INFANT AND CHILD MORTALITY 9

This chapter presents information on mortality among children under five years of age. The rates shown provide information on the levels and trends in mortality as well as mortality differentials between population subgroups. Mortality differentials are useful because they identify population subgroups exposed to elevated risks of mortality.

The mortality rates presented in this chapter are expressed as deaths per 1,000 live births, except in the case of child mortality, which is expressed as deaths per 1,000 children surviving to age one. Rates are presented for the following age intervals:

- Neonatal mortality (NN): the probability of dying within the first month of life
- Postneonatal mortality (PNN): the difference between infant and neonatal mortality
- Infant mortality ($_1q_0$): the probability of dying between birth and exact age one
- Child mortality ($_4q_1$): the probability of dying between exact ages one and five
- Under-five mortality ($_5q_0$): the probability of dying between birth and exact age five

The questionnaire for the 2005 ADHS included a reproductive history in which questions were asked about each of a woman's pregnancies. Respondents were asked to report the outcome of each pregnancy in terms of standard international definitions. A *live birth* was defined as any birth, irrespective of the duration of pregnancy, that after separation from the mother showed any sign of life (for example, breathing, beating of the heart, or movement of voluntary muscles). An *infant death* was defined as the death of a child under one year of age (WHO, 1993).

For each live birth reported in the pregnancy history, information was collected on the date of birth (month and year), sex, survivorship, and current age (for surviving children) or age at death (for deceased children). Thus, respondents were asked to report about events that occurred throughout their reproductive lives. For older respondents, women age 40 and over, this means events that occurred as long as 25 to 30 years ago. Mortality rates for specific periods preceding the survey were calculated using direct estimation procedures.

9.1 ASSESSMENT OF DATA QUALITY

The accuracy of mortality estimates from the ADHS depends on two factors: sampling error (i.e., variability) and non-sampling error (i.e., all sources of error other than sampling error, which primarily means the completeness and accuracy with which births and deaths are reported by respondents and recorded by interviewers).

Sampling variability arises because the mortality data are based on the births and deaths for a specific time period reported by women in the sampled households rather than on all births and deaths in the entire population during that period. If the sampling procedure had selected a different sample of households, a different set of births and deaths would have been reported on by different women and the mortality estimates would be different. The potential variability between mortality estimates from different samples is the source of sampling variability. Nevertheless, the estimated rates presented in this report are representative for Armenia. The sampling variability associated with each estimated rate is represented as a confidence interval within which there is a 95 percent confidence that the true rate resides. These 95 percent confidence intervals are measurable based on sampling theory. The 95 percent confidence intervals for mortality estimates for the total population and for its urban/rural components are presented in Appendix B of this report and are cited in this chapter where appropriate.

Non-sampling error arises primarily from errors in data collection. The most likely source of non-sampling error is the underreporting of deceased children. It is well established that underreporting of deceased children by survey respondents is most likely 1) for time periods more remote from the survey date and 2) for deaths that occurred in early infancy (i.e., in the neonatal period, before a child becomes fully integrated into the family). Underreporting of events that occurred in the more distant past is due either to forgetfulness or to conscious avoidance of recalling the tragedy of losing a child. In this report, the focus is on mortality rates for the 15-year period prior to the survey; rates for earlier time periods are not reported. This eliminates showing mortality estimates for the time periods most susceptible to respondent forgetfulness. Of course, this does not ensure that events occurring in the 15-year period prior to the survey are fully reported.

In the case of underreporting of early infant deaths, the data for the 15-year period prior to the survey can be assessed to determine whether significant underreporting of neonatal deaths occurred. Significant underreporting would result in an implausibly low value for the ratio of neonatal to infant mortality (United Nations, 1982). The assessment consists of comparing the neonatal/infant mortality ratios from the survey with values for national populations that have approximately the same level of infant mortality as observed in the survey and which are known to have relatively complete infant mortality data. In countries at a level of infant mortality of about 33 per 1,000 (the midpoint of the range of the infant mortality rates from the 2005 ADHS; see Table 9.1), the value of this ratio is typically 0.60 or higher.[1]

Table 9.1 shows neonatal and infant mortality rates from the 2005 ADHS for five-year time periods preceding the survey. The neonatal-to-infant mortality ratio for the periods 0-4 years (2001-2005), 5-9 years (1996-2000), and 10-14 years (1991-1995) preceding the survey are 0.65, 0.67, and 0.41, respectively. It can be concluded that there is no underreporting of neonatal deaths for the two time periods in the 10 years preceding the survey. However, the relatively low neonatal/infant mortality ratio of 0.40 for the period 10-14 years preceding the survey strongly suggests that there was underreporting of neonatal deaths for that period.

This analysis of data quality is based on the relative magnitude of the observed neonatal and infant mortality rates and does not preclude the possibility that there was underreporting of events for both the neonatal period and for all of the first year of life—an eventuality that would be undetected by this methodology. Nevertheless, based on this analysis, it is reasonable to conclude that the reporting of neonatal deaths was not a significant problem in the 10-year period immediately preceding the survey but that it was a problem for the period 10-14 years preceding the survey. Accordingly, much greater confidence can be placed in the estimates for 1996-2000 and 2001-2005 than in the estimate for 1991-1995.

9.2 Levels and Trends in Childhood Mortality

Table 9.1 shows infant and child mortality estimates based on data from the 2005 ADHS. For the five years preceding the survey (2001-2005), the infant mortality estimate is 26 per 1,000 live births. The estimates of neonatal and postneonatal mortality are 17 and 9 per 1,000, respectively. The estimate of child mortality (age one to four) is much lower: 4 per 1,000. The overall under-five mortality rate for the period is 30 per 1,000.

[1] For example, see the neonatal and infant mortality rates for Austria (1960), Canada (1953), Belgium (1957), Republic of Germany (1959), Ireland (1957), and Scotland (1952) in the *U.N. Demographic Yearbook, 1961* (Table 13), and Cuba (1968) and Puerto Rico (1965) in the *U.N. Demographic Yearbook, 1974* (Table 22).

Trends in mortality over the 15-year period prior to the survey can also be examined from Table 9.1. The data suggest that mortality has decreased substantially over the past 15 years. In the case of infant mortality, the estimated rates show a decline by 37 percent over the 10-year interval from the midpoint of the 1991-1995 estimate of infant mortality (41 per 1,000) to the midpoint of the 2001-2005 estimate (26 per 1,000) or by about 3.7 percent per year. The actual pace of the mortality decline was probably greater than this because, as indicated above, the rate estimated for 1991-1995 is likely to be an underestimate. Over the 10-year interval, neonatal mortality was stable at 17 per 1,000 and postneonatal mortality declined by 63 percent (24 per 1,000 to 9 per 1,000).

No doubt many factors have contributed to the observed mortality decline in Armenia between 1991-1995 and 2001-2005. To some degree, the decline was probably hastened by health interventions initiated by the MOH in 1994 (i.e., programs in the case management of diarrhea and acute respiratory infection [ARI] as well as programs in support of breastfeeding). These programs are likely to have had more impact on postneonatal mortality than on neonatal mortality, which is consistent with the observed mortality declines in those subintervals of infancy.

Table 9.1 Early childhood mortality rates

Neonatal, postneonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey, Armenia 2005

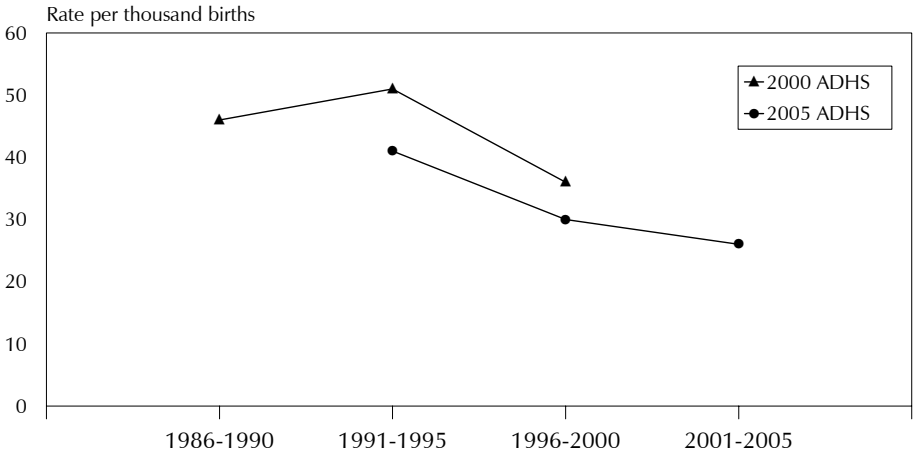
Years preceding the survey	Approximate calendar period[1]	Neonatal mortality (NN)	Postneonatal mortality[2] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
0-4	2001-2005	17	9	26	4	30
5-9	1996-2000	20	10	30	7	36
10-14	1991-1995	17	24	41	7	48

[1]Because survey fieldwork began in early September 2005 and was completed by early December 2005, the rates for the five-year period 2001-2005 actually apply approximately to the calendar period from October 2000 to September 2005. Similarly for the other five-year periods.
[2]Computed as the difference between the infant and the neonatal mortality rates.

Comparison with the results of the 2000 ADHS also suggests a significant decline in the infant mortality rate (IMR). Figure 9.1 shows the infant mortality rates for the 15-year period preceding each survey. Overall, the infant mortality estimates across both surveys show a clear and sustained trend of declining mortality. It should be noted that the 2005 ADHS infant mortality estimates of 41 per 1,000 (1991-1995) and 30 per 1,000 (1996-2000) are lower than the estimates from the 2000 ADHS for the same time periods (51 per 1,000 and 36, per 1,000, respectively).[2]

[2] The differences between the 2000 ADHS and the 2005 ADHS in the IMR estimates for 1991-1995 and 1996-2000 are not statistically significant as indicated by the fact that the 95 percent confidence intervals of the rates for the same time period overlap. For example, for the period 1996-2000, the IMR estimate from the 2000 ADHS is 36, with a 95 percent confidence interval from 25 to 47, and the IMR estimate from the 2005 ADHS is 30 with a 95 percent confidence interval from 21 to 39, which means that the confidence intervals overlap. Nevertheless, the fact that the estimates for both time periods (1991-1995 and 1996-2000) are lower in the 2005 ADHS is convincing evidence of underreporting of deaths in the 2005 ADHS. The large confidence intervals associated with each estimated rate is due to the relatively small number of observed births on which the estimates are based (between 1,500 and 2,500 for the various time periods; see Appendix B, Estimates of Sampling Errors, for the number of births on which specific estimates are based). Indeed, the large confidence intervals associated with infant and childhood mortality rates in most surveys can only be substantially narrowed by considerable increases in sample size, especially in low-fertility countries such as Armenia.

Figure 9.1 Trends in Infant Mortality, According to 2000 ADHS and 2005 ADHS



Note: Rates are means for four-year periods.

9.3 INFANT MORTALITY RATES FROM THE NATIONAL STATISTICAL SERVICE AND THE ADHS

Armenia has a long history of demographic and health data collection—primarily through the use of national registration systems. In the case of births and infant deaths, the National Statistical Service collects the data through a system in which reports from local health officials—which primarily document events occurring in health facilities—are forwarded up the reporting hierarchy to the regional *(marz)* level and to the NSS and ultimately to the MOH. Official government statistics on infant mortality based on these administrative records are published in the annual statistical reports of the NSS.

Prior to 1995, live births and infant deaths in Armenia were defined according to protocols established during the time of the former Soviet Union. The criteria for classifying pregnancy outcomes in the Soviet protocols differed from those recommended by the World Health Organization (WHO). The most important difference relates to pregnancies ending at a gestational age of less than 28 weeks. The Soviet protocols classify such pregnancies as miscarriages (even if signs of life are present at the time of delivery) unless the child survives for seven days.[3] Alternatively, WHO defines a birth showing any sign of life (i.e., breathing, beating of the heart, or movement of voluntary muscles) as a live birth, irrespective of the gestational age at delivery (WHO, 1993). There is also a difference for pregnancies terminating at 28 or more weeks of gestation. The Soviet system classifies such events as live births if the child breathes and as stillbirths if breathing is not evident at delivery. WHO defines these events as live births if any sign of life is present at delivery and otherwise as stillbirths.

In 1995, Armenia officially changed to the WHO definitions of live birth and infant death. However, it is thought that many maternity wards have not fully converted to the new definitions and are still using the Soviet-era definitions (Government of Armenia et al., 1999), which would cause neonatal mortality rates reported by the NSS to be less than the neonatal rates reported in the 2005 ADHS.

[3] In cases in which the gestational age is unknown, fetuses that weigh less than 1,000 grams or measure less than 35 centimeters in length are considered premature and are classified as miscarriages.

Subsequent to the 2000 ADHS and based on the analysis of infant mortality rates from the 2000 ADHS and NSS, a new package of infant mortality rate norms and instructions was developed in Armenia with the aim of improving the registration of infant mortality cases. The package was approved and adopted by the government and introduced in November 2005. According to the new norms, Armenia in late 2005, on the federal level, fully introduced the International Classification of Diseases (IDC-10) recommended by the WHO. Following these recommendations, the perinatal period is determined as starting at 22 weeks, and all newborns over 500 grams are to be registered and the data to be reflected in the official statistics. This is expected to overcome the above-mentioned confusion with definitions of live births. Despite the fact that the listed changes are not reflected in this analysis of the ADHS and NSS infant mortality rates (the survey was conducted in the autumn of 2005), it is necessary to present the new rules pertinent to the registration of infant deaths.

Table 9.2 and Figure 9.2 show infant mortality rates reported by NSS and the 2005 ADHS over the past 15 years. For all three time periods shown, the NSS estimates of infant mortality are substantially less than 2005 ADHS estimates: 49 percent less for the periods 2001-2005 and 1996-2000, and 60 percent less for the period 1991-1995. A thorough investigation of the differences between the two sets of estimates is beyond the scope of this report. However, it is clear that the differences in infant mortality rates arise from both the neonatal and postneonatal periods. For example, the difference between the 2001-2005 rates (12.9 deaths per 1,000) is due to the difference between neonatal and postneonatal rates (8.2 and 4.7 deaths per 1,000, respectively).

The fact that differences exist between postneonatal as well as neonatal rates has important implications for evaluating the completeness of the registration system. While differences in the definitions of pregnancy outcomes can contribute to the differences in the neonatal estimates, they do not affect the postneonatal estimates. Under the reasonable assumption that survey respondents have not overreported postneonatal deaths, it appears that defects in the registration, which are distinct from the definitional problems associated with the reporting of neonatal deaths, are resulting in the underreporting of postneonatal deaths in the registration system. Accordingly, it is likely the case that underreporting of neonatal deaths in the registration system is the joint result of some level of generalized underreporting of events and definitions of live births that have not been fully implemented, and that the postneonatal rates suffer from the problem of generalized underreporting of events. Official government statistics on infant mortality based on these administrative records are published in the annual statistical reports of the NSS.

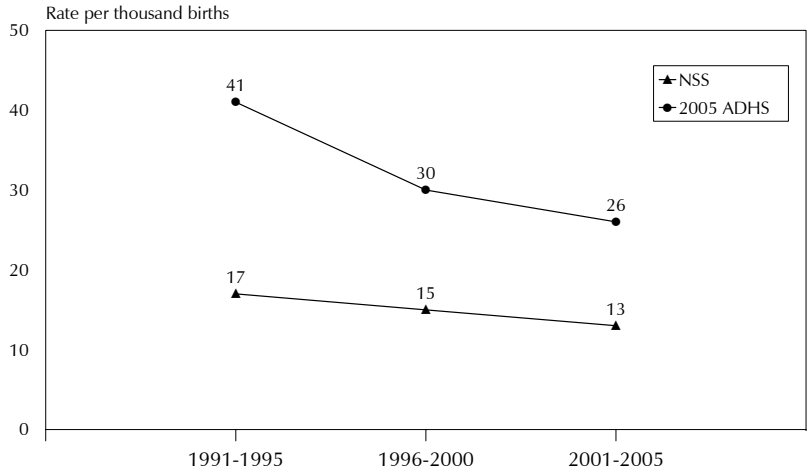
Table 9.2 Comparison of infant mortality rates

Neonatal, postneonatal, and infant mortality rates for five-year periods preceding the survey, National Statistical Service (NSS) and 2005 ADHS

Approximate calendar period[1]	Neonatal mortality[2]		Postneonatal mortality[3]		Infant mortality		
	NSS	ADHS	NSS	ADHS	NSS	ADHS	Shortfall[4]
2001-2005	8.8	17	4.3	9	13.1	26	49
1996-2000	9.1	20	6.2	10	15.3	30	49
1991-1995	8.0	17	8.5	24	16.5	41	60

Source: NSS (2006)
[1]Because survey fieldwork began in early September 2005 and was completed by early December 2005, the rates for the five-year period 2001-2005 actually apply approximately to the calendar period from October 2000 to September 2005. Similarly for the other five-year periods.
[2]Neonatal mortality estimates are based on deaths under 27 days for NSS rates and under one month for ADHS rates.
[3]Computed as the difference between the infant and the neonatal mortality rates
[4]Percent shortfall: NSS relative to ADHS

Figure 9.2 **Trends in Infant Mortality Based on Estimates from the National Statistical Service (NSS) and the 2005 ADHS**



9.4 SOCIOECONOMIC DIFFERENTIALS IN CHILDHOOD MORTALITY

Table 9.3 shows infant and child mortality estimates for the 10-year period preceding the survey, by socioeconomic variables (urban-rural residence, education, and wealth quintile). A 10-year period is used to calculate the rates for population subgroups to reduce sampling variability. The infant mortality rates are shown in Figure 9.3 by urban-rural residence and wealth quintile.

As is the case in most countries, mortality rates in infancy and early childhood are higher in rural areas than in urban areas (31 per 1,000 versus 25 per 1,000). Most of this difference arises from the post-neonatal rates. In the case of child mortality, rural rates (11 per 1,000) are five times the level of urban rates (2 per 1,000). In terms of under-five mortality, rural children have higher rates (42 per 1,000) than urban children (26 per 1,000) by a factor of 1.6.

Overall, under-five mortality levels decline as the mother's education increases, although the relatively small numbers of cases in each education subgroup means that large confidence intervals are associated with these estimates. Differentials by education can be seen most clearly at the postneonatal level. Levels of neonatal mortality seem curiously low among women with either a basic general or a secondary general education compared with more educated women. This could indicate some misreporting of early deaths or recall problems among women with lower levels of education.

As expected, mortality rates are highest among children born to women residing in households in the lowest wealth quintile. Mortality rates are higher among the lowest wealth quintile than among any other socioeconomic characteristic.

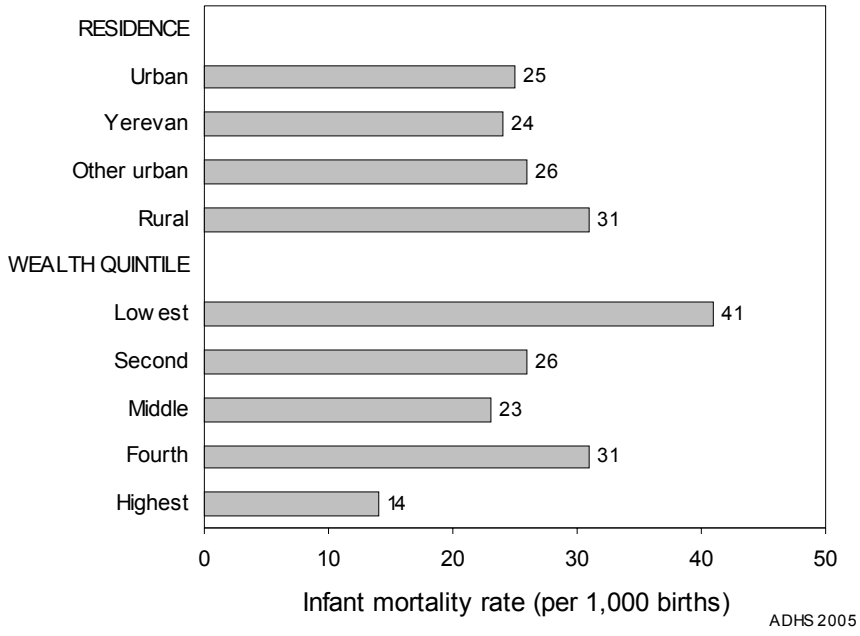
Table 9.3 Early childhood mortality rates by socioeconomic characteristics

Neonatal, postneonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey, by socioeconomic characteristics, Armenia 2005

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Residence					
Urban	18	7	25	2	26
Yerevan	19	5	24	3	26
Other urban	16	10	26	1	27
Rural	19	12	31	11	42
Education					
Basic general	(14)	(28)	(43)	(0)	(43)
Secondary general	14	10	24	9	33
Specialized secondary	25	7	32	3	35
Higher	21	2	22	5	27
Wealth quintile					
Lowest	24	17	41	11	52
Second	18	8	26	5	30
Middle	17	6	23	1	24
Fourth	19	12	31	2	33
Highest	14	0	14	9	23

Note: Rates are expressed per 1,000 births. Rates based on 250 to 499 exposed children are in parentheses.
[1]Computed as the difference between the infant and neonatal mortality rates

Figure 9.3 **Infant Mortality Rates for the 10-year Period Preceding the Survey, by Residence and Wealth Quintile**



9.6 DEMOGRAPHIC DIFFERENTIALS IN CHILDHOOD MORTALITY

Table 9.4 shows the relationship between early childhood mortality and demographic variables. As was the case with the socioeconomic differentials, the rates are shown for the 10-year period preceding the survey. There has been a consistent fertility pattern in Armenia over the last decade by which a large majority of births occur to women in their twenties, and there are relatively few births of birth order 4 and higher or at birth intervals of two and three years. Accordingly, the rates in Table 9.4 for women less than 20 years of age, 40-49 years of age, birth order 4 and higher, and birth intervals of two and three years are based on fewer than 500 births and must be interpreted with caution.

As expected, mortality rates are generally higher for boys than for girls. There appear to be substantial differences in mortality risks associated with mother's age, birth order, and previous birth interval. Some of these differentials are surprising. For example, infant and child mortality are higher among births that are spaced after the longest interval (four or more years) than births that are spaced the closest together (less than two years). This is an interesting result because while the risks of having a short birth interval are well documented, the potential risks of having children spaced too far apart are currently being studied by experts.

Table 9.4 Early childhood mortality rates by demographic characteristics

Neonatal, postneonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey, by demographic characteristics, Armenia 2005

Demographic characteristic	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Child's sex					
Male	21	8	29	8	37
Female	16	10	26	3	29
Mother's age at birth					
<20	(13)	(4)	(18)	(3)	
20-29	17	7	24	3	27
30-39	30	13	43	19	61
40-49	*	*	*	*	*
Birth order					
1	19	2	21	0	21
2-3	17	10	27	6	33
4+	(24)	(43)	(67)	(34)	(99)
Previous birth interval[2]					
<2 years	11	16	27	6	33
2 years	(27)	(9)	(36)	(13)	
3 years	(1)	(13)	(15)	(4)	
4+ years	24	16	39	15	54
Birth size[3]					
Small/very small	(0)	(44)	(44)	na	na
Average or larger	4	4	8	na	na

Note: Rates are expressed per 1,000 births. Rates in parentheses are based on 250 to 499 exposed children. An asterisk indicates that a rate is based on fewer than 250 exposed children and has been suppressed.
na = Not applicable
[1]Computed as the difference between the infant and neonatal mortality rates
[2]Excludes first-order births
[3]Rates are for births occurring during the five-year period before the survey.

9.6 PERINATAL MORTALITY

Perinatal mortality rates indicate the level of mortality from the time of prenatal viability (i.e., the late fetal period beginning at the 28th week of gestation) through labor, delivery, and the early neonatal period of life (i.e., the 0-6 day period after birth). Pregnancies that terminate without signs of life after the 28th week of gestation are referred to as stillbirths. Stillbirths and early neonatal deaths share many of the same underlying causes leading to mortality (e.g., congenital malformations), and for this reason these events are aggregated into the perinatal mortality rate.

Table 9.5 shows perinatal mortality rates per 1,000 pregnancies by selected background characteristics. Perinatal mortality rates are reported for the five-year period preceding the survey. It should be noted that data quality is always an issue when considering perinatal mortality rates, as both stillbirths and early neonatal deaths are susceptible to underreporting. Moreover, in general, there are too few cases by subcategories of background characteristics to produce reliable perinatal mortality rates.

Table 9.5 Perinatal mortality

Number of stillbirths and early neonatal deaths, and the perinatal mortality rate for the five-year period preceding the survey, by selected background characteristics, Armenia 2005

Background characteristic	Number of stillbirths[1]	Number of early neonatal deaths[2]	Perinatal mortality rate[3]	Number of pregnancies of 7 or more months duration
Mother's age at birth				
<20	2	0	*	192
20-29	7	11	16	1,120
30-39	3	5	*	192
40-49	0	0	*	20
Previous pregnancy interval in months				
First pregnancy	4	9	19	651
<15	4	2	*	182
15-26	1	1	9	293
27-38	0	3	*	131
39+	3	1	(18)	267
Residence				
Urban	5	11	17	935
Rural	7	6	22	589
Education				
Basic general	3	0	*	140
Secondary general	5	6	19	584
Specialized secondary	3	2	(12)	451
Higher	2	8	(28)	349
Wealth quintile				
Lowest	6	5	(38)	292
Second	1	0	(3)	295
Middle	1	2	(9)	290
Fourth	4	8	(37)	339
Highest	0	2	(6)	308
Total	12	16	19	1,524

Note: Rates in parentheses are based on 250-499 exposed children. An asterisk indicates that a rate is based on fewer than 250 exposed children and has been suppressed.
[1]Stillbirths are fetal deaths in pregnancies lasting seven or more months.
[2]Early neonatal deaths are deaths among live-born children age 0 to 6 days.
[3]Perinatal mortality rate is the sum of the number of stillbirths and early neonatal deaths divided by the number of pregnancies of seven or more months duration.

The overall perinatal mortality rate is 19 per 1,000. Stillbirths and early neonatal deaths (deaths under seven days) contributed almost equally to the overall perinatal rate, with neonatal deaths being slightly higher than stillbirths. Although research has not yet established a firm relationship between the two components of the perinatal mortality rate, a number of countries with perinatal mortality rates between 20 and 30 per 1,000 have reported stillbirth and early neonatal mortality rates of approximately the same order of magnitude (Hoffman et al., 1984).

As was the case with overall infant mortality, the estimates of perinatal mortality from the survey are higher than the rate based on data from the MOH, which, for the period 2001-2005, was 15.6 per 1,000.

9.7 HIGH-RISK FERTILITY BEHAVIOR

Previous research has shown a strong relationship between the fertility patterns of women and the mortality risks of their children. Typically, mortality risks are greater for children who are born to mothers who are too young or too old, who are born after a short birth interval, or who have a high birth order. In this analysis, a mother is classified as *too young* if she is younger than 18 years of age and *too old* if she is older than 34 years of age. A *short birth interval* is defined as a birth occurring within 24 months of the previous birth, and a child is of *high birth order* if the mother had already given birth to three or more children.

Table 9.6 shows the distribution of children born in the five years before the survey by risk category (see also Figure 9.4). Although first births to women age 18-34 are considered an unavoidable risk, they are included in the analysis and are shown as a separate risk category. Column 1 of Table 9.6 shows that in the five-year period before the survey, 23 percent of births were in a single high-risk category and 4 percent were in a multiple high-risk category. Column 2 shows risk ratios for births in various high-risk categories relative to births not having any high-risk characteristics. Overall, the risk ratio for children in any high-risk category (1.4) was about 40 percent higher than for children who were not in any high-risk category.

Table 9.6 High-risk fertility behavior

Percent distribution of children born in the five years preceding the survey by category of elevated risk of mortality and the risk ratio; and the percent distribution of currently married women by category of risk if they were to conceive a child at the time of the survey, Armenia 2005

Risk category	Births in the 5 years preceding the survey		Percentage of currently married women[1]
	Percentage of births	Risk ratio	
Not in any high-risk category	29.2	1.00	23.9[a]
Unavoidable risk category			
First order births between ages 18 and 34 years	44.3	0.95	5.4
In any avoidable high-risk category	26.5	1.87	70.8
Single high-risk category	22.8	1.35	39.8
Mother's age <18	1.7	0.00	0.1
Mother's age >34	2.8	0.00	25.9
Birth interval <24 months	15.5	0.77	7.6
Birth order >3	2.8	6.82	6.1
Multiple high-risk category	3.7	5.06	31.0
Age <18 & birth interval <24 months[2]	0.1	0.00	0.0
Age >34 & birth interval <24 months	0.1	0.00	0.2
Age >34 & birth order >3	2.5	6.07	29.2
Age >34 & birth interval <24 months & birth order >3	0.0	*	0.2
Birth interval <24 months & birth order >3	1.0	3.69	1.4
Total	100.0	na	100.0
Number of births/women	1,512	na	4,044

Note: Risk ratio is the ratio of the proportion dead among births in a specific high-risk category to the proportion dead among births *not in any high-risk category* (first row). An asterisk indicates that the value cannot be calculated.
na = Not applicable
[1] Women are assigned to risk categories according to the status they would have at the birth of a child if they were to conceive at the time of the survey: current age less than 17 years and 3 months or older than 34 years and 2 months, latest birth occurred less than 15 months ago, or latest birth being of order 3 or higher.
[2] Includes the combined categories age <18 & birth order >3
[a] Includes sterilized women

Column 3 looks to the future and addresses the question of how many currently married women have the potential for having a high-risk birth. The results were obtained by simulating the risk category into which a birth to a currently married woman would fall if she were to become pregnant at the time of the survey. For example, a woman who was 37 years old at the time of the survey and had three previous births, the last of which occurred three years earlier, would be classified in the multiple high-risk category for being too old (35 or older) and at risk of having a high order birth (greater than three).

Overall, 71 percent of married women have the potential to give birth to a child with an elevated risk of mortality. It should be noted that this figure is hypothetical and based on all women who could potentially have a high-risk birth if they were to become pregnant as of the date of being interviewed. However, this is quite unlikely to occur as some of the potentially at-risk women are practicing contraception and some have passed menopause and are infecund.

Figure 9.4 **Births in the Last Five Years in Categories of High-Risk Fertility Behavior**