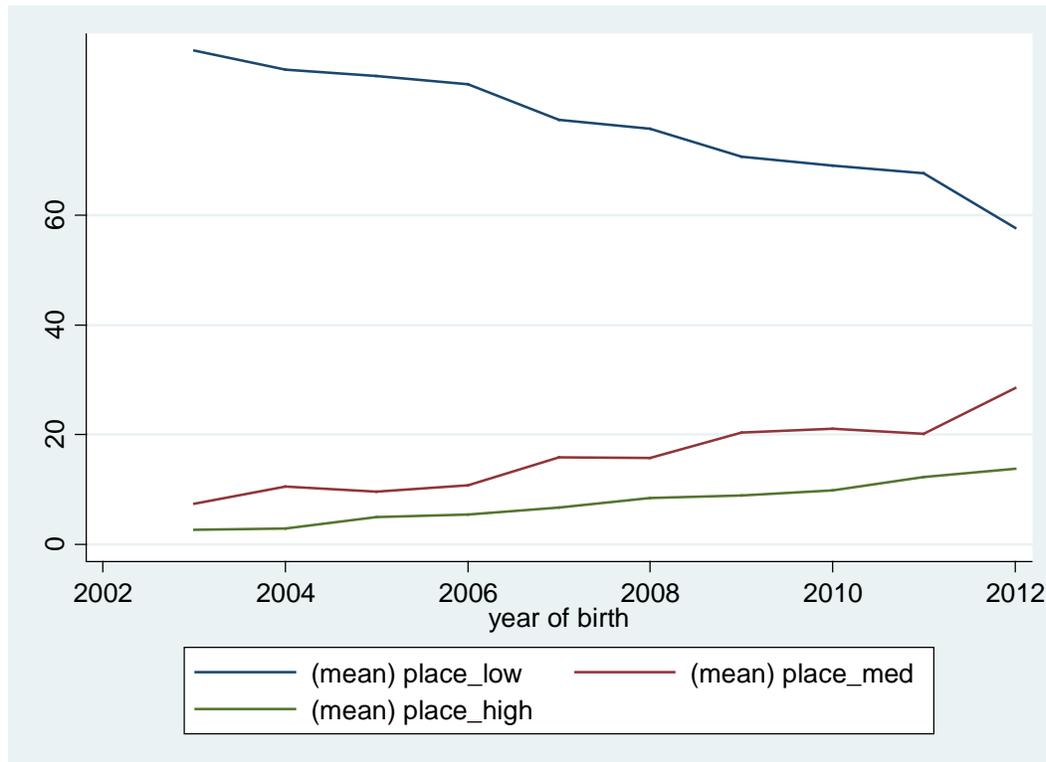
### Richest



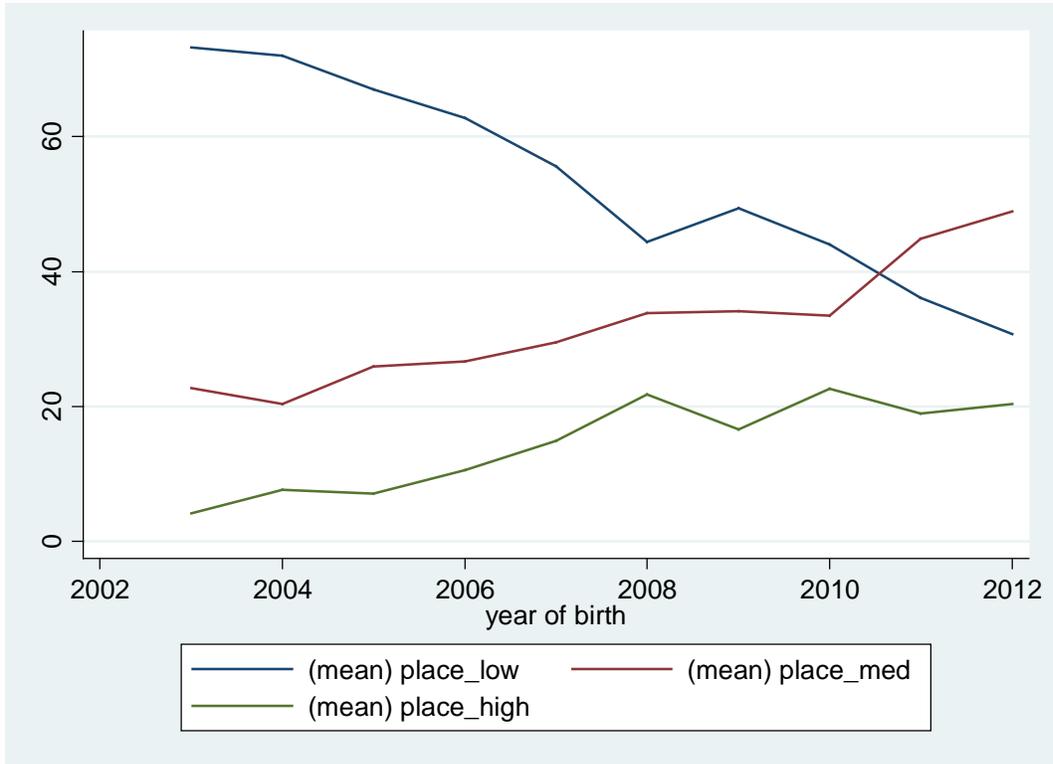
**Five figures for place of delivery by wealth quintile, 2003-2012. 2007 and 2012 DHS surveys of Indonesia**

**Blue line: Low resource place of delivery**  
**Red line: Medium resource place of delivery**  
**Green line: High resource place of delivery**

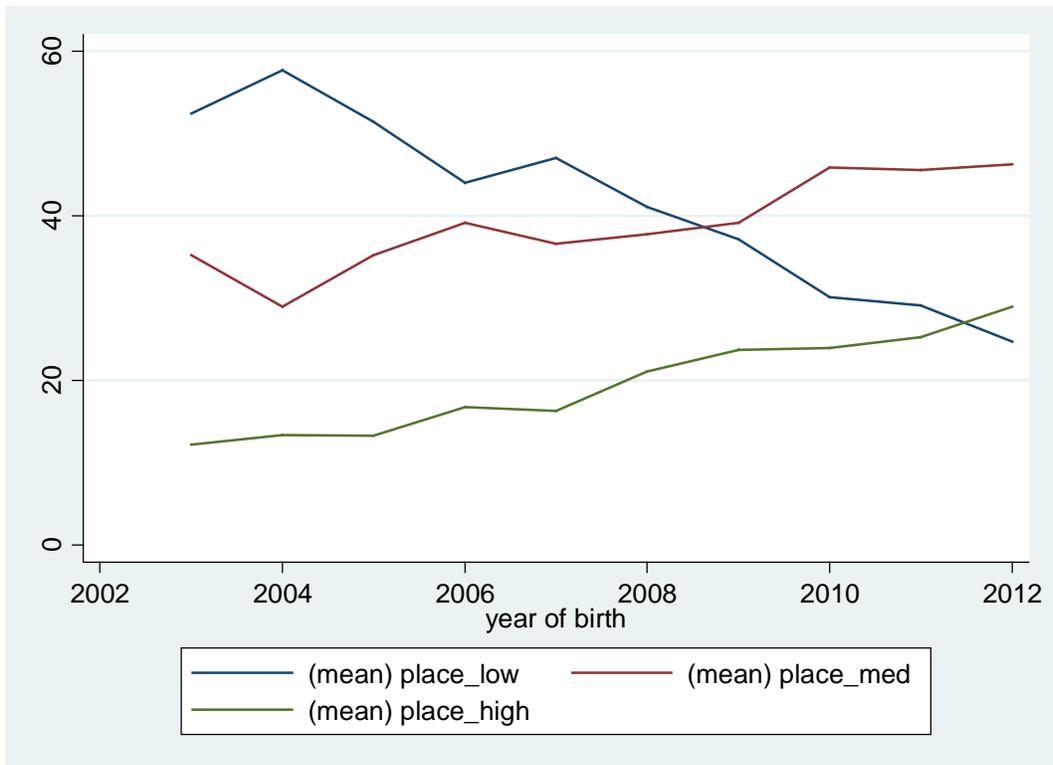
Poorest



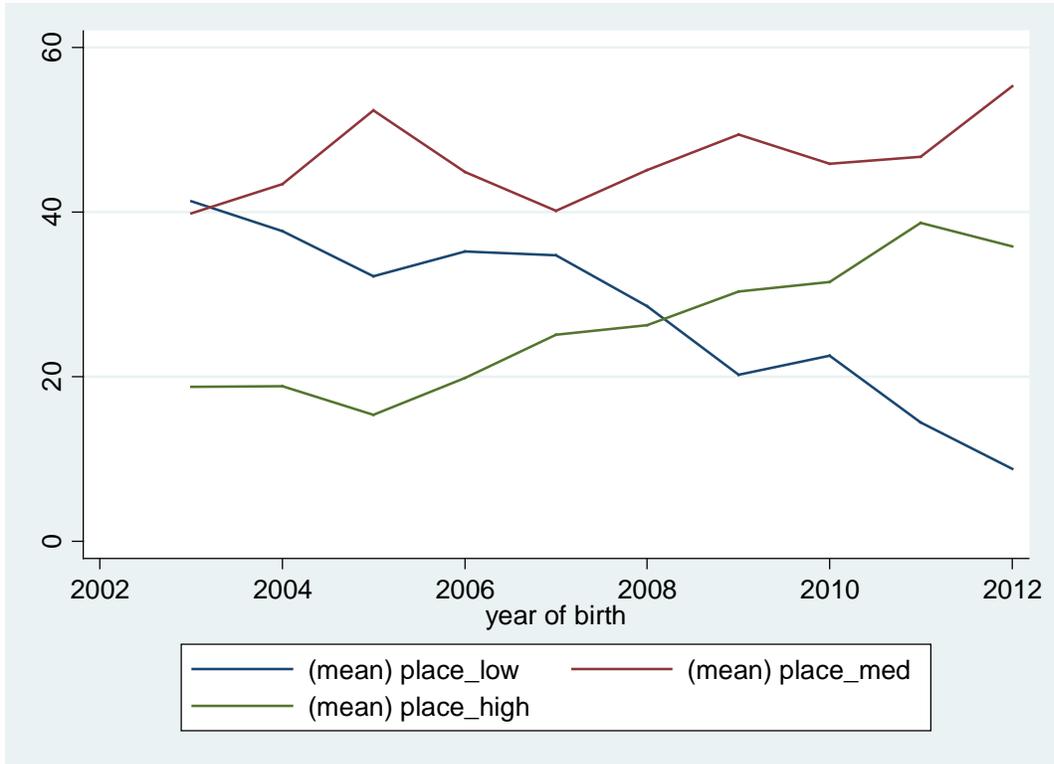
### Poorer



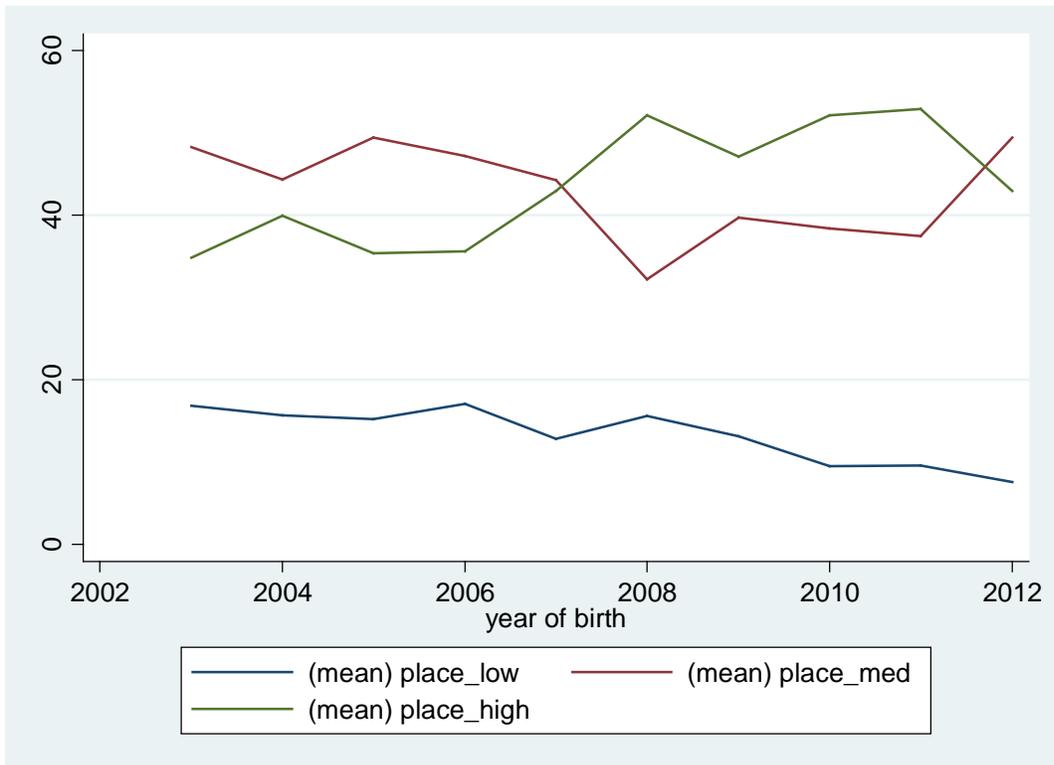
### Middle



### Richer



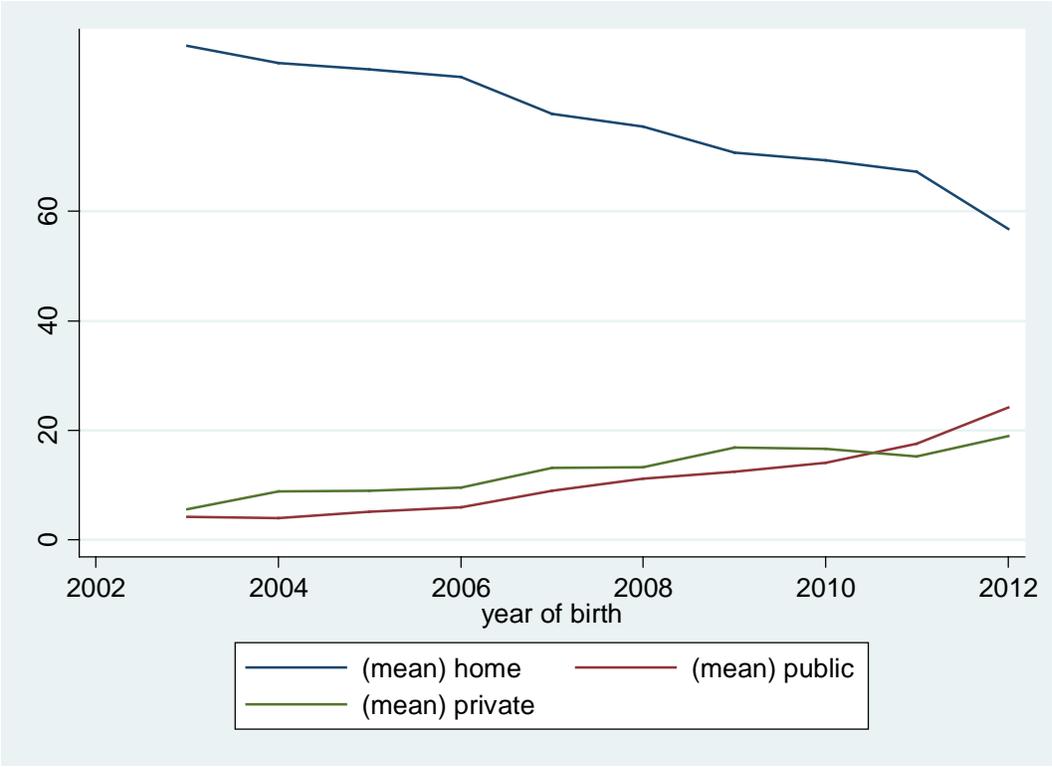
### Richest



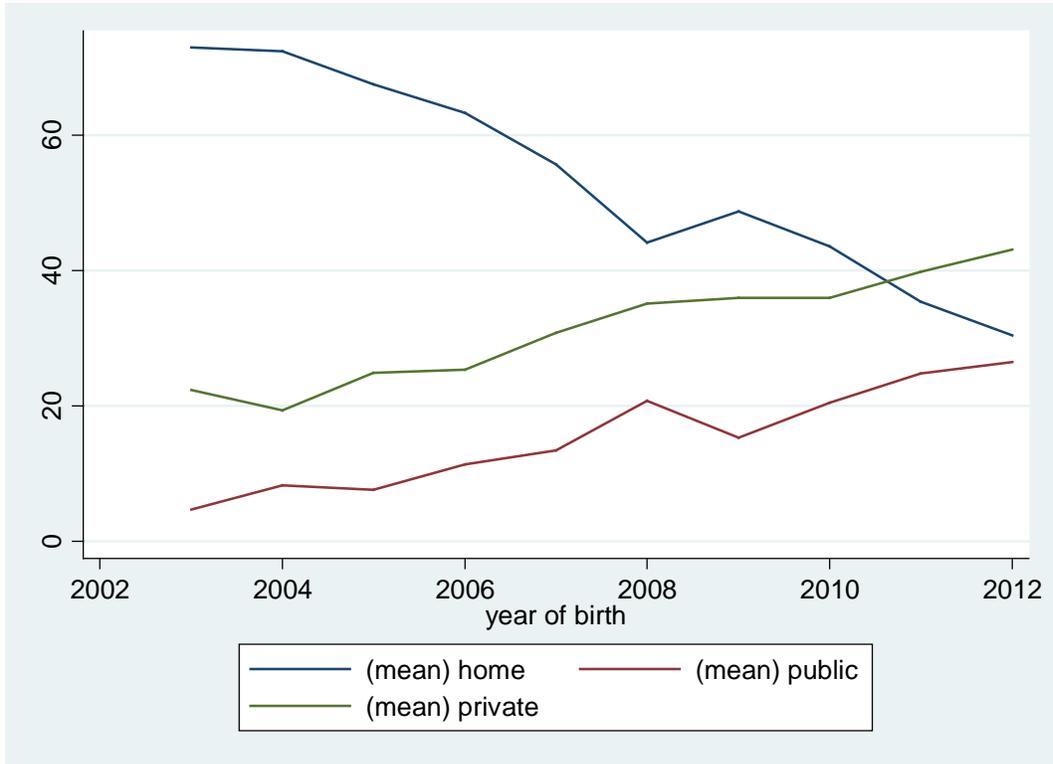
**Five figures for home/public/private place of delivery by wealth quintile, 2003-2012. 2007 and 2012 DHS surveys of Indonesia**

**Blue line: Home**  
**Red line: Public**  
**Green line: Private**

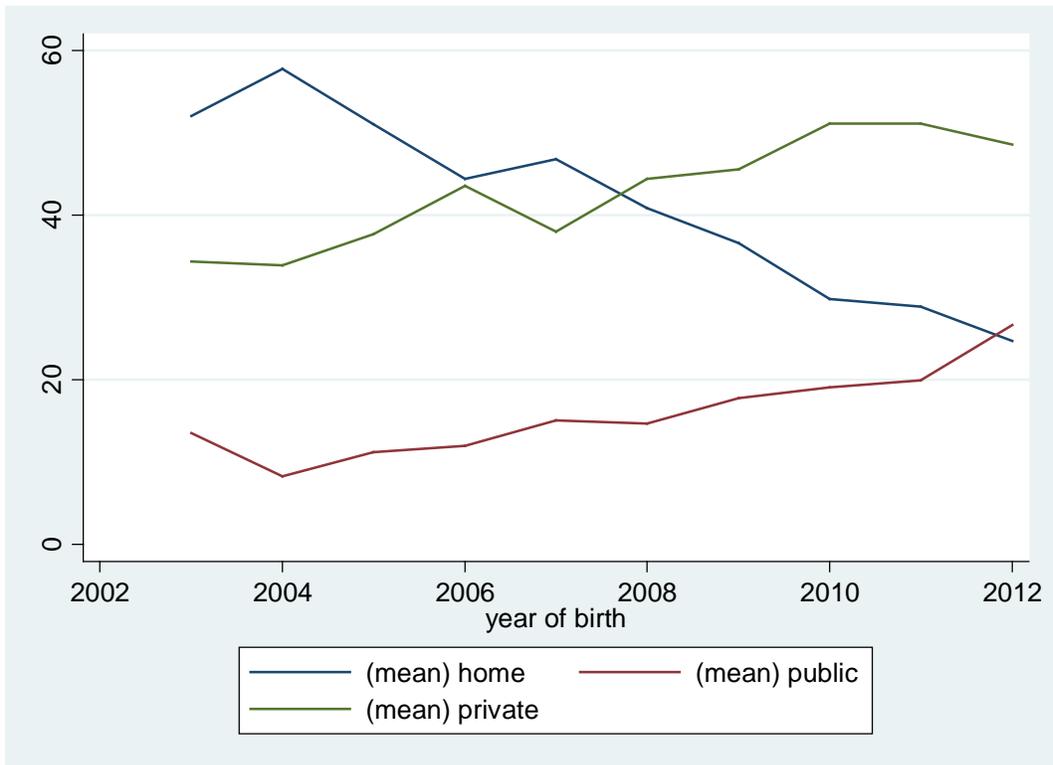
Poorest



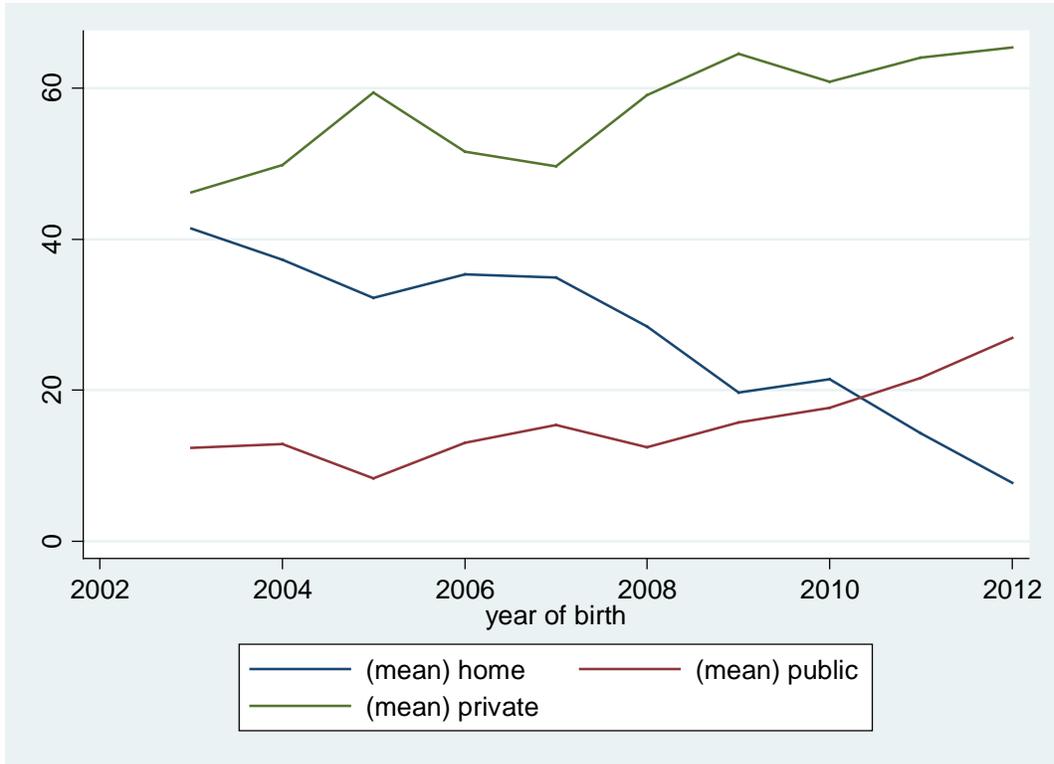
### Poorer



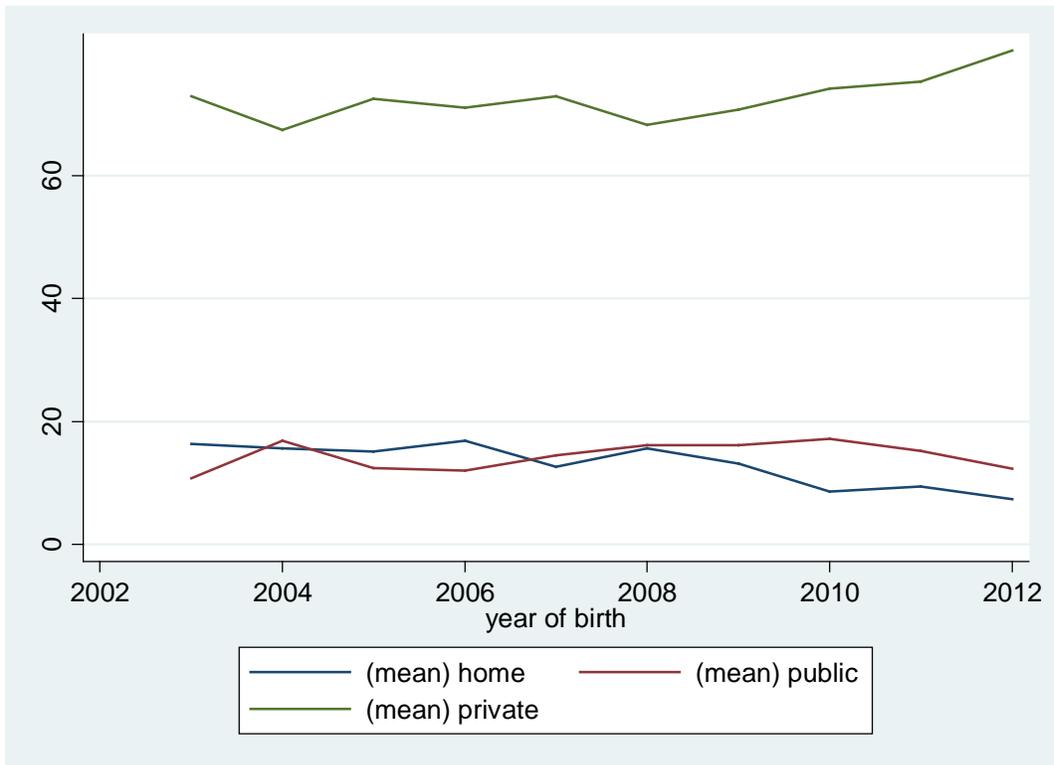
### Middle



### Richer



### Richest











**Village midwife**| **Wealth index****Place of delivery | Poorest Poorer Middle Richer Richest | Total**


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<b>Respondent's home  </b>	<b>55.37</b>	<b>43.90</b>	<b>48.61</b>	<b>34.67</b>	<b>35.60  </b>	<b>45.86</b>
<b>Other home  </b>	<b>7.52</b>	<b>3.76</b>	<b>3.21</b>	<b>1.42</b>	<b>2.05  </b>	<b>4.18</b>
<b>Hospital/clinic  </b>	<b>1.91</b>	<b>2.05</b>	<b>0.87</b>	<b>0.48</b>	<b>1.20  </b>	<b>1.44</b>
<b>Health center  </b>	<b>7.53</b>	<b>7.50</b>	<b>2.25</b>	<b>2.57</b>	<b>2.36  </b>	<b>5.18</b>
<b>Village health post  </b>	<b>0.88</b>	<b>1.61</b>	<b>0.68</b>	<b>2.45</b>	<b>0.25  </b>	<b>1.22</b>
<b>Delivery post  </b>	<b>4.90</b>	<b>4.97</b>	<b>2.84</b>	<b>3.46</b>	<b>3.48  </b>	<b>4.13</b>
<b>Other public sector  </b>	<b>0.00</b>	<b>0.33</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00  </b>	<b>0.09</b>
<b>Hospital  </b>	<b>0.05</b>	<b>1.60</b>	<b>1.15</b>	<b>3.18</b>	<b>2.37  </b>	<b>1.39</b>
<b>Maternity hospital  </b>	<b>0.00</b>	<b>0.22</b>	<b>1.08</b>	<b>0.72</b>	<b>1.39  </b>	<b>0.53</b>
<b>Maternity home  </b>	<b>0.42</b>	<b>0.40</b>	<b>0.91</b>	<b>0.72</b>	<b>0.00  </b>	<b>0.52</b>
<b>Clinic  </b>	<b>0.38</b>	<b>0.65</b>	<b>0.29</b>	<b>0.93</b>	<b>0.97  </b>	<b>0.57</b>
<b>Obstetrician  </b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00  </b>	<b>0.01</b>
<b>midwife  </b>	<b>0.97</b>	<b>2.40</b>	<b>3.63</b>	<b>3.81</b>	<b>3.50  </b>	<b>2.57</b>
<b>village midwife  </b>	<b>20.07</b>	<b>29.70</b>	<b>34.29</b>	<b>45.55</b>	<b>46.82  </b>	<b>32.04</b>
<b>Other private sector  </b>	<b>0.00</b>	<b>0.00</b>	<b>0.17</b>	<b>0.04</b>	<b>0.00  </b>	<b>0.04</b>
<b>Other  </b>	<b>0.00</b>	<b>0.90</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00  </b>	<b>0.24</b>
<hr/>						
<b>Total  </b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00  </b>	<b>100.00</b>



**Table D. Percentage of births that are C sections, by wealth quintile and public / private**  
**C\_section\_pct**  
**| Home or public or private**

<b>Wealth  </b>			
<b>index  </b>	<b>Public</b>	<b>Private  </b>	<b>Total</b>
<b>Poorest  </b>	<b>17</b>	<b>8  </b>	<b>12</b>
<b>Poorer  </b>	<b>21</b>	<b>13  </b>	<b>16</b>
<b>Middle  </b>	<b>25</b>	<b>14  </b>	<b>17</b>
<b>Richer  </b>	<b>30</b>	<b>17  </b>	<b>20</b>
<b>Richest  </b>	<b>32</b>	<b>25  </b>	<b>26</b>
<b>Total  </b>	<b>25</b>	<b>17  </b>	<b>20</b>

**Table E. Percentage of births that are C sections, by wealth quintile and urban / rural**  
**C\_section\_pct**  
**| Type of place of residence**

<b>Wealth  </b>			
<b>index  </b>	<b>Urban</b>	<b>Rural  </b>	<b>Total</b>
<b>Poorest  </b>	<b>5</b>	<b>4  </b>	<b>4</b>
<b>Poorer  </b>	<b>11</b>	<b>8  </b>	<b>9</b>
<b>Middle  </b>	<b>12</b>	<b>11  </b>	<b>12</b>
<b>Richer  </b>	<b>17</b>	<b>13  </b>	<b>16</b>
<b>Richest  </b>	<b>25</b>	<b>15  </b>	<b>23</b>
<b>Total  </b>	<b>17</b>	<b>8  </b>	<b>12</b>

**Table F. Percentage of births that are C sections, by wealth quintile and combinations of public / private and urban / rural C\_section\_pct**

Wealth	Place by public / private				Total
	index	Urban pub	Urban pri	Rural pub	
Poorest	18	5	17	9	12
Poorer	23	11	19	14	16
Middle	26	12	23	18	17
Richer	29	17	33	15	20
Richest	34	26	17	21	26
Total	28	19	21	15	20

**Table D\_C\_sections. Number of births that are C-sections, by wealth quintile and public / private**

Wealth	Home or public or private			Total
	index	Home	Public	
Poorest	0	89	48	136
Poorer	0	141	152	293
Middle	0	155	224	379
Richer	0	183	349	531
Richest	0	165	579	744
Total	0	732	1,352	2,084

**Table D\_births. Number of births, by wealth quintile and public / private.  
(Omits a few births where C-section status was missing.)**

<b>Wealth  </b>	<b>Home or public or private</b>			<b>Total</b>
<b>index  </b>	<b>Home</b>	<b>Public</b>	<b>Private  </b>	<b>Total</b>
<b>Poorest  </b>	<b>2,584</b>	<b>519</b>	<b>576  </b>	<b>3,679</b>
<b>Poorer  </b>	<b>1,369</b>	<b>662</b>	<b>1,191  </b>	<b>3,222</b>
<b>Middle  </b>	<b>1,103</b>	<b>612</b>	<b>1,573  </b>	<b>3,288</b>
<b>Richer  </b>	<b>708</b>	<b>607</b>	<b>2,102  </b>	<b>3,417</b>
<b>Richest  </b>	<b>371</b>	<b>517</b>	<b>2,302  </b>	<b>3,190</b>
<b>Total  </b>	<b>6,136</b>	<b>2,917</b>	<b>7,744  </b>	<b>16,796</b>

**Table D\_C\_sections gives the numerators of the percentages in table D.**

**Table D\_births gives the denominators.**

**If you divide the numbers in Table D\_C\_sections by the corresponding numbers in Table D\_births, and multiply by 100, you should get the percentages in table D.**

**These tables omit about 147 births that were missing on the C-section variable.**

**All the numbers I have given you are weighted to correct for the sample design. The weighted numbers are rounded to the nearest integer. As a result some of the totals may be inconsistent, because of rounding error.**

**fTable I\_place. Number of births by birth attendant and place of delivery. All births during the 5 years before the survey, 2012 IDHS.**

Place="Not stated, other" is a combination of (1) birth attendant given as place; (2) Other public; (3) Other private; (4) Other; and (5) Not stated

**All places**

m3	m15_recode											Total
	Respondent's home	Other home	Pub hosp/ clinic	Pub hlth ctr	Vill hlth post	Pub deliv post	Priv hospital	Priv mat hosp	Priv mat home	Priv clinic	Not stated, other	
doctor	3		35	3			1	1		2	4	50
obst	3	3	633	6			508	345	43	69	71	1,681
nurse	42	4	14	10		0	4	0	2	5	14	96
mwife	1,033	129	333	459	4	32	143	78	107	214	3,190	5,722
vmwife	1,011	83	6	145	29	100	29	3	15	16	1,011	2,449
tba	2,084	181	1	2							21	2,289
dr+mwife	2		14	5			4	0	0	1	6	32
obst+nurse			276	5			210	138	19	19	12	680
obst+mwife	5		238	12			150	115	10	25	31	587
obst+vmwife	2	1	31	2			9	12	1		5	63
nurse+mwife	17	1	110	63		9	37	59	33	50	466	843
nurse+vmwife	5		1	13		1		1		1	43	63
nurse+tba	16	1		0							1	18
mwife+vmwife	19	6	2	4		1				0	7	40
mwife+tba	523	51	7	21	4	5			1	1	116	729
vmwife+tba	396	41	1	5	9	27					71	549
obst+nurse+mwife	1		129	2		0	99	53	13	5	13	316
other comb of ab	14	3	76	12		2	36	17		3	7	170
rel/friend	325	24	6								12	367
other	27		3								15	45
<b>Total</b>	<b>5,528</b>	<b>528</b>	<b>1,915</b>	<b>771</b>	<b>46</b>	<b>177</b>	<b>1,232</b>	<b>821</b>	<b>243</b>	<b>413</b>	<b>5,115</b>	<b>16,790</b>

**Home delivery**

<b>m3</b>	<b>m15_recode</b>		<b>Total</b>
	<b>Respondent's home</b>	<b>Other home</b>	
doctor	3		3
obst	3	3	6
nurse	42	4	47
mwife	1,033	129	1,162
vmwife	1,011	83	1,094
tba	2,084	181	2,266
dr+mwife	2		2
obst+mwife	5		5
obst+vmwife	2	1	2
nurse+mwife	17	1	17
nurse+vmwife	5		5
nurse+tba	16	1	17
mwife+vmwife	19	6	25
mwife+tba	523	51	575
vmwife+tba	396	41	436
obst+nurse+mwife	1		1
other comb of above	14	3	17
rel/friend	325	24	350
other	27		27
<b>Total</b>	<b>5,528</b>	<b>528</b>	<b>6,056</b>

**Public facility**

m3	m15_recode				Total
	Pub hosp/clinic	Pub hlth ctr	Vill hlth post	Pub deliv post	
doctor	35	3			38
obst	633	6			640
nurse	14	10		0	24
mwife	333	459	4	32	829
vmwife	6	145	29	100	280
tba	1	2			3
dr+mwife	14	5			19
obst+nurse	276	5			282
obst+mwife	238	12			250
obst+vmwife	31	2			33
nurse+mwife	110	63		9	182
nurse+vmwife	1	13		1	15
nurse+tba		0			0
mwife+vmwife	2	4		1	7
mwife+tba	7	21	4	5	37
vmwife+tba	1	5	9	27	42
obst+nurse+mwife	129	2		0	132
other comb of above	76	12		2	89
rel/friend	6				6
other	3				3
Total	1,915	771	46	177	2,909

**Private facility**

m3	m15_recode				
	Priv hospital	Priv mat hosp	Priv mat home	Priv clinic	Total
doctor	1	1		2	4
obst	508	345	43	69	964
nurse	4	0	2	5	12
mwife	143	78	107	214	542
vmwife	29	3	15	16	64
dr+mwife	4	0	0	1	6
obst+nurse	210	138	19	19	387
obst+mwife	150	115	10	25	301
obst+vmwife	9	12	1		22
nurse+mwife	37	59	33	50	178
nurse+vmwife		1		1	1
mwife+vmwife				0	0
mwife+tba			1	1	2
ob st+nurse+mwife	99	53	13	5	170
other comb of above	36	17		3	56
Total	1,232	821	243	413	2,710

**Not stated, other**

<b>m3</b>	<b>m15_recode</b>	
	<b>Not stated, other</b>	<b>Total</b>
doctor	4	4
obst	71	71
nurse	14	14
mwife	3,190	3,190
vmwife	1,011	1,011
tba	21	21
dr+mwife	6	6
obst+nurse	12	12
obst+mwife	31	31
obst+vmwife	5	5
nurse+mwife	466	466
nurse+vmwife	43	43
nurse+tba	1	1
mwife+vmwife	7	7
mwife+tba	116	116
vmwife+tba	71	71
obst+nurse+mwife	13	13
other comb of above	7	7
rel/friend	12	12
other	15	15
<b>Total</b>	<b>5,115</b>	<b>5,115</b>

**Table I\_wealth. Number of births by birth attendant and wealth quintile.**

All births during the 5 years before the survey, 2012 IDHS.

m3	Wealth index					Total
	Poorest	Poorer	Middle	Richer	Richest	
doctor	14	8	5	15	8	50
obst	101	201	265	411	702	1,681
nurse	31	23	20	17	4	96
mwife	735	1,021	1,369	1,455	1,143	5,722
vmwife	668	625	510	406	240	2,449
tba	1,209	506	290	203	82	2,289
dr+mwife	5	5	7	10	6	32
obst+nurse	44	124	99	159	254	680
obst+mwife	45	75	89	145	233	587
obst+vmwife	10	27	9	6	10	63
nurse+mwife	59	125	205	201	254	843
nurse+vmwife	6	13	26	10	9	63
nurse+tba	11	5	1	1	1	18
mwife+vmwife	14	10	7	6	2	40
mwife+tba	171	186	171	145	56	729
vmwife+tba	171	160	109	67	42	549
obst+nurse+mwife	22	38	46	97	113	316
other comb of ab	34	19	31	51	34	170
rel/friend	283	49	22	5	8	367
other	22	3	6	9	4	45
Total	3,658	3,222	3,287	3,419	3,203	16,790

**Table I\_wealth\_urban. Number of births by birth attendant and wealth quintile, urban respondents.**

All births during the 5 years before the survey, 2012 IDHS.

m3	Wealth index					Total
	Poorest	Poorer	Middle	Richer	Richest	
doctor	2	5	1	13	7	27
obst	20	90	163	305	614	1,191
nurse	6	9	11	9	3	38
mwife	217	473	880	1,025	969	3,565
vmwife	60	130	144	212	131	676
tba	140	103	131	127	59	561
dr+mwife	2	3	5	10	5	26
obst+nurse	13	60	58	103	232	466
obst+mwife	3	39	47	115	202	406
obst+vmwife	4	5		1	1	11
nurse+mwife	14	68	131	148	212	573
nurse+vmwife		1	13	3	4	21
nurse+tba	0	1	0			1
mwife+vmwife	1	2	2	4	1	10
mwife+tba	25	49	78	86	38	276
vmwife+tba	19	37	22	17	17	112
obst+nurse+mwife	5	22	32	73	102	236
other comb of ab	1	9	10	36	26	82
rel/friend	10	13	15	2	8	49
other	4		1	4	4	13
<b>Total</b>	<b>547</b>	<b>1,118</b>	<b>1,744</b>	<b>2,295</b>	<b>2,635</b>	<b>8,339</b>

**Table I\_wealth\_rural. Number of births by birth attendant and wealth quintile, rural respondents.**

All births during the 5 years before the survey, 2012 IDHS.

m3	Wealth index					Total
	Poorest	Poorer	Middle	Richer	Richest	
doctor	12	3	4	2	1	22
obst	81	111	103	107	89	490
nurse	26	14	10	8	1	58
mwife	518	548	489	430	174	2,158
vmwife	608	495	367	194	109	1,773
tba	1,069	403	158	76	22	1,728
dr+mwife	3	2	1		1	7
obst+nurse	31	64	41	56	22	214
obst+mwife	42	36	42	30	30	180
obst+vmwife	6	22	9	5	9	52
nurse+mwife	45	57	74	52	42	271
nurse+vmwife	6	11	13	6	5	42
nurse+tba	11	4	1	1	1	17
mwife+vmwife	13	7	5	2	1	30
mwife+tba	146	137	93	58	18	453
vmwife+tba	152	123	87	51	25	438
obst+nurse+mwife	17	15	13	24	11	80
other comb of ab	33	10	21	15	8	88
rel/friend	273	36	7	3		319
other	18	3	5	5		32
<b>Total</b>	<b>3,111</b>	<b>2,104</b>	<b>1,543</b>	<b>1,125</b>	<b>568</b>	<b>8,451</b>

### **Annex 3 Site visit schedules ( *trip notes deleted* )**

- A. Bandung field visit: January 28 – 30, 2014**
- B. Banten and Serang, Feb 4-6, 2014**
- C. North Sumatra—Deliserdang, Feb 12-13 2014**

## Annex 4 Questions for women

### 1. Women who recently delivered at health centre/health facility:

- a. Background characteristic: age, number of delivery, and if recently deliver at health facility (for checking) education, marital status, who she lives with (who is head of household? How many pregnancies has she had? How many other live children does she have? Does she work? Does her husband work? Does the head of HH own the house, lease it, or is it subsidized or company housing?
- b. Why did you deliver at health facility (planned before, suggested by health provider during ANC, referred due to complications etc.)
- c. Who went with her to the facility? What would she have done if that person wasn't there?
- d. Did she try other options before going to that facility? If so – what happened?
- e. What are signs that a labor is not going normally? when should a woman seek care – during labor? After labor? and for woman during post partum period? By when you will decide if you need to deliver at health facility? (should we ask anything about recognition of complications, where to delivery, when to go??)
- f. At which facility was your most recent delivery? why you choose that facility (probing, if necessary: cost, distance, cleanliness, transport available, drugs and equipment, health provider (type, experience, attitude, being treated with respect, relationship), facility where usually go, safety of mother and child, recommended by health provider, referred from another facility, etc)
- g. During your pregnancy did you have a plan for the following: where to deliver, with whom to deliver, cost, and transportation? From whom you get the suggestions for the plan? Please tell us, how she/he inform you about the plan?
- h. Was the previous delivery (if she has any) also in health facility? If not, why? What type of provider attended to you? (eg, doctor, specialist, midwife nurse?)
- i. How about the cost for the services? How much did you pay of your own money for your delivery? Did you pay to the midwife or the facility? For transportation? Medication? Blood?
- j. Did you know about Jampersal? Did you use Jampersal? What do you think about that (probing: easy process, get same services as the women who pay for the services; what do you need to have with you to access Jampersal? Did you pay for anything even though you could use Jampersal? What did you pay for? ). → Some women use Jamkesda instead – or combinations of insurance. Sometimes

Jamkesda will cover transportation as well, for example. Ask more generally about health insurance.

- k. Who inform you about Jampersal?
- l. Who help you to get the services (for transportation, administration, blood, etc.)? How about the Desa Siaga activity in your village? Civic forum? Pokja?
- m. In your neighborhood, is there a woman who delivers a baby at home? What might be the reasons for that?
- n. Did you have any complications during your labor and delivery? (If so – what happened?) Did you get any postpartum visits? What did they do during those visits?
- o. How did you feel about the care you received at the facility? Would you recommend other women to go? Why or why not?

**2. Women who recently delivered at home (same edits as above)**

- a. Background characteristic: age, number of delivery, and if recently deliver at home (for checking) education, marital status, who she lives with (who is head of household? How many pregnancies has she had? How many other live children does she have? Does she work? Does her husband work? Does the head of HH own the house, lease it, or is it subsidized or company housing?
- b. Why did you deliver at home: (I would let this be open – ended – don't suggest the answers or make it multiple choice. We can probe for more reasons. Probing should reveal as many reasons as possible.
  - i. We also want to get at “going alone” and what that means...
  - ii. Considered as unnecessary to deliver at health facility?
  - iii. Cost constraints?
  - iv. Distance/transportation?
  - v. Cultural barriers?
  - vi. How did you and your family decide that? Who decide that? Did you discuss about that?
  - vii. Quality of services
  - viii. perceptions - fear of the facility because....
- c. What are signs that a labor is not going normally? when should a woman seek care – during labor? After labor? and for woman during post partum period? By

when you will decide if you need to deliver at health facility? (should we ask anything about recognition of complications, where to delivery, when to go??)

- d. What will be your preference if you will choose to deliver at health facility? (probing: cost, distance, cleanliness, transport available, drugs and equipment, health provider (type, experience, attitude, being treated with respect, relationship), facility where usually go, safety of mother and child, or it will be based on the recommendation of health provider? What are your concerns (e.g., alone?) (or would you only go if you were very ill? What is considered to be a big enough problem for you to go?)
- e. During your pregnancy did you have a plan for the following: where to deliver, with whom to deliver, cost, and transportation? From whom you get the suggestions for the plan? Please tell us, how she/he inform you about the plan?
- f. Did you attend ANC? How many? During the ANC visit, do you get suggestion to deliver at health facility? If not, what advice did you get (and from whom) about where to deliver?
- g. (see above – more broadly about “health insurance” not just Jampersal) Do you know about Jampersal? What do you think about that? Who inform you about Jampersal?
- h. Is there desa siaga movement in your village? How about their activity? What are the components?

## Annex 5 Questions for stakeholders

### 1. Midwives (village midwives, midwives coordinators/doctors at health centre)

- a. Would you please explain to us about the community knowledge, perception and behaviours on delivery at health facility?
  - i. Do they know about danger signs of pregnancy, delivery and post partum period?
  - ii. What are their perceptions about delivering at health facility? Do they have wrong impression about that?
  - iii. What are their behaviours about delivery in health facility? How many of them deliver at home? Are they mostly have plan to deliver at health facility or may be the only use the facility if there have complications?
  - iv. Do women and their families know about Jampersal?
- b. What might be the constraints for the community to access the facility? (prompt?)
- c. What are the factors that may encourage them to deliver at health facility? (prompt?)
- d. Would you please tell us about the Jampersal scheme?
  - i. Do women know about Jampersal? What services do they think are included?
  - ii. Is that easy for people to access it? What are their perceptions about it?
  - iii. How do you market the insurance?
  - iv. How about the reimbursement process? Please tell us the process for the reimbursement, the components covered, is there any delay in the process etc.? is the pay per woman good compensation for you? Do you have to pay retribution for each patient?
  - v. Have you seen many more women coming for delivery? For ANC? For PNC? Can your facility cover all the increased numbers of women coming? Do you need more midwives? Doctors? Supplies of what? Equipment? What about referral—if you refer a woman, will you be paid by Jampersal for your efforts with that woman?
  - vi. How about the people who use that scheme? Do you think poor people using it, or may be some of them still don't know about the scheme and

not using it? Among the people who used the Jampersal, are they mostly poor people? How do you know that?

- vii. Tell us your opinion about the insurance? Do you have any suggestion to make it better?
- e. What have been done by the health centre to encourage people to deliver at health facility? What are the constraints? How to make it more effective (what need to be done)? How about the involvement of other sectors?
- f. Please tell us about the desa siaga or other community activities (e.g, civic forums, Ayeisha, maternity waiting home, use of cell phone?? Are they still there? Is it has been helpful? What are their constraints?

## **2. DHO**

- a. What have been done by the DHO to encourage people to deliver at health facility?
  - i. New regulations/policy?
  - ii. What have been done at the community? How
  - iii. Incentives for village midwives, health centre?
  - iv. What are the constraints?
  - v. How to make it more effective (what need to be done)?
- b. How about the involvement of other sectors? Civil society forum?
- c. What are the barriers for effective referral from the community to facility and between facilities? What have been done to solve that? What need to be done further?
- d. How about public-privates providers/facilities:
  - i. Relationship – dual practice
  - ii. Hours of work in public/private
- e. How about the involvement of private hospitals/providers in providing free delivery services?
  - i. What have been done to improve their involvement?
  - ii. What are the constraints?

- iii. What need to be done further?
  - iv. How many PPM are involved in the Jampersal?
  - v. Do you have MOUs with private hospitals?
  - vi. How many BEONC puskesmas are in the district? How many referral hospitals are available?
- f. Budgetary issues:
- i. Would you please tell us about the new JKN system? How it will influence the previous setting using Jampersal?
  - ii. How is the process of setting priorities? Who involve in that process?

*What is the verification process? How long does it take to pay for services?*

*What percent of the Jampersal budget did you use last year?*

### **3. Civic forums**

- a. What are the constraints for people to access health facility for delivery and during pregnancy and post partum period, family planning? (probing: cost, availability of services, quality of care, cultural, etc.)
- b. What are needed to encourage people to access health facility during pregnancy, delivery and post partum period?
- c. What are the roles of other sectors than health sectors to encourage facility delivery?
  - i. Who are they? How about media?
  - ii. What have been done by each of them?
  - iii. What have been the strength and weakness of other sectors in their involvement to encourage facility delivery?
- d. Please explain to us about the civic forum?
  - i. How you form it?
  - ii. Who are the members?
  - iii. What are the activities of the forum?
  - iv. What are the strengths and weaknesses of the forum?

- v. What are their roles in improving the health of the women/neonates? How about in encouraging facility delivery, specifically?
  - vi. How about the KIA motivator? What are their roles? How they are different with the health kaders?
  - vii. How do you monitor/ keep records of which women are pregnant/ outcomes of delivery? Where women delivery? Who uses Jampersl?
- e. Would you please tell us about Desa siaga activity? Are they still existed? What are their constraints? What are needed to make it function?
- f. What do you know about Jampersal? About JKN? Who can access this insurance? What are the services covered by these insurances? What needs to be paid for beyond what is covered by the insurance?

## **Annex 6 Implementers/researchers interviewed**

**Ministry of Health:** Dr. Gita Maya, Dr Imran Pambudi, Maternal Health plus meeting on Feb 28<sup>th</sup> with Direktur Jenderal Bina Upaya Kesehatan, Direktur Jenderal Bina Gizi dan KIA, Kepala Badan Penelitian dan Pengembangan Kesehatan, BKKBN, BPS, Badan Litbangkes, Ditjen BUK, Ditjen GIKIA, Dr. Atmarita, Dr. Adan Bachtiar and others

**Prior MOH staff:** Dr. Ardi Kaptiningsih, Pak Lukman, Dr. Hannah Setyawati

**PKK:** Ibu Endah

**World Bank:** Ms Puti Marzoeki, Eko Pambudi

**UNFPA:** Ms Melania Hidayat

**UI:** Dr. Budi Utomo, Dr. Endang Achadi, Dr Meiwita Budiharsana

**TPN2K:** Dr. Prastuti Soewondo (Becky), Peter Agnew

**IBI:** Ms Emi

**HOGSI:** Dr. Ovi

**AusAID (DFAT):** John Leigh, Dir, Health; Widya Setyawati, Sr Program Manager-MCH, Health Unit

**AIPHSS:** Jack Langenbrunner

**EMAS:** Anne Hyre, Maya, Ali Zazri and many more—see field office site visits

**Mohammadiyah:** Dr. Marcus and Ita

**Budi Kamulian:** Dr. Baharuddhin

**MercyCorp:** Danielle de Knocke van der Meulen, Dir Programs; Sri Kusuma Hartani, Program Manager-Health & Nutrition

**World Vision:** Asteria T. Aritonang, CHN Campaign Director