

CHAPTER 10

MATERNAL HEALTH

This chapter presents findings on maternal health--antenatal care and delivery assistance. In line with the program to improve maternal health and to make maternal health care services more accessible, besides health centers in every subdistrict, ambulatory health services, auxiliary health centers (*puskesmas pembantu*), health posts (*posyandu*), and village delivery posts (*polindes*) have been established. In village delivery posts, antenatal care and delivery assistance are provided by trained traditional birth attendants under the supervision of a midwife.

10.1 Antenatal Care

Table 10.1.1 shows the percent distribution of live births in the five-year period prior to the survey by type of antenatal care received during pregnancy according to selected background characteristics. In Indonesia, antenatal care is defined as pregnancy-related health care provided by medical professionals (doctor, nurse, or midwife), excluding traditional birth attendants and friends. Although each live birth may have received antenatal care from multiple types of providers, in this report the evaluation of maternal health care for early detection of high-risk pregnancies is based on the most qualified provider. The place of antenatal care service, recorded in the survey, is the most frequently visited service.

Among 28,810 ever-married women age 15-49 interviewed in the survey, 13,170 were mothers who had a total of 16,217 live births in the five years preceding the survey. Eighty-nine percent of these births were to mothers who received antenatal care from a medical professional—79 percent were cared for by a nurse/midwife or an auxiliary nurse/midwife.

Antenatal coverage is slightly lower among births to mothers age 35 and older. Third or lower order births are more likely to receive antenatal care from medical professionals than higher order births. Births to mothers living in urban areas or in Java-Bali are more likely to receive antenatal care from medical professionals than other births. Ninety-two percent of live births in Java-Bali had antenatal care from medical professionals, compared with 88 percent in Outer Java-Bali I and 83 percent in Outer Java-Bali II.

There is a strong relationship between mother's education and antenatal care. Seventy-one percent of births to mothers with no education received antenatal care from medical professionals, compared with only 97 percent of children whose mothers had some secondary education. The corresponding proportions for children whose mothers had some primary education and who have completed primary school are 83 percent and 91 percent, respectively.

Mothers living in the urban areas and those having some secondary education are more likely to receive antenatal care from a doctor than other mothers. Although there is little variation in antenatal care coverage by medical professionals between regions, there are sharp differentials between urban and rural areas within regions.

Table 10.1.2 shows the provincial differentials in antenatal care coverage. Virtually all women in DKI Jakarta and DI Yogyakarta had antenatal care during pregnancy. Antenatal care coverage was 90 percent or higher in East Java, Bali, West Sumatra, South Sumatra, Lampung, West Nusa Tenggara, North Sulawesi, and East Kalimantan. On the other hand, antenatal coverage was less than 70 percent in Jambi and Maluku, where a large proportion of women received antenatal care from traditional birth attendants. It is interesting to note, however, that 28 percent of births in the five years preceding the survey in East Timor did not receive any antenatal care.

Table 10.1.1 Antenatal care: background characteristics

Percent distribution of live births in the five years preceding the survey by source of antenatal care during pregnancy, according to selected background characteristics, Indonesia 1997

| Background characteristic | Source of antenatal care ¹ | | | | | | Total | Number of births |
|------------------------------|---------------------------------------|-------------------|--------------------------------|--|-------|--------|-------|------------------|
| | Doctor | Nurse/ Midwife | Auxiliary nurse/ Midwife | Tradi- tional birth attendant | Other | No one | | |
| Mother's age at birth | | | | | | | | |
| < 20 | 5.4 | 77.0 | 6.4 | 3.8 | 0.0 | 7.4 | 100.0 | 2,215 |
| 20-24 | 10.1 | 72.9 | 8.6 | 2.6 | 0.1 | 5.8 | 100.0 | 4,647 |
| 25-29 | 13.7 | 70.7 | 6.6 | 2.9 | 0.0 | 6.0 | 100.0 | 4,236 |
| 30-34 | 10.7 | 69.9 | 7.3 | 3.3 | 0.1 | 8.7 | 100.0 | 3,111 |
| 35+ | 10.6 | 65.3 | 7.5 | 4.8 | 0.1 | 11.7 | 100.0 | 2,007 |
| Birth order | | | | | | | | |
| 1 | 13.8 | 73.5 | 6.7 | 2.1 | 0.0 | 3.8 | 100.0 | 5,314 |
| 2-3 | 10.9 | 72.2 | 7.4 | 2.8 | 0.1 | 6.6 | 100.0 | 6,581 |
| 4-6 | 6.7 | 70.4 | 8.2 | 4.2 | 0.0 | 10.5 | 100.0 | 3,314 |
| 7+ | 4.2 | 58.2 | 8.6 | 8.4 | 0.1 | 20.6 | 100.0 | 1,008 |
| Residence | | | | | | | | |
| Urban | 22.4 | 69.9 | 4.9 | 1.1 | 0.0 | 1.7 | 100.0 | 4,373 |
| Rural | 6.2 | 71.9 | 8.3 | 4.0 | 0.1 | 9.4 | 100.0 | 11,844 |
| Region/Residence | | | | | | | | |
| Java-Bali | 11.1 | 75.8 | 4.9 | 2.3 | 0.0 | 6.0 | 100.0 | 9,188 |
| Urban | 21.4 | 71.4 | 4.4 | 1.1 | 0.0 | 1.7 | 100.0 | 2,940 |
| Rural | 6.3 | 77.8 | 5.1 | 2.9 | 0.0 | 7.9 | 100.0 | 6,247 |
| Outer Java-Bali I | 9.3 | 68.4 | 10.2 | 3.7 | 0.0 | 8.3 | 100.0 | 4,821 |
| Urban | 24.1 | 68.3 | 5.4 | 0.8 | 0.0 | 1.4 | 100.0 | 984 |
| Rural | 5.5 | 68.5 | 11.4 | 4.5 | 0.0 | 10.1 | 100.0 | 3,837 |
| Outer Java-Bali II | 11.3 | 59.6 | 11.8 | 5.9 | 0.3 | 11.1 | 100.0 | 2,207 |
| Urban ¹ | 25.7 | 63.9 | 6.9 | 1.4 | 0.0 | 2.1 | 100.0 | 448 |
| Rural | 7.6 | 58.5 | 13.0 | 7.1 | 0.4 | 13.4 | 100.0 | 1,759 |
| Mother's education | | | | | | | | |
| No education | 3.4 | 60.2 | 7.8 | 5.7 | 0.1 | 22.7 | 100.0 | 1,462 |
| Some primary | 3.4 | 72.0 | 7.5 | 4.9 | 0.1 | 12.1 | 100.0 | 4,067 |
| Completed primary | 5.8 | 76.1 | 9.1 | 3.5 | 0.0 | 5.5 | 100.0 | 5,262 |
| Some secondary+ | 22.6 | 69.3 | 5.5 | 1.0 | 0.0 | 1.5 | 100.0 | 5,425 |
| Total | 10.6 | 71.4 | 7.4 | 3.2 | 0.1 | 7.4 | 100.0 | 16,217 |

¹ If the respondent mentioned more than one provider, only the *most* qualified was considered.

10.2 Place of Antenatal Care, Number of Antenatal Care Visits, and Stage of Pregnancy

Table 10.2.1 indicates that 52 percent of children were born to mothers who received antenatal care from government health services, of which health centers are the most often visited (39 percent).

Rural women are more likely to visit a public health facility for antenatal care, while urban women go to a private facility. The facility most often used by rural women is the health center, while urban women

use the services of a private midwife. Private services are more frequently utilized by better educated women than those with less education; the comparison is 54 percent for women with secondary or higher education and 19 percent for women with no education. Since village delivery posts (polindes) are available only in limited areas, they have limited utilization (2 percent)—less than 1 percent in the urban areas and 3 percent in the rural areas.

Table 10.1.2 Antenatal care: region and province

Percent distribution of live births in the five years preceding the survey by source of antenatal care during pregnancy, according to region and province, Indonesia 1997

| Region and province | Source of antenatal care ¹ | | | | | | Total | Number of births |
|---------------------------|---------------------------------------|-------------------|--------------------------------|--|-------|--------|-------|------------------|
| | Doctor | Nurse/ Midwife | Auxiliary nurse/ Midwife | Tradi- tional birth attendant | Other | No one | | |
| Java-Bali | 11.1 | 75.8 | 4.9 | 2.3 | 0.0 | 6.0 | 100.0 | 9,188 |
| DKI Jakarta | 27.5 | 66.0 | 5.9 | 0.3 | 0.0 | 0.4 | 100.0 | 572 |
| West Java | 7.1 | 73.4 | 5.6 | 5.1 | 0.0 | 8.7 | 100.0 | 3,351 |
| Central Java | 12.9 | 75.7 | 5.2 | 1.1 | 0.0 | 5.1 | 100.0 | 2,385 |
| DI Yogyakarta | 19.1 | 71.4 | 7.8 | 0.0 | 0.0 | 1.7 | 100.0 | 181 |
| East Java | 10.2 | 81.3 | 2.9 | 0.6 | 0.0 | 5.0 | 100.0 | 2,497 |
| Bali | 12.7 | 76.8 | 8.0 | 0.2 | 0.0 | 2.3 | 100.0 | 202 |
| Outer Java-Bali I | 9.3 | 68.4 | 10.2 | 3.7 | 0.0 | 8.3 | 100.0 | 4,821 |
| Dista Aceh | 6.3 | 61.8 | 17.1 | 1.5 | 0.0 | 13.4 | 100.0 | 354 |
| North Sumatra | 9.1 | 64.9 | 8.0 | 7.3 | 0.0 | 10.6 | 100.0 | 1,267 |
| West Sumatra | 14.4 | 71.5 | 7.8 | 3.0 | 0.0 | 3.3 | 100.0 | 385 |
| South Sumatra | 13.8 | 68.5 | 10.2 | 3.3 | 0.0 | 4.3 | 100.0 | 516 |
| Lampung | 4.5 | 78.1 | 11.6 | 2.2 | 0.0 | 3.6 | 100.0 | 544 |
| West Nusa Tenggara | 5.9 | 67.2 | 17.6 | 1.8 | 0.0 | 7.4 | 100.0 | 371 |
| West Kalimantan | 4.5 | 66.7 | 10.1 | 1.2 | 0.0 | 17.5 | 100.0 | 324 |
| South Kalimantan | 6.6 | 62.6 | 19.4 | 7.1 | 0.0 | 4.1 | 100.0 | 214 |
| North Sulawesi | 24.2 | 56.3 | 15.1 | 0.2 | 0.0 | 4.1 | 100.0 | 192 |
| South Sulawesi | 10.1 | 75.6 | 2.4 | 2.4 | 0.0 | 9.6 | 100.0 | 655 |
| Outer Java-Bali II | 11.3 | 59.6 | 11.8 | 5.9 | 0.3 | 11.1 | 100.0 | 2,207 |
| Riau | 16.7 | 59.8 | 9.5 | 7.0 | 0.2 | 6.8 | 100.0 | 344 |
| Jambi | 6.9 | 46.4 | 16.0 | 14.2 | 0.0 | 16.5 | 100.0 | 247 |
| Bengkulu | 10.2 | 69.7 | 6.8 | 5.1 | 0.0 | 8.2 | 100.0 | 117 |
| East Nusa Tenggara | 5.1 | 67.6 | 12.7 | 3.5 | 1.5 | 9.5 | 100.0 | 367 |
| East Timor | 12.3 | 49.7 | 8.9 | 1.4 | 0.0 | 27.7 | 100.0 | 116 |
| Central Kalimantan | 5.3 | 52.8 | 24.6 | 6.3 | 0.0 | 10.9 | 100.0 | 153 |
| East Kalimantan | 23.5 | 66.5 | 6.0 | 0.7 | 0.0 | 3.4 | 100.0 | 223 |
| Central Sulawesi | 10.8 | 59.0 | 12.7 | 5.6 | 0.3 | 11.6 | 100.0 | 177 |
| Southeast Sulawesi | 10.9 | 69.6 | 8.7 | 6.8 | 0.0 | 4.0 | 100.0 | 117 |
| Maluku | 10.0 | 53.5 | 3.9 | 11.1 | 0.0 | 21.6 | 100.0 | 173 |
| Irian Jaya | 11.3 | 58.1 | 17.8 | 1.4 | 0.0 | 11.4 | 100.0 | 173 |
| Total | 10.6 | 71.4 | 7.4 | 3.2 | 0.1 | 7.4 | 100.0 | 16,217 |

¹ If the respondent mentioned more than one provider, only the *most* qualified was considered.

Table 10.2.1 Place of antenatal care: background characteristics

Percent distribution of live births in the five years preceding the survey by place of antenatal care during pregnancy, according to selected background characteristics, Indonesia 1997

| Background characteristic | Place of antenatal care | | | | | | | | | | | Total | Number of births |
|------------------------------|-------------------------|---------------|---------------|-------------|------------|------------------------|------------|-------------|------------|------------|------------|--------------|------------------|
| | Government | | | | Private | | | | | | | | |
| | Hospital | Health center | Delivery post | Health post | Hospital | Family planning clinic | Doctor | Mid-wife | TBA visit | Other | No one | | |
| Mother's age at birth | | | | | | | | | | | | | |
| < 20 | 2.7 | 44.7 | 1.4 | 8.2 | 1.2 | 2.0 | 1.9 | 27.1 | 2.0 | 1.3 | 7.4 | 100.0 | 2,215 |
| 20-24 | 4.7 | 39.9 | 1.7 | 6.5 | 2.5 | 3.7 | 3.6 | 28.6 | 2.3 | 0.6 | 5.8 | 100.0 | 4,647 |
| 25-29 | 5.0 | 37.1 | 2.8 | 6.0 | 4.3 | 3.3 | 4.8 | 28.0 | 2.6 | 0.3 | 6.0 | 100.0 | 4,236 |
| 30-34 | 4.0 | 38.0 | 2.1 | 5.8 | 3.3 | 3.9 | 4.1 | 26.4 | 3.2 | 0.5 | 8.7 | 100.0 | 3,111 |
| 35+ | 3.6 | 38.8 | 1.9 | 5.5 | 2.8 | 2.7 | 4.4 | 23.9 | 4.2 | 0.5 | 11.7 | 100.0 | 2,007 |
| Birth order | | | | | | | | | | | | | |
| 1 | 4.4 | 39.0 | 1.4 | 6.1 | 3.6 | 4.0 | 5.1 | 30.4 | 1.8 | 0.4 | 3.8 | 100.0 | 5,314 |
| 2-3 | 4.5 | 39.7 | 2.5 | 6.4 | 3.5 | 3.5 | 4.1 | 26.3 | 2.2 | 0.7 | 6.6 | 100.0 | 6,581 |
| 4-6 | 3.7 | 40.5 | 2.2 | 6.8 | 1.8 | 2.1 | 2.2 | 25.7 | 3.8 | 0.8 | 10.5 | 100.0 | 3,314 |
| 7+ | 3.0 | 35.0 | 1.8 | 5.6 | 1.2 | 1.9 | 1.5 | 21.5 | 8.1 | 0.2 | 20.5 | 100.0 | 1,008 |
| Residence | | | | | | | | | | | | | |
| Urban | 6.1 | 27.2 | 0.1 | 2.1 | 8.9 | 6.7 | 9.0 | 36.9 | 0.5 | 0.7 | 1.7 | 100.0 | 4,373 |
| Rural | 3.5 | 43.7 | 2.7 | 7.9 | 0.9 | 2.0 | 2.0 | 23.7 | 3.6 | 0.5 | 9.4 | 100.0 | 11,844 |
| Region/Residence | | | | | | | | | | | | | |
| Java-bali | 3.1 | 38.8 | 2.1 | 5.4 | 3.3 | 2.9 | 4.5 | 31.6 | 1.9 | 0.4 | 6.0 | 100.0 | 9,188 |
| Urban | 4.6 | 26.1 | 0.1 | 1.5 | 8.7 | 5.4 | 8.6 | 41.7 | 0.5 | 1.0 | 1.7 | 100.0 | 2,940 |
| Rural | 2.4 | 44.6 | 3.1 | 7.2 | 0.9 | 1.7 | 2.6 | 26.8 | 2.6 | 0.1 | 7.9 | 100.0 | 6,247 |
| Outer Java-Bali I | 5.3 | 37.6 | 2.2 | 6.3 | 2.6 | 4.5 | 2.9 | 26.2 | 3.5 | 0.6 | 8.3 | 100.0 | 4,821 |
| Urban | 8.2 | 26.8 | 0.1 | 2.4 | 10.4 | 10.4 | 9.3 | 30.3 | 0.6 | 0.1 | 1.4 | 100.0 | 984 |
| Rural | 4.5 | 40.4 | 2.7 | 7.2 | 0.6 | 3.0 | 1.3 | 25.1 | 4.2 | 0.8 | 10.1 | 100.0 | 3,837 |
| Outer Java-Bali II | 6.5 | 45.4 | 1.3 | 10.3 | 2.5 | 2.2 | 3.4 | 11.4 | 4.5 | 1.2 | 11.1 | 100.0 | 2,207 |
| Urban | 11.2 | 35.4 | 0.1 | 5.5 | 6.7 | 6.9 | 11.2 | 20.0 | 0.9 | 0.0 | 2.1 | 100.0 | 448 |
| Rural | 5.3 | 48.0 | 1.7 | 11.5 | 1.4 | 1.0 | 1.4 | 9.2 | 5.4 | 1.6 | 13.4 | 100.0 | 1,759 |
| Level of education | | | | | | | | | | | | | |
| No education | 1.3 | 37.4 | 3.5 | 10.1 | 0.4 | 1.1 | 2.0 | 15.6 | 5.1 | 0.8 | 22.7 | 100.0 | 1,462 |
| Some primary | 2.7 | 43.9 | 2.6 | 8.1 | 1.0 | 1.5 | 1.0 | 22.3 | 3.9 | 0.8 | 12.1 | 100.0 | 4,067 |
| Completed primary | 3.3 | 43.8 | 2.1 | 6.8 | 1.3 | 2.3 | 1.5 | 29.6 | 3.2 | 0.6 | 5.5 | 100.0 | 5,262 |
| Some secondary + | 7.0 | 32.0 | 1.2 | 3.5 | 6.9 | 6.2 | 8.8 | 31.8 | 0.8 | 0.3 | 1.5 | 100.0 | 5,425 |
| Total | 4.2 | 39.3 | 2.0 | 6.3 | 3.0 | 3.3 | 3.9 | 27.2 | 2.7 | 0.6 | 7.4 | 100.0 | 16,217 |

TBA = Traditional birth attendant

Table 10.2.2 shows provincial variations in the utilization of health services for antenatal care. In DKI Jakarta, Bali, North Sumatra, West Sumatra, and Lampung, more than 50 percent of children were born to mothers who had antenatal care from private health facilities, among which private midwife's clinics were the most frequently visited.

The Indonesian maternal health program recommends that pregnant women have at least four antenatal care visits during pregnancy, according to the following schedule: one visit in the first trimester, one visit in the second trimester, and two visits in the third trimester. Table 10.3 shows that the median number of antenatal visits was 6.6, well above the recommended number. Sixty-nine percent of births were to mothers who had four or more antenatal care visits from a medical professional (Figure 10.1).

Table 10.2.2 Place of antenatal care: region and province

Percent distribution of live births in the five years preceding the survey by place of antenatal care during pregnancy, according to region and province, Indonesia 1997

| Region and province | Place of antenatal care | | | | | | | | | | | Total | Number of births |
|---------------------------|-------------------------|---------------|---------------|-------------|----------|------------------------|--------|----------|-----------|-------|--------|-------|------------------|
| | Government | | | | Private | | | | | | | | |
| | Hospital | Health center | Delivery post | Health post | Hospital | Family planning clinic | Doctor | Mid-wife | TBA visit | Other | No one | | |
| Java-Bali | 3.1 | 38.8 | 2.1 | 5.4 | 3.3 | 2.9 | 4.5 | 31.6 | 1.9 | 0.4 | 6.0 | 100.0 | 9,188 |
| DKI Jakarta | 5.2 | 21.4 | 0.0 | 0.2 | 12.2 | 8.2 | 8.5 | 43.7 | 0.3 | 0.0 | 0.4 | 100.0 | 572 |
| West Java | 2.4 | 35.1 | 1.4 | 5.6 | 2.7 | 1.1 | 3.0 | 34.4 | 4.4 | 1.0 | 8.7 | 100.0 | 3,351 |
| Central Java | 5.7 | 41.8 | 1.0 | 5.5 | 1.0 | 4.1 | 5.8 | 29.7 | 0.4 | 0.0 | 5.1 | 100.0 | 2,385 |
| DI Yogyakarta | 4.0 | 49.3 | 0.2 | 0.2 | 2.4 | 5.1 | 6.4 | 30.7 | 0.0 | 0.0 | 1.7 | 100.0 | 181 |
| East Java | 1.2 | 44.1 | 5.0 | 6.8 | 4.7 | 2.8 | 3.8 | 25.7 | 0.7 | 0.1 | 5.0 | 100.0 | 2,497 |
| Bali | 2.9 | 36.2 | 0.0 | 2.0 | 0.5 | 1.7 | 9.4 | 45.0 | 0.2 | 0.0 | 2.3 | 100.0 | 202 |
| Outer Java-Bali I | 5.3 | 37.6 | 2.2 | 6.3 | 2.6 | 4.5 | 2.9 | 26.2 | 3.5 | 0.6 | 8.3 | 100.0 | 4,821 |
| Dista Aceh | 5.7 | 48.2 | 1.8 | 6.2 | 0.8 | 6.4 | 2.7 | 13.5 | 1.1 | 0.3 | 13.4 | 100.0 | 354 |
| North Sumatra | 4.8 | 18.1 | 3.6 | 2.9 | 1.4 | 8.7 | 2.5 | 39.4 | 6.7 | 1.2 | 10.6 | 100.0 | 1,267 |
| West Sumatra | 5.2 | 28.1 | 1.9 | 5.3 | 3.9 | 3.0 | 5.3 | 40.0 | 3.5 | 0.5 | 3.3 | 100.0 | 385 |
| South Sumatra | 4.1 | 39.5 | 2.2 | 5.0 | 2.1 | 4.6 | 4.7 | 29.5 | 3.7 | 0.4 | 4.3 | 100.0 | 516 |
| Lampung | 0.7 | 34.4 | 0.0 | 8.0 | 1.0 | 4.7 | 2.5 | 42.5 | 2.0 | 0.7 | 3.6 | 100.0 | 544 |
| West Nusa Tenggara | 2.5 | 57.2 | 4.0 | 18.8 | 1.5 | 0.5 | 1.5 | 4.1 | 2.4 | 0.2 | 7.4 | 100.0 | 371 |
| West Kalimantan | 2.7 | 48.5 | 4.9 | 10.4 | 2.0 | 3.5 | 1.4 | 7.4 | 1.0 | 0.5 | 17.5 | 100.0 | 324 |
| South Kalimantan | 2.6 | 57.4 | 0.2 | 7.5 | 0.2 | 1.2 | 4.4 | 17.9 | 3.6 | 0.7 | 4.3 | 100.0 | 214 |
| North Sulawesi | 12.0 | 54.5 | 1.2 | 8.5 | 4.8 | 3.2 | 4.6 | 6.7 | 0.2 | 0.1 | 4.1 | 100.0 | 192 |
| South Sulawesi | 12.6 | 49.0 | 0.0 | 2.5 | 8.0 | 0.8 | 2.0 | 12.8 | 2.3 | 0.4 | 9.6 | 100.0 | 655 |
| Outer Java-Bali II | 6.5 | 45.4 | 1.3 | 10.3 | 2.5 | 2.2 | 3.4 | 11.4 | 4.5 | 1.2 | 11.1 | 100.0 | 2,207 |
| Riau | 5.1 | 36.1 | 0.7 | 8.9 | 2.0 | 7.2 | 5.4 | 21.6 | 5.0 | 1.3 | 6.8 | 100.0 | 344 |
| Jambi | 4.0 | 38.4 | 0.1 | 2.4 | 0.8 | 3.3 | 4.1 | 16.4 | 13.5 | 0.4 | 16.5 | 100.0 | 247 |
| Bengkulu | 3.0 | 30.9 | 0.2 | 12.6 | 0.5 | 0.7 | 4.3 | 33.6 | 5.1 | 0.6 | 8.2 | 100.0 | 117 |
| East Nusa Tenggara | 5.5 | 52.1 | 2.4 | 18.4 | 2.0 | 2.4 | 0.7 | 3.1 | 1.5 | 2.2 | 9.5 | 100.0 | 367 |
| East Timor | 19.8 | 42.8 | 2.0 | 3.0 | 0.1 | 0.5 | 0.2 | 1.6 | 1.4 | 0.8 | 27.7 | 100.0 | 116 |
| Central Kalimantan | 4.3 | 54.6 | 1.4 | 1.6 | 1.2 | 0.8 | 0.5 | 19.8 | 3.3 | 1.7 | 10.9 | 100.0 | 153 |
| East Kalimantan | 8.0 | 53.0 | 0.0 | 6.6 | 8.5 | 1.0 | 7.1 | 12.1 | 0.3 | 0.0 | 3.4 | 100.0 | 223 |
| Central Sulawesi | 8.5 | 51.1 | 0.7 | 11.7 | 1.2 | 0.1 | 1.1 | 7.2 | 3.0 | 3.5 | 11.6 | 100.0 | 177 |
| Southeast Sulawesi | 6.3 | 43.4 | 0.8 | 29.7 | 2.5 | 0.0 | 1.3 | 5.3 | 6.2 | 0.6 | 4.0 | 100.0 | 117 |
| Maluku | 3.9 | 40.3 | 0.6 | 7.0 | 6.7 | 0.8 | 5.7 | 3.2 | 8.7 | 1.4 | 21.6 | 100.0 | 173 |
| Irian Jaya | 8.5 | 53.6 | 5.9 | 11.8 | 0.3 | 0.2 | 5.0 | 1.8 | 1.1 | 0.2 | 11.4 | 100.0 | 173 |
| Total | 4.2 | 39.3 | 2.0 | 6.3 | 3.0 | 3.3 | 3.9 | 27.2 | 2.7 | 0.6 | 7.4 | 100.0 | 16,217 |

TBA = Traditional birth attendant

Table 10.3 also shows that four in ten pregnant women started having an antenatal check, as recommended, in the first trimester, while more than half (52 percent) had their first antenatal care visit in the second and third trimester. Eleven percent of births were to mothers who had no professional antenatal care. The median number of months at the first antenatal care visit was 3.3 months, which means that half of the pregnant women had their first antenatal care earlier than 3.3 months of pregnancy.

Table 10.3 Number of antenatal care visits and stage of pregnancy

Percent distribution of live births in the five years preceding the survey by number of antenatal care (ANC) visits, and by the stage of pregnancy at the time of the first visit, according to type of antenatal care, Indonesia 1997

| Antenatal care indicator | Any antenatal care | Any antenatal care from a medical professional ¹ |
|---|--------------------|---|
| Number of ANC visits | | |
| 0 | 7.4 | 10.6 |
| 1 | 3.4 | 2.9 |
| 2-3 | 18.2 | 16.8 |
| 4-6 | 27.7 | 26.8 |
| 7-9 | 24.0 | 23.7 |
| 10+ | 18.7 | 18.6 |
| Don't know/missing | 0.7 | 0.6 |
| Total | 100.0 | 100.0 |
| Median | 6.6 | 6.6 |
| Number of months pregnant at time of first ANC visit | | |
| No antenatal care | 7.4 | 10.6 |
| 0-2 months | 37.8 | 37.1 |
| 3-5 months | 44.8 | 43.3 |
| 6+ months | 9.6 | 8.6 |
| Don't know/missing | 0.4 | 0.4 |
| Total | 100.0 | 100.0 |
| Median | 3.3 | 3.3 |
| Number of births | 16,217 | 16,217 |

¹ Medical professional includes doctor, nurse, and midwife.

10.3 Tetanus Toxoid Vaccination

Immunization of pregnant women is a coordinated activity of the Expanded Program on Immunization (EPI) and the maternal and child health care (MCH) units in the Ministry of Health, which recommends that women receive two tetanus toxoid injections during the first pregnancy. Booster injections are given once during each subsequent pregnancy to maintain full protection. In recent years, tetanus toxoid immunization was also given to women before marriage, so that any pregnancy occurring within 3 years of their marriage would be protected against tetanus. Antenatal cards, on which tetanus toxoid immunizations are recorded, are distributed to every pregnant woman as a lifetime pregnancy and delivery history record keeper.

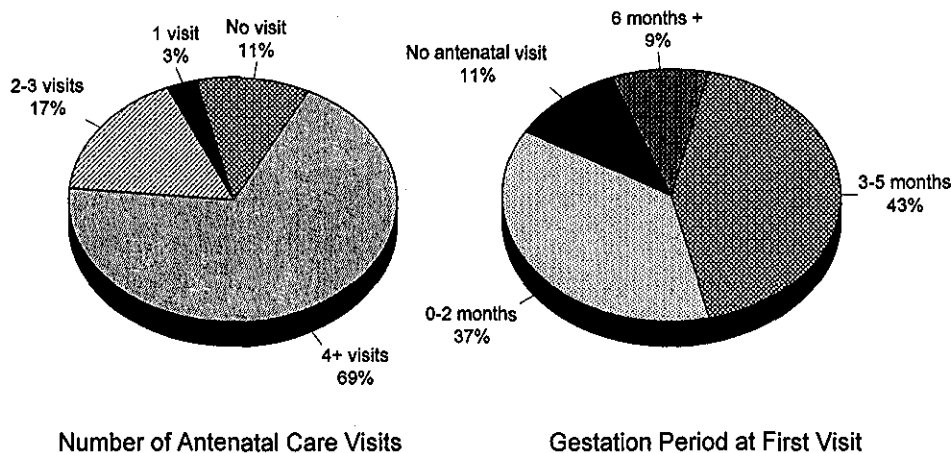
Among 16,217 live births in the five years preceding the survey, 53 percent were to mothers who received antenatal cards. Antenatal card coverage is higher in urban areas than in rural areas (62 percent compared with 50 percent). Women in Java-Bali are more likely to have an antenatal card than women in the Outer Islands of Java-Bali (58 percent compared with 45 and 53 percent). The percentage of mothers with antenatal cards is higher among those with higher education (Table 10.4.1).

Since the findings above show that antenatal cards were not widely distributed, tetanus toxoid immunization coverage cannot be estimated from vaccination cards alone. Respondents' recall

is used to supplement information on immunization status. As a result, the proportion of births that are fully protected against tetanus may be underestimated. In addition, some women may have received tetanus toxoid immunization before marriage or during a previous pregnancy, so they might not need another injection or a booster immunization. On the other hand, women may incorrectly report other types of injections as tetanus immunization, which will overestimate the level of immunization coverage. It is difficult to evaluate the extent to which each of these biases exist in the DHS data. Therefore, the information on tetanus immunization should be regarded as an approximate indicator of the level of coverage.

Overall, of births in the five years before the survey, 53 percent were to mothers who received two or more tetanus toxoid injections during pregnancy, 18 percent received one injection, and 26 percent received no injection. The coverage of tetanus toxoid injection tends to decrease as the mother's age and the birth order increase (Table 10.4.1). The percentage of births unprotected against tetanus neonatorum is substantially higher in rural areas (29 percent) than in urban areas (18 percent) and is higher in the Outer Java-Bali regions (32 and 28 percent) than in Java-Bali (23 percent). Tetanus toxoid injection coverage increases with mother's education. While 45 percent of births to mothers with no education and 37 percent of births to mothers with some primary education never receive any tetanus toxoid injection, the corresponding proportion for births to mothers with some secondary education is only 16 percent.

Figure 10.1
Number of Antenatal Care Visits and Gestation
Period at First Visit for Births in the
Five Years Preceding the Survey



IDHS97

In the five years preceding the survey, the proportion of births for which an antenatal card was presented varied significantly by province, from 21 percent in North Sumatra to 75 percent or more in DI Yogyakarta and Bali. Tetanus immunization coverage also varies among provinces. While less than 10 percent of births in Bali and North Sulawesi were to mothers who did not receive a tetanus toxoid injection during pregnancy, more than 50 percent of births in North Sumatra were to unimmunized mothers (Table 10.4.2).

10.4 Iron Pills

Anemia during pregnancy is still prevalent in Indonesia. Iron pills are distributed to women during their antenatal care visits to health care services. The maternal health program of the Indonesian Ministry of Health recommends that pregnant women take at least 90 iron pills during their pregnancy. In order to evaluate this program, in the 1997 IDHS, all women who gave birth during the five years before the survey were asked whether they had received iron pills during their last pregnancy and, if so, how many they had taken.

Of the 13,170 births in the five years preceding the survey, 24 percent of the mothers took 90 or more iron pills during pregnancy, while 17 percent took none (Table 10.5). Older mothers, mothers of higher order births, and less educated mothers are less likely to take iron pills during their pregnancy.

Iron pills are better distributed in urban areas and in Java-Bali, than in other areas. For 20 percent or more of recent births in rural areas and in Outer Java-Bali, women did not take any iron pills during their pregnancy, while mothers in urban areas and in Java-Bali region took at least 90 iron pills during pregnancy for more than 30 percent of births.

Table 10.4.1 Tetanus toxoid vaccinations: background characteristics

Percent distribution of live births in the five years preceding the survey by number of tetanus toxoid injections received by mothers during pregnancy, and percentage for which mothers could show antenatal cards, according to background characteristics, Indonesia 1997

| Background characteristic | Number of tetanus toxoid injections | | | | Total | Number of births | Percent with antenatal card |
|------------------------------|-------------------------------------|----------|-------------------|---------------------|-------|------------------|-----------------------------|
| | None | One dose | Two doses or more | Don't know/ Missing | | | |
| Mother's age at birth | | | | | | | |
| < 20 | 26.4 | 19.1 | 52.5 | 2.0 | 100.0 | 2,215 | 54.2 |
| 20-24 | 23.3 | 18.6 | 56.3 | 1.7 | 100.0 | 4,647 | 55.8 |
| 25-29 | 23.8 | 20.3 | 54.4 | 1.5 | 100.0 | 4,236 | 56.9 |
| 30-34 | 27.1 | 15.9 | 54.6 | 2.4 | 100.0 | 3,111 | 50.3 |
| 35+ | 36.2 | 17.4 | 43.6 | 2.9 | 100.0 | 2,007 | 43.5 |
| Birth order | | | | | | | |
| 1 | 21.4 | 19.1 | 58.0 | 1.6 | 100.0 | 5,314 | 59.9 |
| 2-3 | 23.3 | 18.8 | 55.7 | 2.2 | 100.0 | 6,581 | 56.1 |
| 4-6 | 32.3 | 18.0 | 47.7 | 1.9 | 100.0 | 3,314 | 44.3 |
| 7+ | 50.5 | 13.7 | 32.6 | 3.1 | 100.0 | 1,008 | 30.6 |
| Residence | | | | | | | |
| Urban | 17.8 | 18.9 | 61.6 | 1.7 | 100.0 | 4,373 | 61.9 |
| Rural | 29.3 | 18.2 | 50.4 | 2.1 | 100.0 | 11,844 | 50.2 |
| Region/Residence | | | | | | | |
| Java-Bali | 22.5 | 18.5 | 56.8 | 2.1 | 100.0 | 9,188 | 58.1 |
| Urban | 16.5 | 18.5 | 63.5 | 1.5 | 100.0 | 2,940 | 63.6 |
| Rural | 25.3 | 18.6 | 53.7 | 2.4 | 100.0 | 6,247 | 55.6 |
| Outer Java-Bali I | 32.3 | 18.5 | 47.4 | 1.8 | 100.0 | 4,821 | 44.5 |
| Urban | 22.3 | 18.3 | 56.9 | 2.5 | 100.0 | 984 | 56.1 |
| Rural | 34.9 | 18.5 | 44.9 | 1.7 | 100.0 | 3,837 | 41.6 |
| Outer Java-Bali II | 28.3 | 17.7 | 52.2 | 1.8 | 100.0 | 2,207 | 52.6 |
| Urban | 16.6 | 22.7 | 59.5 | 1.3 | 100.0 | 448 | 63.2 |
| Rural | 31.3 | 16.4 | 50.4 | 1.9 | 100.0 | 1,759 | 49.9 |
| Mother's education | | | | | | | |
| No education | 45.2 | 17.0 | 34.8 | 3.0 | 100.0 | 1,462 | 36.1 |
| Some primary | 37.2 | 17.2 | 43.5 | 2.1 | 100.0 | 4,067 | 43.1 |
| Completed primary | 23.0 | 17.9 | 57.2 | 1.8 | 100.0 | 5,262 | 55.3 |
| Some secondary+ | 15.9 | 20.2 | 62.1 | 1.8 | 100.0 | 5,425 | 63.7 |
| All births | 26.2 | 18.4 | 53.4 | 2.0 | 100.0 | 16,217 | 53.3 |

While nine in ten mothers with no antenatal care and nine in ten mothers who receive antenatal care from a traditional birth attendant never get any iron pills during their pregnancy, only 8-11 percent of mothers who go to a government or a private health service facility for antenatal care get no iron pills during their pregnancy. Mothers who have their first antenatal visit in the first trimester are more likely to have taken 90 or more iron pills during their pregnancy than those who start antenatal care later.

Table 10.4.2 Tetanus toxoid vaccinations: region and province

Percent distribution of live births in the five years preceding the survey by number of tetanus toxoid injections received by mothers during pregnancy, and percentage for which mothers could show antenatal cards, according to region and province, Indonesia 1997

| Region and province | Number of tetanus toxoid injections | | | | Total | Number of births | Percent with antenatal card |
|---------------------------|-------------------------------------|----------|-------------------|---------------------|-------|------------------|-----------------------------|
| | None | One dose | Two doses or more | Don't know/ Missing | | | |
| Java-Bali | 22.5 | 18.5 | 56.8 | 2.1 | 100.0 | 9,188 | 58.1 |
| DKI Jakarta | 18.8 | 17.7 | 61.2 | 2.3 | 100.0 | 572 | 67.7 |
| West Java | 28.5 | 10.3 | 60.0 | 1.2 | 100.0 | 3,351 | 49.1 |
| Central Java | 16.0 | 22.6 | 57.3 | 4.1 | 100.0 | 2,385 | 53.9 |
| DI Yogyakarta | 10.6 | 31.5 | 57.2 | 0.7 | 100.0 | 181 | 75.0 |
| East Java | 23.6 | 23.5 | 51.2 | 1.7 | 100.0 | 2,497 | 68.8 |
| Bali | 7.3 | 36.1 | 55.2 | 1.5 | 100.0 | 202 | 81.7 |
| Outer Java-Bali I | 32.3 | 18.5 | 47.4 | 1.8 | 100.0 | 4,821 | 44.5 |
| Dista Aceh | 35.8 | 15.6 | 47.1 | 1.5 | 100.0 | 354 | 40.0 |
| North Sumatra | 52.2 | 13.3 | 31.8 | 2.8 | 100.0 | 1,267 | 20.8 |
| West Sumatra | 34.0 | 17.0 | 48.2 | 0.8 | 100.0 | 385 | 37.9 |
| South Sumatra | 24.9 | 13.5 | 60.8 | 0.7 | 100.0 | 516 | 49.4 |
| Lampung | 20.6 | 16.9 | 59.3 | 3.2 | 100.0 | 544 | 62.6 |
| West Nusa Tenggara | 26.6 | 28.9 | 43.2 | 1.3 | 100.0 | 371 | 62.4 |
| West Kalimantan | 30.2 | 16.2 | 52.1 | 1.6 | 100.0 | 324 | 49.4 |
| South Kalimantan | 27.9 | 19.3 | 52.4 | 0.4 | 100.0 | 214 | 45.7 |
| North Sulawesi | 8.8 | 28.4 | 62.0 | 0.5 | 100.0 | 192 | 69.8 |
| South Sulawesi | 18.5 | 28.5 | 51.4 | 1.7 | 100.0 | 655 | 57.9 |
| Outer Java-Bali II | 28.3 | 17.7 | 52.2 | 1.8 | 100.0 | 2,207 | 52.6 |
| Riau | 39.2 | 18.4 | 40.6 | 1.9 | 100.0 | 344 | 44.2 |
| Jambi | 37.0 | 14.9 | 42.6 | 5.5 | 100.0 | 247 | 40.3 |
| Bengkulu | 26.9 | 15.5 | 57.1 | 0.5 | 100.0 | 117 | 52.7 |
| East Nusa Tenggara | 17.2 | 14.3 | 67.5 | 1.0 | 100.0 | 367 | 61.0 |
| East Timor | 44.4 | 14.8 | 40.6 | 0.4 | 100.0 | 116 | 41.6 |
| Central Kalimantan | 35.8 | 22.8 | 40.5 | 0.8 | 100.0 | 153 | 38.3 |
| East Kalimantan | 13.5 | 25.2 | 60.9 | 0.5 | 100.0 | 223 | 64.3 |
| Central Sulawesi | 25.7 | 18.8 | 53.7 | 1.9 | 100.0 | 177 | 60.7 |
| Southeast Sulawesi | 17.5 | 13.8 | 67.5 | 1.3 | 100.0 | 117 | 63.9 |
| Maluku | 39.9 | 14.1 | 43.5 | 2.5 | 100.0 | 173 | 42.8 |
| Irian Jaya | 19.7 | 21.1 | 57.9 | 2.0 | 100.0 | 173 | 66.8 |
| Total | 26.2 | 18.4 | 53.4 | 2.0 | 100.0 | 16,217 | 53.3 |

10.5 Place of Delivery

Despite the growing availability of village delivery posts (*polindes*), four in five births in Indonesia are still delivered at home, including 7 percent delivered in a midwife's home (an increase of 2 percentage points since 1994). Only 9 percent of births in the five years preceding the survey were delivered in a government health service facility (government hospitals, village delivery posts, and health centers) and 19 percent were delivered in private hospitals or clinics (including the 7 percent delivered in a midwife's home) (Figure 10.2).

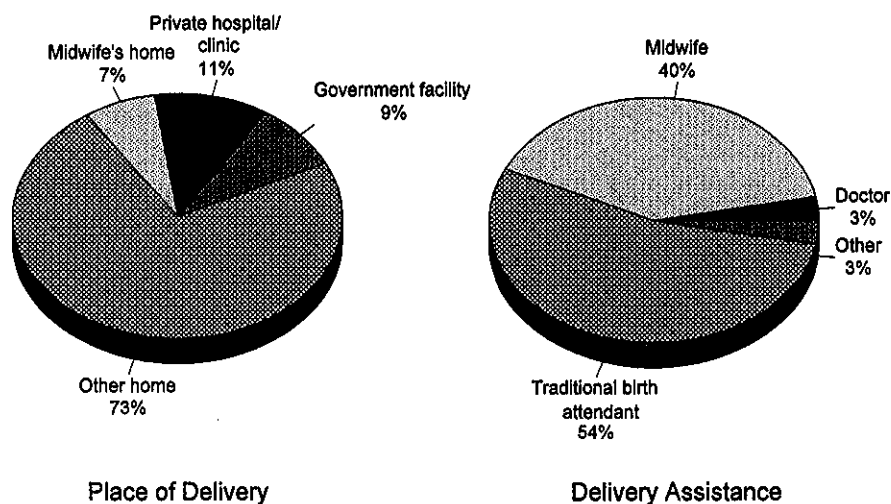
Table 10.5 Iron tablets taken during pregnancy

Percent distribution of women whose last birth occurred in the five years preceding the survey, by the number of iron tablets taken during the pregnancy, according to selected background characteristics, Indonesia 1997

| Background characteristic | Number of iron tablets taken during pregnancy | | | | | | | Total | Number of women |
|---|---|------------|------------|-------------|-------------|-------------|------------|--------------|-----------------|
| | 0 | 1-14 | 15-29 | 30-59 | 60-89 | 90+ | Don't know | | |
| Mother's age at birth | | | | | | | | | |
| < 20 | 15.3 | 8.4 | 12.2 | 20.7 | 13.5 | 22.8 | 7.2 | 100.0 | 1,778 |
| 20-24 | 15.7 | 7.8 | 9.7 | 21.7 | 12.7 | 23.8 | 8.6 | 100.0 | 3,662 |
| 25-29 | 14.5 | 7.8 | 9.0 | 18.3 | 12.8 | 28.0 | 9.7 | 100.0 | 3,431 |
| 30-34 | 17.7 | 7.6 | 10.9 | 18.0 | 11.6 | 24.4 | 9.8 | 100.0 | 2,542 |
| 35+ | 24.3 | 7.4 | 8.3 | 19.6 | 12.0 | 20.5 | 7.9 | 100.0 | 1,758 |
| Birth order | | | | | | | | | |
| 1 | 11.4 | 7.3 | 9.6 | 21.4 | 13.2 | 28.7 | 8.4 | 100.0 | 4,197 |
| 2-3 | 15.4 | 7.4 | 9.5 | 19.4 | 12.8 | 25.7 | 9.7 | 100.0 | 5,491 |
| 4-6 | 22.3 | 9.2 | 11.2 | 18.6 | 12.1 | 17.8 | 8.8 | 100.0 | 2,689 |
| 7+ | 37.5 | 8.0 | 9.1 | 16.6 | 8.6 | 15.0 | 5.3 | 100.0 | 793 |
| Residence | | | | | | | | | |
| Urban | 8.3 | 6.2 | 8.8 | 19.4 | 12.4 | 34.0 | 11.0 | 100.0 | 3,602 |
| Rural | 20.1 | 8.4 | 10.3 | 19.8 | 12.6 | 20.8 | 8.0 | 100.0 | 9,568 |
| Region/Residence | | | | | | | | | |
| Java-Bali | 13.6 | 6.5 | 10.5 | 16.8 | 12.9 | 31.1 | 8.5 | 100.0 | 7,777 |
| Urban | 7.6 | 5.4 | 8.8 | 17.0 | 10.8 | 39.9 | 10.4 | 100.0 | 2,486 |
| Rural | 16.4 | 7.0 | 11.2 | 16.7 | 13.9 | 27.0 | 7.7 | 100.0 | 5,291 |
| Outer Java-Bali I | 20.7 | 10.8 | 9.6 | 24.5 | 12.2 | 13.6 | 8.7 | 100.0 | 3,707 |
| Urban | 10.2 | 9.2 | 9.3 | 25.6 | 15.6 | 19.1 | 11.0 | 100.0 | 765 |
| Rural | 23.5 | 11.2 | 9.6 | 24.1 | 11.4 | 12.2 | 8.1 | 100.0 | 2,942 |
| Outer Java-Bali II | 23.4 | 7.2 | 7.7 | 22.3 | 11.5 | 17.3 | 10.5 | 100.0 | 1,685 |
| Urban | 8.7 | 5.9 | 6.8 | 22.7 | 16.5 | 24.5 | 15.0 | 100.0 | 350 |
| Rural | 27.3 | 7.6 | 8.0 | 22.2 | 10.1 | 15.4 | 9.3 | 100.0 | 1,335 |
| Mother's education | | | | | | | | | |
| No education | 37.1 | 9.1 | 10.2 | 14.3 | 8.1 | 14.1 | 7.1 | 100.0 | 1,150 |
| Some primary | 24.4 | 9.5 | 11.8 | 18.7 | 12.6 | 16.9 | 6.2 | 100.0 | 3,216 |
| Completed primary | 15.6 | 8.0 | 9.5 | 21.2 | 12.7 | 24.9 | 8.1 | 100.0 | 4,399 |
| Some secondary+ | 7.4 | 6.0 | 8.8 | 20.3 | 13.5 | 32.2 | 11.9 | 100.0 | 4,406 |
| Number of months pregnant at first ANC visit | | | | | | | | | |
| No antenatal care | 92.9 | 2.1 | 0.5 | 1.7 | 0.9 | 0.7 | 1.2 | 100.0 | 1,190 |
| 0-2 | 6.3 | 5.2 | 7.4 | 18.7 | 14.3 | 37.4 | 10.8 | 100.0 | 5,020 |
| 3-5 | 10.3 | 8.5 | 13.0 | 23.6 | 14.0 | 21.5 | 9.1 | 100.0 | 5,773 |
| 6+ | 16.5 | 21.0 | 14.7 | 23.4 | 9.5 | 8.0 | 6.8 | 100.0 | 1,140 |
| Place of antenatal care | | | | | | | | | |
| Government hospital | 9.0 | 10.5 | 7.3 | 18.9 | 10.8 | 33.7 | 9.9 | 100.0 | 553 |
| Health center | 8.6 | 9.2 | 11.5 | 23.4 | 12.7 | 25.2 | 9.3 | 100.0 | 5,234 |
| Delivery post | 9.4 | 10.3 | 11.4 | 24.9 | 14.9 | 23.5 | 5.5 | 100.0 | 278 |
| Health post | 11.1 | 6.5 | 15.4 | 23.6 | 14.8 | 23.2 | 5.4 | 100.0 | 854 |
| Private hospital | 7.7 | 4.1 | 6.5 | 20.7 | 8.3 | 38.8 | 13.9 | 100.0 | 379 |
| Private FP clinic | 10.3 | 5.6 | 6.6 | 21.0 | 9.7 | 32.7 | 14.0 | 100.0 | 438 |
| Private doctor | 8.0 | 2.3 | 7.9 | 10.3 | 14.8 | 41.4 | 15.3 | 100.0 | 549 |
| Private midwife | 10.2 | 8.5 | 10.6 | 20.2 | 16.2 | 25.0 | 9.4 | 100.0 | 3,669 |
| TBA visit | 91.3 | 2.1 | 0.6 | 1.8 | 0.1 | 2.0 | 2.2 | 100.0 | 324 |
| Other | 42.8 | 17.1 | 7.1 | 15.2 | 10.4 | 2.9 | 4.3 | 100.0 | 68 |
| No one | 95.3 | 2.4 | 0.4 | 1.0 | 0.3 | 0.1 | 0.4 | 100.0 | 821 |
| Total | 16.9 | 7.8 | 9.9 | 19.7 | 12.5 | 24.4 | 8.8 | 100.0 | 13,170 |

Note: Totals include 47 women with missing information as to number of months pregnant at first ANC visit and 7 women with no information on place of antenatal care (ANC).
TBA = Traditional birth attendant

Figure 10.2
Delivery Characteristics of Births in
the Five Years Preceding the Survey



IDHS97

Births to women in high-risk age groups—under 20 years or 35 years and over—are more likely to be delivered at a private home than births to women age 20-34. For women under age 20 the proportion is 83 percent, for those age 35 and over it is 78 percent, and for women age 20 to 34 it ranges from 67 to 72 percent. Higher order births are more frequently delivered at home—89 percent among seventh and higher order births compared with 65 percent among first order birth. This implies that a relatively large proportion of high-risk births are delivered at home (Table 10.6.1).

Births in rural areas are twice as likely to be delivered at home as those in urban areas (84 percent compared with 41 percent). Fifteen percent of births in urban areas are delivered in a midwife's home. The percentage of home deliveries in the Outer Java-Bali regions (76 and 82 percent) is higher than that in Java-Bali (69 percent). Deliveries in a midwife's home are very popular in urban Java-Bali (20 percent). Births to mothers who have no education are twice as likely to be delivered at home as births to mothers who have some secondary education (92 percent and 48 percent, respectively). The utilization of private hospitals or clinics for delivery is considerably higher in urban than in rural areas. It is also higher for first through third deliveries, and among births to mothers with some secondary education.

Significant variations are found in the place of delivery by province (Table 10.6.2). A majority of births (more than 60 percent) are delivered at home in all provinces except in DKI Jakarta (20 percent), DI Yogyakarta (43 percent), Bali (28 percent), and West Sumatra (51 percent). In DKI Jakarta, 80 percent of births occur in health facilities, among which 56 percent are delivered in private hospitals, clinics, or midwife's homes and 23 percent in government hospitals or health centers. Similarly, in DI Yogyakarta, Bali, and West Sumatra, more births are delivered in private facilities than in government facilities.

Table 10.6.1 Place of delivery: background characteristics

Percent distribution of live births in the five years preceding the survey by place of delivery, according to selected background characteristics, Indonesia 1997

| Background characteristic | Place of delivery | | | | | | | | | Total | Number of births |
|--|-------------------|------------|------------|------------|---------------|---------------|------------|------------|---------------|--------------|------------------|
| | Home | | | Government | | | Private | | | | |
| | Respondent's | Other's | Mid-wife's | Hospital | Health center | Delivery post | Hospital | Clinic | Other private | | |
| Mother's age at birth | | | | | | | | | | | |
| <20 | 76.3 | 6.4 | 4.3 | 3.8 | 2.6 | 0.2 | 1.9 | 4.5 | 0.0 | 100.0 | 2,215 |
| 20-24 | 65.6 | 6.2 | 7.5 | 5.9 | 2.7 | 0.1 | 4.2 | 7.2 | 0.5 | 100.0 | 4,647 |
| 25-29 | 63.2 | 3.4 | 7.9 | 7.8 | 2.3 | 0.2 | 6.7 | 8.2 | 0.3 | 100.0 | 4,236 |
| 30-34 | 68.4 | 2.8 | 6.7 | 6.4 | 2.2 | 0.4 | 5.3 | 7.6 | 0.1 | 100.0 | 3,111 |
| 35+ | 75.8 | 2.3 | 4.8 | 6.1 | 1.3 | 0.5 | 3.8 | 5.3 | 0.0 | 100.0 | 2,007 |
| Birth order | | | | | | | | | | | |
| 1 | 58.3 | 6.4 | 8.3 | 8.3 | 3.1 | 0.2 | 6.1 | 8.9 | 0.3 | 100.0 | 5,314 |
| 2-3 | 67.6 | 3.8 | 7.2 | 6.2 | 2.1 | 0.2 | 5.5 | 7.1 | 0.3 | 100.0 | 6,581 |
| 4-6 | 79.8 | 3.0 | 4.2 | 4.0 | 1.7 | 0.3 | 2.1 | 4.7 | 0.1 | 100.0 | 3,314 |
| 7+ | 87.5 | 1.5 | 2.5 | 2.7 | 1.8 | 0.5 | 0.8 | 2.8 | 0.0 | 100.0 | 1,008 |
| Residence | | | | | | | | | | | |
| Urban | 35.3 | 5.2 | 14.8 | 11.8 | 3.9 | 0.3 | 13.4 | 14.9 | 0.4 | 100.0 | 4,373 |
| Rural | 80.3 | 4.0 | 3.7 | 4.2 | 1.7 | 0.2 | 1.5 | 4.0 | 0.2 | 100.0 | 11,844 |
| Region/Residence | | | | | | | | | | | |
| Java-Bali | 65.8 | 2.8 | 9.7 | 5.8 | 2.5 | 0.2 | 5.2 | 7.6 | 0.3 | 100.0 | 9,188 |
| Urban | 34.3 | 4.6 | 19.7 | 9.9 | 4.4 | 0.4 | 12.9 | 13.1 | 0.4 | 100.0 | 2,940 |
| Rural | 80.5 | 1.9 | 5.0 | 3.9 | 1.6 | 0.2 | 1.7 | 5.1 | 0.3 | 100.0 | 6,247 |
| Outer Java-Bali I | 69.4 | 6.5 | 3.5 | 6.3 | 2.4 | 0.4 | 4.2 | 7.1 | 0.2 | 100.0 | 4,821 |
| Urban | 35.0 | 6.3 | 4.9 | 13.9 | 2.9 | 0.0 | 16.0 | 20.5 | 0.4 | 100.0 | 984 |
| Rural | 78.3 | 6.6 | 3.2 | 4.3 | 2.2 | 0.5 | 1.2 | 3.6 | 0.1 | 100.0 | 3,837 |
| Outer Java-Bali II | 75.8 | 6.1 | 1.1 | 8.0 | 1.6 | 0.0 | 3.6 | 3.7 | 0.1 | 100.0 | 2,207 |
| Urban | 42.0 | 6.3 | 4.6 | 19.5 | 2.5 | 0.1 | 11.1 | 14.0 | 0.0 | 100.0 | 448 |
| Rural | 84.4 | 6.0 | 0.2 | 5.0 | 1.3 | 0.0 | 1.7 | 1.1 | 0.1 | 100.0 | 1,759 |
| Mother's education | | | | | | | | | | | |
| No education | 90.6 | 1.9 | 2.3 | 1.7 | 0.8 | 0.1 | 1.2 | 1.3 | 0.1 | 100.0 | 1,462 |
| Some primary | 84.9 | 3.8 | 3.6 | 2.6 | 1.9 | 0.1 | 0.9 | 2.1 | 0.2 | 100.0 | 4,067 |
| Completed primary | 75.8 | 4.4 | 5.7 | 4.1 | 2.2 | 0.3 | 1.7 | 5.5 | 0.3 | 100.0 | 5,262 |
| Some secondary+ | 42.5 | 5.4 | 11.2 | 12.2 | 3.2 | 0.3 | 11.5 | 13.5 | 0.3 | 100.0 | 5,425 |
| Number of antenatal care visits | | | | | | | | | | | |
| 0 | 94.4 | 3.5 | 0.4 | 0.3 | 0.3 | 0.0 | 0.4 | 0.5 | 0.1 | 100.0 | 1,717 |
| 1-3 | 84.5 | 5.0 | 2.1 | 2.9 | 1.7 | 0.1 | 1.6 | 2.1 | 0.0 | 100.0 | 3,184 |
| 4+ | 59.7 | 4.3 | 9.0 | 8.1 | 2.8 | 0.3 | 6.3 | 9.2 | 0.3 | 100.0 | 11,214 |
| Don't know/missing | 62.9 | 3.6 | 1.8 | 2.9 | 2.7 | 0.0 | 4.4 | 20.7 | 0.9 | 100.0 | 91 |
| Total | 68.3 | 4.3 | 6.7 | 6.2 | 2.3 | 0.2 | 4.7 | 6.9 | 0.2 | 100.0 | 16,217 |

Table 10.6.2 Place of delivery: region and province

Percent distribution of live births in the five years preceding the survey by place of delivery, according to region and province, Indonesia 1997

| Region and province | Place of delivery | | | | | | | | | Total | Number of births |
|---------------------------|-------------------|---------|------------|------------|---------------|---------------|----------|--------|---------------|-------|------------------|
| | Home | | | Government | | | Private | | | | |
| | Respondent's | Other's | Mid-wife's | Hospital | Health center | Delivery post | Hospital | Clinic | Other private | | |
| Java-Bali | 65.8 | 2.8 | 9.7 | 5.8 | 2.5 | 0.2 | 5.2 | 7.6 | 0.3 | 100.0 | 9,188 |
| DKI Jakarta | 13.2 | 6.8 | 21.6 | 12.0 | 11.2 | 0.0 | 14.3 | 20.1 | 0.4 | 100.0 | 572 |
| West Java | 77.9 | 3.0 | 8.9 | 3.5 | 0.7 | 0.1 | 3.1 | 2.6 | 0.1 | 100.0 | 3,351 |
| Central Java | 71.1 | 1.9 | 5.9 | 5.3 | 2.1 | 0.0 | 4.3 | 9.0 | 0.2 | 100.0 | 2,485 |
| DI Yogyakarta | 41.9 | 0.7 | 17.9 | 14.2 | 4.6 | 0.0 | 7.5 | 13.3 | 0.0 | 100.0 | 181 |
| East Java | 61.3 | 2.5 | 9.3 | 6.5 | 2.6 | 0.7 | 6.6 | 9.7 | 0.7 | 100.0 | 2,497 |
| Bali | 26.1 | 2.0 | 31.6 | 16.8 | 8.4 | 0.2 | 4.7 | 9.6 | 0.6 | 100.0 | 202 |
| Outer Java-Bali I | 69.4 | 6.5 | 3.5 | 6.3 | 2.4 | 0.4 | 4.2 | 7.1 | 0.2 | 100.0 | 4,821 |
| Dista Aceh | 85.6 | 2.4 | 0.0 | 4.4 | 0.7 | 0.0 | 0.6 | 6.4 | 0.0 | 100.0 | 354 |
| North Sumatra | 70.2 | 7.6 | 1.3 | 4.6 | 1.7 | 0.6 | 3.9 | 10.1 | 0.0 | 100.0 | 1,267 |
| West Sumatra | 42.8 | 8.5 | 19.4 | 9.0 | 6.3 | 1.6 | 3.9 | 8.2 | 0.3 | 100.0 | 385 |
| South Sumatra | 65.5 | 5.7 | 5.2 | 5.0 | 0.5 | 0.3 | 4.2 | 13.4 | 0.1 | 100.0 | 516 |
| Lampung | 72.3 | 5.8 | 6.6 | 2.9 | 0.4 | 0.0 | 1.1 | 10.8 | 0.0 | 100.0 | 544 |
| West Nusa Tenggara | 75.7 | 9.0 | 0.5 | 6.3 | 4.2 | 0.4 | 2.2 | 0.5 | 1.0 | 100.0 | 371 |
| West Kalimantan | 79.1 | 4.3 | 0.4 | 6.2 | 1.8 | 0.0 | 3.1 | 5.0 | 0.1 | 100.0 | 324 |
| South Kalimantan | 81.8 | 7.6 | 0.9 | 6.3 | 0.4 | 0.0 | 2.0 | 1.0 | 0.0 | 100.0 | 214 |
| North Sulawesi | 68.8 | 3.5 | 0.5 | 10.6 | 5.0 | 0.4 | 6.2 | 4.9 | 0.2 | 100.0 | 192 |
| South Sulawesi | 63.3 | 7.0 | 1.5 | 11.4 | 4.4 | 0.0 | 11.5 | 0.7 | 0.1 | 100.0 | 655 |
| Outer Java-Bali II | 75.8 | 6.1 | 1.1 | 8.0 | 1.6 | 0.0 | 3.6 | 3.7 | 0.1 | 100.0 | 2,207 |
| Riau | 66.9 | 9.7 | 0.7 | 3.7 | 1.1 | 0.1 | 4.2 | 13.7 | 0.0 | 100.0 | 344 |
| Jambi | 77.8 | 6.1 | 0.8 | 2.6 | 3.6 | 0.0 | 1.5 | 7.5 | 0.1 | 100.0 | 247 |
| Bengkulu | 84.5 | 6.8 | 0.2 | 4.0 | 0.2 | 0.5 | 1.1 | 1.6 | 0.9 | 100.0 | 117 |
| East Nusa Tenggara | 82.5 | 2.8 | 0.1 | 8.4 | 1.6 | 0.0 | 3.2 | 1.1 | 0.1 | 100.0 | 367 |
| East Timor | 83.5 | 0.7 | 0.1 | 13.6 | 0.9 | 0.0 | 0.4 | 0.7 | 0.0 | 100.0 | 116 |
| Central Kalimantan | 81.0 | 12.9 | 0.2 | 5.0 | 0.2 | 0.0 | 0.5 | 0.3 | 0.0 | 100.0 | 153 |
| East Kalimantan | 54.2 | 7.2 | 7.9 | 15.7 | 1.8 | 0.0 | 9.9 | 3.2 | 0.0 | 100.0 | 223 |
| Central Sulawesi | 77.6 | 11.5 | 0.2 | 7.7 | 1.0 | 0.0 | 1.5 | 0.1 | 0.0 | 100.0 | 177 |
| Southeast Sulawesi | 91.0 | 3.4 | 0.2 | 3.4 | 0.4 | 0.0 | 1.6 | 0.0 | 0.0 | 100.0 | 117 |
| Maluku | 83.4 | 0.9 | 0.2 | 6.0 | 0.2 | 0.0 | 9.4 | 0.0 | 0.0 | 100.0 | 173 |
| Irian Jaya | 68.7 | 2.7 | 0.2 | 20.5 | 4.5 | 0.0 | 2.4 | 0.8 | 0.2 | 100.0 | 173 |
| Total | 68.3 | 4.3 | 6.7 | 6.2 | 2.3 | 0.2 | 4.7 | 6.9 | 0.2 | 100.0 | 16,217 |

10.6 Assistance during Delivery

In the survey, respondents were asked about all types of assistance attending the delivery. If more than one type of delivery attendant was recorded, only the least qualified delivery attendant was considered for tabulation, since they are usually the first choice to assist during delivery. Only complicated cases are referred to the more qualified attendant.

Forty-three percent of births in the five years before the survey were assisted by a doctor or a nurse/midwife, and 57 percent of births were assisted by non-medical staff—54 percent by a traditional birth attendant and 3 percent by a relative (Table 10.7.1 and Figure 10.2). Births to young mothers, high birth orders, those in rural areas, those to mothers with no education, and to mothers who receive no antenatal care are more likely to be assisted by non-medical staff than other births.

Table 10.7.1 Assistance during delivery: background characteristics

Percent distribution of live births in the five years preceding the survey by type of assistance during delivery, according to selected background characteristics, Indonesia 1997

| Background characteristic | Assistance during delivery ¹ | | | | | | Total | Number of births |
|--|---|-------------|-----------------------------|------------|------------|------------|--------------|------------------|
| | Doctor | Midwife | Traditional birth attendant | Relative | Other | No one | | |
| Mother's age at birth | | | | | | | | |
| < 20 | 0.6 | 31.2 | 65.7 | 2.4 | 0.0 | 0.0 | 100.0 | 2,215 |
| 20-24 | 2.9 | 42.0 | 52.5 | 2.3 | 0.1 | 0.1 | 100.0 | 4,647 |
| 25-29 | 5.0 | 44.0 | 48.3 | 2.4 | 0.1 | 0.2 | 100.0 | 4,236 |
| 30-34 | 3.1 | 41.9 | 52.5 | 2.2 | 0.1 | 0.4 | 100.0 | 3,111 |
| 35+ | 3.4 | 33.6 | 58.7 | 3.5 | 0.0 | 0.8 | 100.0 | 2,007 |
| Birth order | | | | | | | | |
| 1 | 4.6 | 46.5 | 47.1 | 1.7 | 0.1 | 0.1 | 100.0 | 5,314 |
| 2-3 | 3.3 | 41.4 | 52.6 | 2.3 | 0.0 | 0.1 | 100.0 | 6,581 |
| 4-6 | 1.5 | 31.1 | 63.8 | 3.0 | 0.1 | 0.6 | 100.0 | 3,314 |
| 7+ | 0.7 | 25.8 | 65.8 | 6.3 | 0.2 | 1.2 | 100.0 | 1,008 |
| Residence | | | | | | | | |
| Urban | 7.9 | 68.5 | 23.1 | 0.4 | 0.0 | 0.1 | 100.0 | 4,373 |
| Rural | 1.5 | 29.5 | 65.3 | 3.2 | 0.1 | 0.3 | 100.0 | 11,844 |
| Region/Residence | | | | | | | | |
| Java-Bali | 3.8 | 38.1 | 57.2 | 0.7 | 0.0 | 0.2 | 100.0 | 9,188 |
| Urban | 7.9 | 65.3 | 26.6 | 0.0 | 0.0 | 0.1 | 100.0 | 2,940 |
| Rural | 1.9 | 25.4 | 71.4 | 1.0 | 0.0 | 0.2 | 100.0 | 6,247 |
| Outer Java-Bali I | 2.7 | 45.9 | 48.1 | 3.0 | 0.1 | 0.3 | 100.0 | 4,821 |
| Urban | 9.1 | 76.0 | 14.3 | 0.7 | 0.0 | 0.0 | 100.0 | 984 |
| Rural | 1.1 | 38.1 | 56.7 | 3.5 | 0.1 | 0.4 | 100.0 | 3,837 |
| Outer Java-Bali II | 1.8 | 35.1 | 53.4 | 9.0 | 0.4 | 0.3 | 100.0 | 2,207 |
| Urban | 4.9 | 73.2 | 19.2 | 2.1 | 0.4 | 0.1 | 100.0 | 448 |
| Rural | 1.0 | 25.4 | 62.1 | 10.7 | 0.4 | 0.4 | 100.0 | 1,759 |
| Mother's education | | | | | | | | |
| No education | 1.2 | 14.2 | 73.9 | 9.4 | 0.2 | 1.2 | 100.0 | 1,462 |
| Some primary | 0.9 | 22.0 | 73.8 | 2.8 | 0.1 | 0.4 | 100.0 | 4,067 |
| Completed primary | 1.5 | 34.7 | 62.0 | 1.6 | 0.1 | 0.1 | 100.0 | 5,262 |
| Some secondary+ | 7.3 | 65.6 | 25.9 | 1.1 | 0.0 | 0.0 | 100.0 | 5,425 |
| Number of antenatal care visits | | | | | | | | |
| 0 | 0.4 | 5.9 | 83.3 | 9.0 | 0.3 | 1.0 | 100.0 | 1,717 |
| 1-3 | 1.0 | 25.8 | 69.3 | 3.7 | 0.0 | 0.3 | 100.0 | 3,184 |
| 4+ | 4.3 | 49.4 | 45.1 | 1.1 | 0.0 | 0.2 | 100.0 | 11,249 |
| Don't know/missing | 5.5 | 40.6 | 48.3 | 5.6 | 0.0 | 0.0 | 100.0 | 91 |
| Total | 3.2 | 40.0 | 54.0 | 2.5 | 0.1 | 0.3 | 100.0 | 16,217 |

¹ If the respondent mentioned more than one attendant, only the *least* qualified attendant was considered (see text for explanation).

Traditional birth attendants still have a very important role in delivery assistance, especially in the rural areas (65 percent), in the Java-Bali region (57 percent), to mothers with no education or some primary education (74 percent), as well as to mothers with no antenatal care (83 percent).

The coverage of deliveries assisted by traditional birth attendants varies among provinces, from 9 percent in DKI Jakarta to 78 percent in West Nusa Tenggara (Table 10.7.2). Overall, 3 percent of births were assisted by relatives, which may have greater risk for the mother and baby, than those assisted by traditional birth attendants, because relatives generally have no training and are less experienced in assisting delivery than traditional birth attendants. Some provinces have a high prevalence of relative-assisted deliveries, e.g., East Nusa Tenggara (11 percent), Irian Jaya (26 percent), and East Timor (57 percent). The high prevalence of deliveries assisted by relatives in Irian Jaya and East Timor was also noted in past IDHS.

Table 10.7.2 Assistance during delivery: region and province

Percent distribution of live births in the five years preceding the survey by type of assistance during delivery, according to region and province, Indonesia 1997

| Region and province | Assistance during delivery ¹ | | | | | | Total | Number of births |
|---------------------------|---|---------|-----------------------------|----------|-------|--------|-------|------------------|
| | Doctor | Midwife | Traditional birth attendant | Relative | Other | No one | | |
| Java-Bali | 3.8 | 38.1 | 57.2 | 0.7 | 0.0 | 0.2 | 100.0 | 9,188 |
| DKI Jakarta | 13.0 | 77.6 | 9.4 | 0.0 | 0.0 | 0.0 | 100.0 | 572 |
| West Java | 2.3 | 28.3 | 69.2 | 0.2 | 0.0 | 0.0 | 100.0 | 3,351 |
| Central Java | 4.2 | 33.1 | 61.3 | 0.7 | 0.0 | 0.8 | 100.0 | 2,385 |
| DI Yogyakarta | 3.2 | 57.8 | 39.0 | 0.0 | 0.0 | 0.0 | 100.0 | 181 |
| East Java | 3.4 | 43.0 | 52.5 | 1.1 | 0.0 | 0.0 | 100.0 | 2,497 |
| Bali | 3.5 | 74.1 | 16.4 | 5.8 | 0.1 | 0.0 | 100.0 | 202 |
| Outer Java-Bali I | 2.7 | 45.9 | 48.1 | 3.0 | 0.1 | 0.3 | 100.0 | 4,821 |
| Dista Aceh | 1.5 | 37.9 | 59.6 | 1.0 | 0.0 | 0.0 | 100.0 | 354 |
| North Sumatra | 4.2 | 57.7 | 30.9 | 6.0 | 0.2 | 1.0 | 100.0 | 1,267 |
| West Sumatra | 1.7 | 67.6 | 30.7 | 0.0 | 0.0 | 0.0 | 100.0 | 385 |
| South Sumatra | 3.9 | 50.4 | 44.9 | 0.8 | 0.0 | 0.0 | 100.0 | 516 |
| Lampung | 0.9 | 39.0 | 58.8 | 1.1 | 0.0 | 0.2 | 100.0 | 544 |
| West Nusa Tenggara | 0.8 | 19.8 | 78.4 | 0.9 | 0.0 | 0.1 | 100.0 | 371 |
| West Kalimantan | 1.9 | 35.0 | 59.8 | 3.3 | 0.0 | 0.0 | 100.0 | 324 |
| South Kalimantan | 3.1 | 37.3 | 59.5 | 0.0 | 0.0 | 0.0 | 100.0 | 214 |
| North Sulawesi | 2.1 | 43.6 | 53.4 | 1.0 | 0.0 | 0.0 | 100.0 | 192 |
| South Sulawesi | 3.2 | 40.1 | 50.7 | 5.6 | 0.0 | 0.4 | 100.0 | 655 |
| Outer Java-Bali II | 1.8 | 35.1 | 53.4 | 9.0 | 0.4 | 0.3 | 100.0 | 2,207 |
| Riau | 1.7 | 42.5 | 54.4 | 1.3 | 0.1 | 0.0 | 100.0 | 344 |
| Jambi | 1.8 | 34.5 | 63.4 | 0.3 | 0.0 | 0.0 | 100.0 | 247 |
| Bengkulu | 1.3 | 41.0 | 51.1 | 6.1 | 0.1 | 0.3 | 100.0 | 117 |
| East Nusa Tenggara | 0.6 | 25.9 | 62.1 | 10.5 | 0.4 | 0.5 | 100.0 | 367 |
| East Timor | 2.4 | 23.4 | 17.0 | 57.1 | 0.1 | 0.0 | 100.0 | 116 |
| Central Kalimantan | 0.3 | 37.9 | 58.4 | 2.7 | 0.7 | 0.0 | 100.0 | 153 |
| East Kalimantan | 6.6 | 56.2 | 33.7 | 2.9 | 0.2 | 0.4 | 100.0 | 223 |
| Central Sulawesi | 0.5 | 22.1 | 67.6 | 9.5 | 0.3 | 0.0 | 100.0 | 177 |
| Southeast Sulawesi | 1.9 | 23.4 | 70.9 | 3.3 | 0.0 | 0.4 | 100.0 | 117 |
| Maluku | 1.5 | 26.3 | 68.7 | 3.4 | 0.0 | 0.1 | 100.0 | 173 |
| Irian Jaya | 1.1 | 45.5 | 23.1 | 25.5 | 2.7 | 2.1 | 100.0 | 173 |
| Total | 3.2 | 40.0 | 54.0 | 2.5 | 0.1 | 0.3 | 100.0 | 16,217 |

¹ If the respondent mentioned more than one attendant, only the *least* qualified attendant was considered (see text for explanation).

10.7 Delivery Characteristics

In Indonesia, caesarean sections generally are performed under certain medical indications and to terminate complicated deliveries. In this survey, only 4 percent of births were delivered by a caesarean section (Table 10.8.1). The percentage of caesarean section is higher among older women, lower birth orders, and mothers with some secondary education. In urban areas, 6 percent of births were delivered by a caesarean section, compared to 4 percent in rural areas. Deliveries in Java-Bali are more likely to be by a caesarean section than in Outer Java-Bali regions (5 percent compared with only 3 percent).

Table 10.8.1 Delivery characteristics: background characteristics

Among births in the five years preceding the survey, the percentage of deliveries by caesarean section, the percentage of premature births, and the percent distribution by birth weight and by the mother's estimate of baby's size at birth, according to background characteristics, Indonesia 1997

| Background characteristic | Delivery by C-section | Pre-mature birth | Birth weight | | | Size of child at birth | | | | Total | Number of births |
|------------------------------|-----------------------|------------------|------------------|----------------|---------------------|------------------------|----------------------|-------------------|---------------------|--------------|------------------|
| | | | Less than 2.5 kg | 2.5 kg or more | Don't know/ Missing | Very small | Smaller than average | Average or larger | Don't know/ Missing | | |
| Mother's age at birth | | | | | | | | | | | |
| <20 | 2.6 | 4.7 | 11.9 | 88.1 | 43.3 | 1.9 | 17.2 | 78.4 | 2.6 | 100.0 | 2,215 |
| 20-24 | 4.1 | 3.6 | 7.5 | 92.5 | 37.0 | 1.6 | 12.2 | 83.8 | 2.4 | 100.0 | 4,647 |
| 25-29 | 4.3 | 2.3 | 7.1 | 92.9 | 34.2 | 1.1 | 10.7 | 86.2 | 2.0 | 100.0 | 4,236 |
| 30-34 | 5.2 | 2.0 | 7.5 | 92.5 | 38.5 | 2.1 | 11.7 | 83.0 | 3.2 | 100.0 | 3,111 |
| 35+ | 5.0 | 1.7 | 5.1 | 94.9 | 44.4 | 1.6 | 11.0 | 85.9 | 1.5 | 100.0 | 2,007 |
| Birth order | | | | | | | | | | | |
| 1 | 5.2 | 4.7 | 9.6 | 90.4 | 30.5 | 1.5 | 15.1 | 81.4 | 2.0 | 100.0 | 5,314 |
| 2-3 | 4.2 | 2.4 | 5.9 | 94.1 | 36.4 | 1.6 | 10.6 | 85.9 | 1.8 | 100.0 | 6,581 |
| 4-6 | 3.1 | 1.3 | 7.7 | 92.3 | 48.3 | 1.7 | 11.1 | 83.8 | 3.3 | 100.0 | 3,314 |
| 7+ | 3.6 | 1.1 | 8.0 | 92.0 | 60.6 | 1.7 | 11.3 | 82.8 | 4.2 | 100.0 | 1,008 |
| Residence | | | | | | | | | | | |
| Urban | 6.3 | 4.0 | 6.6 | 93.4 | 10.1 | 1.4 | 11.2 | 86.8 | 0.7 | 100.0 | 4,373 |
| Rural | 3.5 | 2.5 | 8.4 | 91.6 | 48.7 | 1.7 | 12.6 | 82.7 | 3.0 | 100.0 | 11,844 |
| Region/Residence | | | | | | | | | | | |
| Java-Bali | 5.1 | 3.5 | 7.9 | 92.1 | 33.4 | 1.7 | 13.8 | 82.0 | 2.5 | 100.0 | 9,188 |
| Urban | 5.9 | 4.5 | 6.6 | 93.4 | 8.5 | 1.5 | 11.2 | 86.7 | 0.6 | 100.0 | 2,940 |
| Rural | 4.7 | 3.1 | 8.8 | 91.2 | 45.0 | 1.8 | 15.0 | 79.8 | 3.4 | 100.0 | 6,247 |
| Outer Java-Bali I | 3.2 | 2.0 | 6.9 | 93.1 | 42.4 | 1.6 | 9.8 | 86.7 | 2.0 | 100.0 | 4,821 |
| Urban | 7.1 | 3.0 | 5.9 | 94.1 | 11.2 | 1.2 | 10.6 | 87.4 | 0.8 | 100.0 | 984 |
| Rural | 2.2 | 1.7 | 7.3 | 92.7 | 50.4 | 1.7 | 9.5 | 86.5 | 2.3 | 100.0 | 3,837 |
| Outer Java-Bali II | 3.3 | 2.3 | 8.8 | 91.2 | 49.9 | 1.3 | 11.3 | 85.0 | 2.4 | 100.0 | 2,207 |
| Urban | 7.7 | 3.6 | 7.3 | 92.7 | 18.3 | 0.9 | 12.5 | 86.0 | 0.7 | 100.0 | 448 |
| Rural | 2.1 | 1.9 | 9.5 | 90.5 | 58.0 | 1.5 | 11.0 | 84.8 | 2.8 | 100.0 | 1,759 |
| Mother's education | | | | | | | | | | | |
| No education | 1.9 | 1.2 | 11.4 | 88.6 | 68.6 | 1.7 | 12.6 | 80.9 | 4.7 | 100.0 | 1,462 |
| Some primary | 3.0 | 2.0 | 10.9 | 89.1 | 55.2 | 1.9 | 14.7 | 79.4 | 4.0 | 100.0 | 4,067 |
| Completed primary | 4.3 | 3.0 | 7.9 | 92.1 | 39.1 | 1.8 | 12.9 | 83.4 | 1.8 | 100.0 | 5,262 |
| Some secondary+ | 5.9 | 3.9 | 5.8 | 94.2 | 16.8 | 1.2 | 9.5 | 88.4 | 0.9 | 100.0 | 5,425 |
| Total | 4.3 | 2.9 | 7.7 | 92.3 | 38.4 | 1.6 | 12.2 | 83.8 | 2.3 | 100.0 | 16,217 |

In some provinces, caesarean sections were more frequently performed than in others, i.e., 8 percent or more in DKI Jakarta, Central Java, and East Kalimantan, compared with less than 2 percent in West Kalimantan, East Timor, Central Kalimantan, and Maluku (Table 10.8.2).

Table 10.8.2 Delivery characteristics: region and province

Among births in the five years preceding the survey, the percentage of deliveries by caesarean section, the percentage of premature births, and the percent distribution by birth weight and by the mother's estimate of baby's size at birth, according to region and province, Indonesia 1997

| Region and province | Delivery by C-section | Pre-mature birth | Birth weight | | | Size of child at birth | | | | Total | Number of births |
|---------------------------|-----------------------|------------------|------------------|----------------|---------------------|------------------------|----------------------|-------------------|---------------------|--------------|------------------|
| | | | Less than 2.5 kg | 2.5 kg or more | Don't know/ Missing | Very small | Smaller than average | Average or larger | Don't know/ Missing | | |
| Java-Bali | 5.1 | 3.5 | 7.9 | 92.1 | 33.4 | 1.7 | 13.8 | 82.0 | 2.5 | 100.0 | 9,188 |
| DKI Jakarta | 8.4 | 4.5 | 6.3 | 93.7 | 4.7 | 3.6 | 10.5 | 85.0 | 0.9 | 100.0 | 572 |
| West Java | 2.1 | 3.2 | 10.4 | 89.6 | 42.3 | 2.5 | 11.9 | 80.9 | 4.6 | 100.0 | 3,351 |
| Central Java | 9.3 | 2.7 | 6.5 | 93.5 | 24.4 | 0.7 | 14.6 | 82.1 | 2.6 | 100.0 | 2,385 |
| DI Yogyakarta | 4.2 | 2.8 | 4.9 | 95.1 | 15.6 | 0.7 | 5.8 | 93.1 | 0.4 | 100.0 | 181 |
| East Java | 4.3 | 4.4 | 7.1 | 92.9 | 39.2 | 1.2 | 17.2 | 81.3 | 0.3 | 100.0 | 2,497 |
| Bali | 6.7 | 4.2 | 8.0 | 92.0 | 19.2 | 1.4 | 9.2 | 88.1 | 1.3 | 100.0 | 202 |
| Outer Java-Bali I | 3.2 | 2.0 | 6.9 | 93.1 | 42.4 | 1.6 | 9.8 | 86.7 | 2.0 | 100.0 | 4,821 |
| Dista Aceh | 3.4 | 1.1 | 3.6 | 96.4 | 63.6 | 0.2 | 9.9 | 89.0 | 0.9 | 100.0 | 354 |
| North Sumatra | 2.9 | 1.0 | 3.7 | 96.3 | 45.6 | 0.9 | 6.6 | 89.2 | 3.3 | 100.0 | 1,267 |
| West Sumatra | 5.2 | 3.6 | 5.8 | 94.2 | 21.7 | 0.6 | 11.4 | 86.1 | 1.9 | 100.0 | 385 |
| South Sumatra | 4.4 | 2.9 | 8.3 | 91.7 | 34.7 | 1.6 | 11.5 | 86.1 | 0.8 | 100.0 | 516 |
| Lampung | 2.3 | 2.3 | 5.1 | 94.9 | 47.7 | 1.5 | 9.5 | 88.2 | 0.8 | 100.0 | 544 |
| West Nusa Tenggara | 2.3 | 2.2 | 7.7 | 92.3 | 34.5 | 1.4 | 11.0 | 85.4 | 2.3 | 100.0 | 371 |
| West Kalimantan | 1.7 | 1.5 | 10.7 | 89.3 | 48.4 | 1.4 | 11.0 | 86.9 | 0.7 | 100.0 | 324 |
| South Kalimantan | 2.5 | 1.9 | 7.1 | 92.9 | 36.9 | 2.3 | 7.2 | 83.1 | 7.5 | 100.0 | 214 |
| North Sulawesi | 2.9 | 3.0 | 7.0 | 93.0 | 48.2 | 3.7 | 10.0 | 86.1 | 0.2 | 100.0 | 192 |
| South Sulawesi | 4.0 | 2.0 | 12.3 | 87.7 | 40.4 | 3.6 | 13.0 | 82.1 | 1.3 | 100.0 | 655 |
| Outer Java-Bali II | 3.3 | 2.3 | 8.8 | 91.2 | 49.9 | 1.3 | 11.3 | 85.0 | 2.4 | 100.0 | 2,207 |
| Riau | 3.3 | 1.8 | 6.5 | 93.5 | 45.0 | 0.8 | 13.0 | 85.5 | 0.6 | 100.0 | 344 |
| Jambi | 2.3 | 1.7 | 4.5 | 95.5 | 54.1 | 0.6 | 11.0 | 88.3 | 0.1 | 100.0 | 247 |
| Bengkulu | 2.7 | 1.4 | 4.6 | 95.4 | 41.8 | 1.6 | 10.1 | 86.5 | 1.9 | 100.0 | 117 |
| East Nusa Tenggara | 2.3 | 2.3 | 13.1 | 86.9 | 54.9 | 0.9 | 11.8 | 85.7 | 1.6 | 100.0 | 367 |
| East Timor | 0.9 | 0.4 | 6.0 | 94.0 | 79.5 | 0.2 | 1.9 | 92.7 | 5.2 | 100.0 | 116 |
| Central Kalimantan | 1.7 | 2.2 | 10.8 | 89.2 | 49.8 | 2.1 | 9.1 | 85.2 | 3.5 | 100.0 | 153 |
| East Kalimantan | 10.1 | 4.9 | 8.5 | 91.5 | 22.2 | 2.8 | 17.6 | 79.5 | 0.1 | 100.0 | 223 |
| Central Sulawesi | 2.5 | 2.9 | 15.6 | 84.4 | 39.6 | 4.0 | 16.3 | 71.1 | 8.5 | 100.0 | 177 |
| Southeast Sulawesi | 2.3 | 2.1 | 6.6 | 93.4 | 59.7 | 0.4 | 10.5 | 85.2 | 3.8 | 100.0 | 117 |
| Maluku | 1.9 | 1.2 | 6.4 | 93.6 | 62.7 | 0.7 | 7.1 | 87.4 | 4.7 | 100.0 | 173 |
| Irian Jaya | 4.0 | 3.2 | 7.9 | 92.1 | 55.6 | 1.0 | 7.1 | 90.7 | 1.2 | 100.0 | 173 |
| Total | 4.3 | 2.9 | 7.7 | 92.3 | 38.4 | 1.6 | 12.2 | 83.8 | 2.3 | 100.0 | 16,217 |

According to respondents' reports, about 3 percent of births were delivered prematurely. This figure is relatively low in comparison to the actual percentage of low birth weight deliveries (8 percent) and the percentage of newborns reported as small by their mothers (14 percent).

Since most deliveries are attended by traditional birth attendants at home, birth weights were not reported for 38 percent of births in the 1997 IDHS. This proportion is five times higher in rural than in urban areas (48 percent and 10 percent, respectively). Among babies who were weighed at birth, 8 percent were under 2.5 kilograms (i.e., low birth weight). The prevalence of low birth weight is higher among children born to mothers less than 20 years than among those born to older mothers (12 percent compared with 8 percent or less). The prevalence of low birth weight fluctuates with birth order. It is high (10 percent) among first-born children, declines to 6 percent among second and third children, and increases again to 8 percent among fourth and higher order births.

The prevalence of low birth weight declines as mother's educational level increases; 11-12 percent among children born to mothers with no education or some primary education, compared with 8 percent or less among children born to mothers with complete primary or higher education.

There is a slight difference in the prevalence of births with low birth weight by area of residence—8 percent in rural areas and 7 percent in urban areas. In the Outer Java-Bali II region, 9 percent of births weighed less than 2.5 kilograms, compared with 8 percent in Java-Bali and 7 percent in Outer Java-Bali I region.

Survey respondents were asked their perception of the size of their newborns. Approximately 14 percent of births were perceived by their mothers as being either *very small* or *smaller than average*. Younger mothers and those with less education are more likely to report that their newborn is *smaller than average* (Table 10.8.1).

The prevalence of low birth weight ranges between 10 and 16 percent in 6 provinces, namely West Java, West Kalimantan, South Sulawesi, East Nusa Tenggara, Central Kalimantan, and Central Sulawesi (Table 10.8.2).

10.8 Complications of Delivery

To identify complications associated with delivery, respondents were asked about certain signs and symptoms that they had experienced to all live births during the five years prior to the survey. Table 10.9 shows that 26 percent of births were accompanied by complications at delivery. Prolonged labor was reported for 22 percent of births, excessive bleeding for 7 percent and, vaginal infection for 4 percent. Two percent of births were accompanied with maternal convulsions.

In general, delivery by a medical professional is more likely to be reported involving complications, in particular prolonged labor and excessive bleeding (Table 10.9 bottom panel). As expected, the prevalence of delivery complications is higher (35 percent) among deliveries with caesarian section, mostly due to prolonged labor (25 percent) and excessive bleeding (14 percent). Among deliveries resulting in neonatal deaths, 38 percent were accompanied with complications including prolonged labor (32 percent), excessive bleeding (13 percent), vaginal infection (13 percent), and maternal convulsions (4 percent).

There are negligible differences in the prevalence of delivery complications by respondents' type of residence.

Table 10.9. Complications of delivery

Percentage of live births in the five years preceding the survey for which respondents had complications associated with delivery, by type of complication, residence, and selected medical maternity care indicators, Indonesia 1997

| Medical maternity care indicator | Type of complication | | | | | Number of births |
|--|----------------------|--------------------|-------------------|-------------|--------|------------------|
| | Prolonged labor | Excessive bleeding | Vaginal infection | Convulsions | None | |
| URBAN | | | | | | |
| Antenatal care/ delivery assistance¹ | | | | | | |
| Both ANC and DA | 23.2 | 5.9 | 2.2 | 1.3 | 72.8 | 3,452 |
| ANC only | 21.1 | 5.5 | 1.6 | 0.9 | 77.0 | 800 |
| DA only | (34.4) | (7.3) | (7.5) | (0.0) | (60.5) | 17 |
| No ANC or DA | 27.9 | 3.2 | 5.0 | 7.7 | 70.0 | 103 |
| Neonatal death | 30.4 | 9.1 | 9.7 | 1.8 | 65.8 | 65 |
| Delivery by C-section | 26.6 | 6.8 | 4.7 | 2.1 | 67.0 | 276 |
| Total | 22.9 | 5.8 | 2.2 | 1.3 | 73.4 | 4,373 |
| RURAL | | | | | | |
| Antenatal care/ delivery assistance¹ | | | | | | |
| Both ANC and DA | 25.0 | 7.8 | 4.9 | 2.6 | 70.7 | 4,373 |
| ANC only | 18.2 | 7.1 | 3.7 | 1.3 | 77.6 | 5,865 |
| DA only | 33.2 | 19.2 | 7.0 | 8.1 | 51.6 | 125 |
| No ANC or DA | 21.8 | 8.5 | 5.1 | 2.1 | 73.5 | 1,481 |
| Neonatal death | 33.0 | 13.7 | 13.8 | 5.1 | 61.2 | 184 |
| Delivery by C-section | 23.3 | 19.3 | 6.8 | 4.1 | 63.3 | 418 |
| Total | 21.3 | 7.7 | 4.4 | 2.0 | 74.3 | 11,844 |
| TOTAL | | | | | | |
| Antenatal care/ delivery assistance¹ | | | | | | |
| Both ANC and DA | 24.2 | 7.0 | 3.7 | 2.0 | 71.6 | 7,825 |
| ANC only | 18.6 | 6.9 | 3.4 | 1.3 | 77.6 | 6,665 |
| DA only | 33.3 | 17.7 | 7.1 | 7.1 | 52.7 | 142 |
| No ANC or DA | 22.2 | 8.2 | 5.1 | 2.5 | 73.3 | 1,584 |
| Neonatal death | 32.4 | 12.5 | 12.7 | 4.3 | 62.4 | 249 |
| Delivery by C-section | 24.6 | 14.4 | 6.0 | 3.4 | 64.8 | 695 |
| Total | 21.8 | 7.2 | 3.8 | 1.8 | 74.1 | 16,217 |

Note: Figures in parentheses are based on 25-49 unweighted cases.

¹ Care provided by a doctor, nurse, or midwife.

ANC = Antenatal care

DA = Delivery assistance

