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Apgar Score in the United States, 1978

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The Apgar score was developed in 1952 by Virginia Apgar, M.D., as a means of evaluating the physical condition of an infant at 1 and 5 minutes after birth. It is an indication of the need for immediate medical attention and a predictor of the infant's chances of surviving the first year of life. The scoring system was developed to predict survival; to compare the results of different methods of resuscitation; to compare the results of care received at different hospitals; to evaluate the results of obstetrical practices such as induction of labor, elective cesarean section, and maternal anesthesia and analgesia; and to insure closer observation of the infant during the first minutes of life.¹

In formulating the scoring system, a list was made of all objective signs pertaining to the physical condition of the infant at birth. The five signs most easily identified without interfering with the care of the newborn were then chosen.² These are heart rate, respiratory effort, muscle tone, reflex irritability (response to skin stimulation of feet), and color, each of which is given a score of 0, 1, or 2. Table 1 shows the method of scoring each sign. The Apgar score is the sum of these five values and ranges from 0 to 10, with 10 being optimum. A score of 0-3 indicates that the infant is severely depressed; 4-6, moderately depressed; and 7-10 indicates good to excellent condition.

One-minute and 5-minute Apgar scores are useful for different purposes. The 1-minute score is an indication of the infant's condition at birth. The 5-minute score reflects a combination of the condition at birth and the results of any care the infant receives during the first 5 minutes of life. It is also a

¹Apgar, V.: The newborn (Apgar) scoring system. *Pediatr. Clin. North Am.* 13(3):645-650, Aug. 1966.

²Apgar, V.: A proposal for a new method of evaluation of the newborn infant. *Current Researches in Anesthesia and Analgesia.* 260-267, July-Aug. 1953.

Table 1. Method of Apgar scoring

Sign	Score		
	0	1	2
Heart rate	Absent	Slow (less than 100)	100 or more
Respiratory effort	Absent	Weak cry; hypoventilation	Good; strong cry
Muscle tone	Limp	Some flexion of extremities	Well flexed
Reflex irritability	No response	Some motion	Cry
Color	Blue; pale	Body pink; extremities blue	Completely pink

SOURCE: Apgar, V., et al.: Evaluation of the newborn infant - second report. *JAMA.* 168(15):1985-1988, Dec. 13, 1958.

better predictor of long-term health conditions and survival chances than is the 1-minute score.

One- and 5-minute Apgar scores were added to the U.S. Standard Certificate of Live Birth in 1978. In that year the 1-minute Apgar score was included on the birth certificates of 39 States, and the 5-minute score was included on the certificates of 38 States and the District of Columbia. (See "Sources of Data" for the list of States.) Although Apgar score is a new item on most State certificates, completeness of reporting is good; the proportion of births with Apgar score not stated is only 6 percent for both 1-minute and 5-minute scores. In addition, an examination of the data by race and State suggests that there are no major differences in the interpretation of the method of scoring.

In 1978, the vast majority of infants had satisfactory Apgar scores at 1 and 5 minutes after birth. Only 9 percent scored less than 7 at 1 minute, and 2 percent scored less than 7 at 5 minutes. Five-minute scores were considerably higher than 1-minute scores.

Table 2. Number and percent distribution of live births by 1- and 5-minute Apgar scores, according to race: Total of reporting areas, 1978

[See "Sources of Data" for reporting areas]

Time of score and race	Apgar score												
	Total	0	1	2	3	4	5	6	7	8	9	10	Not stated
Number													
1-minute score ¹													
All races ²	2,385,454	2,273	12,809	14,993	18,225	25,811	45,505	86,127	221,788	715,613	981,440	118,999	141,871
White	1,954,726	1,498	9,015	11,006	13,637	19,944	35,930	70,039	183,314	596,123	803,327	97,717	113,176
Black	353,978	670	3,358	3,550	3,975	5,067	8,252	13,670	31,625	94,552	146,285	18,755	24,219
5-minute score ³													
All races ²	2,357,543	2,872	4,697	3,765	3,726	4,791	9,322	17,592	40,116	166,412	1,129,688	832,266	142,296
White	1,923,984	1,860	3,137	2,515	2,592	3,415	6,663	13,130	31,005	133,493	924,801	687,726	113,647
Black	357,185	828	1,408	1,148	1,041	1,234	2,390	3,942	7,966	27,791	162,896	123,391	23,150
Percent distribution													
1-minute score ¹													
All races ²	100.0	0.1	0.6	0.7	0.8	1.2	2.0	3.8	9.9	31.9	43.7	5.3	...
White	100.0	0.1	0.5	0.6	0.7	1.1	2.0	3.8	10.0	32.4	43.6	5.3	...
Black	100.0	0.2	1.0	1.1	1.2	1.5	2.5	4.1	9.6	28.7	44.4	5.7	...
5-minute score ³													
All races ²	100.0	0.1	0.2	0.2	0.2	0.2	0.4	0.8	1.8	7.5	51.0	37.6	...
White	100.0	0.1	0.2	0.1	0.1	0.2	0.4	0.7	1.7	7.4	51.1	38.0	...
Black	100.0	0.2	0.4	0.3	0.3	0.4	0.7	1.2	2.4	8.3	48.8	36.9	...

¹Total of 39 reporting States.
²Includes races other than white and black.
³Total of 38 reporting States and the District of Columbia.

The most favorable Apgar-score distributions were for infants weighing 2,501-4,500 grams and those born to mothers aged 20-34 years. Favorable Apgar scores were also seen for infants of mothers who had high educational attainment, who were married, and who had received some prenatal care.

1- and 5-minute scores

As shown in table 2, a very large proportion of infants had high Apgar scores. The modal category of 9 for 1-minute score included 43.7 percent of newborns; another 31.9 percent had scores of 8. It is noteworthy that only 5.3 percent had perfect scores of 10. Only 2.2 percent of the newborns were given scores of 0-3, indicating that they were severely depressed; 9.2 percent were scored less than 7, indicating physical depression to some extent.

Distributions of 1-minute Apgar scores for white and black infants closely paralleled the distribution for infants of all races. The majority of infants of both races were assigned scores of 8 or 9. A slightly higher proportion of white than black babies were scored 7 or higher (91.3 compared with 88.4 percent). However, black babies were almost twice as likely as white babies to receive a score of 0-3 (3.5 compared with 1.9 percent).

Five-minute scores were considerably higher than 1-minute scores; close to 90 percent were scored 9 or 10 at 5 minutes, compared with about 50 percent at 1 minute. Again the modal score was 9: over half of the infants were in this category. The proportion assigned a score of 10 increased substantially to 37.6 percent. Less than 1 percent of the infants were severely depressed at 5 minutes, and only 2 percent scored less than 7.

Five-minute scores of 9-10 were slightly less likely for black than for white infants. However, the broader range of 7-10 contains similar proportions of black and white babies. Although scores of 0-3 at 5 minutes were less frequent than at 1 minute for both racial groups, a racial differential remains.

As evident from table 3, the great majority of newborns had improved Apgar scores at 5 minutes. One exception was for babies with a score of 0 at 1 minute; 50.9 percent retained the 0 score at 5 minutes. Many of these infants probably die soon after birth. Half of the infants with 1-minute scores of 1 had moved out of the severely depressed range by 5 minutes after birth. The majority of infants with scores of 3 or higher at 1 minute scored 7 or higher by 5 minutes.

Scores for white newborns showed greater improvement between 1 and 5 minutes than did scores

Table 3. Number of live births and percent distribution by 5-minute Apgar score, according to 1-minute Apgar score: Total of 38 reporting States, 1978
 [See "Sources of Data" for reporting areas]

1-minute score	Number of births ¹	Total	5-minute score										
			0	1	2	3	4	5	6	7	8	9	10
			Percent distribution										
All 1-minute scores . . .	2,348,160	100.0	0.1	0.2	0.2	0.2	0.2	0.4	0.8	1.8	7.5	51.0	37.6
0	2,258	100.0	50.9	12.4	8.3	6.6	4.1	3.7	2.4	1.9	2.4	4.5	3.0
1	12,580	100.0	4.9	25.5	9.5	8.9	9.2	11.0	9.7	8.1	6.6	5.6	1.0
2	14,764	100.0	1.1	4.1	10.5	7.2	9.2	12.6	16.6	14.1	13.4	9.6	1.5
3	18,009	100.0	0.3	1.1	1.7	4.5	5.4	12.0	17.7	21.0	20.3	13.8	2.3
4	25,490	100.0	0.1	0.3	0.5	0.5	2.3	6.1	15.8	22.5	27.5	21.0	3.3
5	44,955	100.0	0.1	0.1	0.2	0.3	0.3	2.5	7.6	21.3	32.6	29.9	5.2
6	85,143	100.0	0.0	0.0	0.1	0.1	0.2	0.3	2.2	11.9	38.4	40.1	6.7
7	219,980	100.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	2.4	27.3	60.4	9.4
8	708,397	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	5.8	76.3	17.5
9	963,056	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	40.6	58.9
10	116,913	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2	98.4
Not stated	136,615	100.0	0.2	0.3	0.3	0.3	0.3	0.8	1.3	3.3	11.1	62.7	19.4

¹Includes births with Apgar score not stated, which are excluded from the computation of the percent distribution.

Table 4. Percent distribution of live births by 5-minute Apgar score, according to 1-minute Apgar score and race: Total of 38 reporting States, 1978
 [See "Sources of Data" for reporting areas]

1-minute score and race	5-minute score					
	Total	0	1-3	4-6	7-8	9-10
White						
All 1-minute scores	100.0	0.1	0.5	1.3	9.1	89.1
0	100.0	46.8	30.7	11.7	4.2	6.6
1-3	100.0	1.8	20.7	34.6	30.3	12.7
4-6	100.0	0.0	0.4	7.9	50.7	40.9
7-8	100.0	0.0	0.0	0.2	11.4	88.4
9-10	100.0	0.0	0.0	0.0	0.4	99.5
Not stated	100.0	0.2	0.8	2.2	14.4	82.4
Black						
All 1-minute scores	100.0	0.3	1.1	2.2	10.6	85.8
0	100.0	62.1	21.3	8.1	3.7	4.9
1-3	100.0	1.9	27.1	35.2	26.8	8.9
4-6	100.0	0.1	0.9	10.8	54.2	34.0
7-8	100.0	0.1	0.1	0.4	13.3	86.1
9-10	100.0	0.1	0.0	0.1	0.3	99.5
Not stated	100.0	0.1	1.3	2.9	14.1	81.6

for black babies (table 4). This may be due to the larger proportion of low-birth-weight babies (who generally have lower scores) among black than among white infants. Black infants with a 1-minute score of 0 were more likely than white infants to retain a score of 0 at 5 minutes (62.1 compared with 46.8 percent). White babies with scores of 1-3 at 1 minute were more likely to improve to a satisfactory level

(7-10) at 5 minutes than were black babies with these scores.

Birth weight

Weight at birth is also an indication of an infant's health condition and potential for survival. The greatest risks of mortality and morbidity exist for

Table 5. Number of live births and percent distributions by 1- and 5-minute Apgar scores, according to birth weight and race:
Total of reporting areas, 1978

[See "Sources of Data" for the reporting areas]

Birth weight ¹ and race	1-minute score ²						5-minute score ⁴					
	Number of births ³	Total	0-3	4-6	7-8	9-10	Number of births ³	Total	0-3	4-6	7-8	9-10
All races ⁵			Percent distribution						Percent distribution			
All birth weights	2,385,454	100.0	2.2	7.0	41.8	49.0	2,357,543	100.0	0.7	1.4	9.3	88.6
500 grams or less	2,207	100.0	89.5	5.7	3.0	1.9	2,202	100.0	88.0	5.5	1.5	4.9
501-1,000 grams	10,112	100.0	64.3	24.2	8.7	2.8	10,051	100.0	45.8	29.7	16.6	7.9
1,001-1,500 grams	14,655	100.0	29.1	35.0	28.0	8.0	14,559	100.0	11.6	25.2	37.3	25.8
1,501-2,000 grams	31,579	100.0	12.1	26.6	42.8	18.4	31,387	100.0	3.7	11.5	34.5	50.4
2,001-2,500 grams	106,955	100.0	4.4	13.3	46.6	35.7	106,021	100.0	1.1	3.6	19.7	75.5
2,501-3,000 grams	402,136	100.0	1.8	7.1	41.9	49.2	397,912	100.0	0.4	1.3	10.1	88.3
3,001-3,500 grams	886,747	100.0	1.2	5.6	40.7	52.4	876,100	100.0	0.2	0.8	7.7	91.2
3,501-4,000 grams	678,819	100.0	1.2	5.9	42.2	50.8	670,307	100.0	0.2	0.7	7.7	91.4
4,001-4,500 grams	204,075	100.0	1.4	7.2	44.2	47.2	201,398	100.0	0.2	0.9	8.6	90.2
4,501-5,000 grams	36,400	100.0	2.3	9.6	46.1	42.0	35,929	100.0	0.3	1.5	11.1	87.1
5,001 grams or more	5,336	100.0	6.1	14.1	45.7	34.1	5,285	100.0	2.1	3.3	15.1	79.5
Not stated	6,433	100.0	21.3	11.4	31.3	36.0	6,392	100.0	14.6	9.2	10.6	65.7
White												
All birth weights	1,954,726	100.0	1.9	6.8	42.3	48.9	1,923,984	100.0	0.6	1.3	9.1	89.1
500 grams or less	1,421	100.0	89.1	4.3	4.1	2.5	1,396	100.0	86.6	5.6	1.1	6.7
501-1,000 grams	6,512	100.0	64.5	24.5	8.5	2.4	6,402	100.0	45.4	29.8	17.3	7.5
1,001-1,500 grams	9,815	100.0	29.5	35.6	27.2	7.8	9,648	100.0	11.9	25.3	37.6	25.2
1,501-2,000 grams	21,866	100.0	12.5	27.7	42.8	17.0	21,548	100.0	3.9	11.7	35.5	48.9
2,001-2,500 grams	75,726	100.0	4.4	14.0	47.7	33.9	74,582	100.0	1.1	3.7	20.7	74.5
2,501-3,000 grams	298,124	100.0	1.7	7.3	42.8	48.2	293,163	100.0	0.3	1.3	10.3	88.1
3,001-3,500 grams	721,689	100.0	1.1	5.5	41.3	52.1	709,987	100.0	0.2	0.8	7.6	91.4
3,501-4,000 grams	592,017	100.0	1.1	5.7	42.4	50.8	583,056	100.0	0.2	0.7	7.5	91.7
4,001-4,500 grams	184,745	100.0	1.3	7.0	44.3	47.4	181,976	100.0	0.2	0.8	8.4	90.5
4,501-5,000 grams	33,191	100.0	2.0	9.3	46.3	42.4	32,706	100.0	0.3	1.3	10.8	87.7
5,001 grams or more	4,714	100.0	5.0	13.7	46.8	34.4	4,667	100.0	1.7	2.8	14.7	80.8
Not stated	4,906	100.0	19.3	11.6	34.0	35.2	4,853	100.0	12.6	8.8	10.7	67.9
Black												
All birth weights	353,978	100.0	3.5	8.2	38.3	50.0	357,185	100.0	1.3	2.3	10.7	85.7
500 grams or less	723	100.0	90.7	7.4	1.1	0.8	743	100.0	89.9	5.9	2.2	2.0
501-1,000 grams	3,323	100.0	63.8	23.9	9.1	3.3	3,374	100.0	46.6	29.8	15.4	8.2
1,001-1,500 grams	4,422	100.0	27.6	34.0	30.0	8.4	4,493	100.0	10.8	25.2	37.1	26.9
1,501-2,000 grams	8,784	100.0	11.2	24.4	42.5	21.8	8,920	100.0	3.4	11.1	32.3	53.2
2,001-2,500 grams	27,730	100.0	4.3	11.7	43.4	40.6	27,954	100.0	1.2	3.4	17.6	77.9
2,501-3,000 grams	88,457	100.0	2.1	6.7	38.5	52.7	89,272	100.0	0.5	1.4	9.6	88.5
3,001-3,500 grams	134,310	100.0	1.8	6.4	37.1	54.7	135,519	100.0	0.4	1.2	8.4	90.0
3,501-4,000 grams	67,593	100.0	2.0	7.3	39.4	51.3	68,129	100.0	0.4	1.3	9.2	89.1
4,001-4,500 grams	14,519	100.0	2.8	9.8	40.9	46.5	14,638	100.0	0.6	1.9	11.1	86.4
4,501-5,000 grams	2,362	100.0	5.8	13.0	41.7	39.5	2,378	100.0	1.1	4.0	13.5	81.3
5,001 grams or more	465	100.0	17.6	15.7	33.8	32.9	463	100.0	7.0	7.9	18.8	66.3
Not stated	1,290	100.0	28.5	10.9	21.7	38.9	1,302	100.0	21.8	9.8	9.0	59.5

¹Equivalents of gram weights in terms of pounds and ounces are as follows:

- 500 grams or less = 1 lb 1 oz or less
- 501-1,000 grams = 1 lb 2 oz-2 lb 3 oz
- 1,001-1,500 grams = 2 lb 4 oz-3 lb 4 oz
- 1,501-2,000 grams = 3 lb 5 oz-4 lb 6 oz
- 2,001-2,500 grams = 4 lb 7 oz-5 lb 8 oz
- 2,501-3,000 grams = 5 lb 9 oz-6 lb 9 oz
- 3,001-3,500 grams = 6 lb 10 oz-7 lb 11 oz
- 3,501-4,000 grams = 7 lb 12 oz-8 lb 13 oz
- 4,001-4,500 grams = 8 lb 14 oz-9 lb 14 oz
- 4,501-5,000 grams = 9 lb 15 oz-11 lb 0 oz
- 5,001 grams or more = 11 lb 1 oz or more

²Total of 39 reporting States.

³Includes births with Apgar score not stated, which are excluded from the computation of the percent distribution.

⁴Total of 38 reporting States and the District of Columbia.

⁵Includes races other than white and black.

low-birth-weight infants, that is, babies weighing 2,500 grams (5 lb 8 oz) or less at birth. Table 5 clearly illustrates the strong relationship between both 1- and 5-minute Apgar scores and weight at birth. Newborns with birth weight of 1,500 grams or less generally have extremely low Apgar scores. Scores for 9 out of 10 infants weighing 500 grams or less indicate severe depression at both 1 and 5 minutes. There is probably little chance of survival for these infants. Babies in the next weight category (501-1,000 grams) also show a high incidence of severe depression. At 1 minute, 64.3 percent of these babies had a score of 0-3, and although there was some improvement by 5 minutes, three-quarters remained moderately to severely depressed, probably indicating a poor long-term prognosis.

Each 500-gram weight category in the low-birth-weight range shows less favorable Apgar score distri-

butions at both 1 and 5 minutes than for all but the largest infants. Figure 1 and table 6 show the 1-minute and 5-minute Apgar score distributions for low-birth-weight infants compared with those weighing more than 2,500 grams. Low-birth-weight babies were 9 times as likely as heavier babies to be assigned a 1-minute Apgar score of 0-3. Almost a third of these infants were classified as moderately or severely depressed, a proportion 4 times as high as that for heavier infants. High scores of 9-10 were assigned to half of the infants over 2,500 grams, in contrast to one-quarter of those weighing 2,500 grams or less.

Although scores for low-birth-weight infants generally improve by 5 minutes, they still lag behind those of heavier infants. The relative decrease in the proportion of births with scores less than 7 was smaller among low-birth-weight infants than among

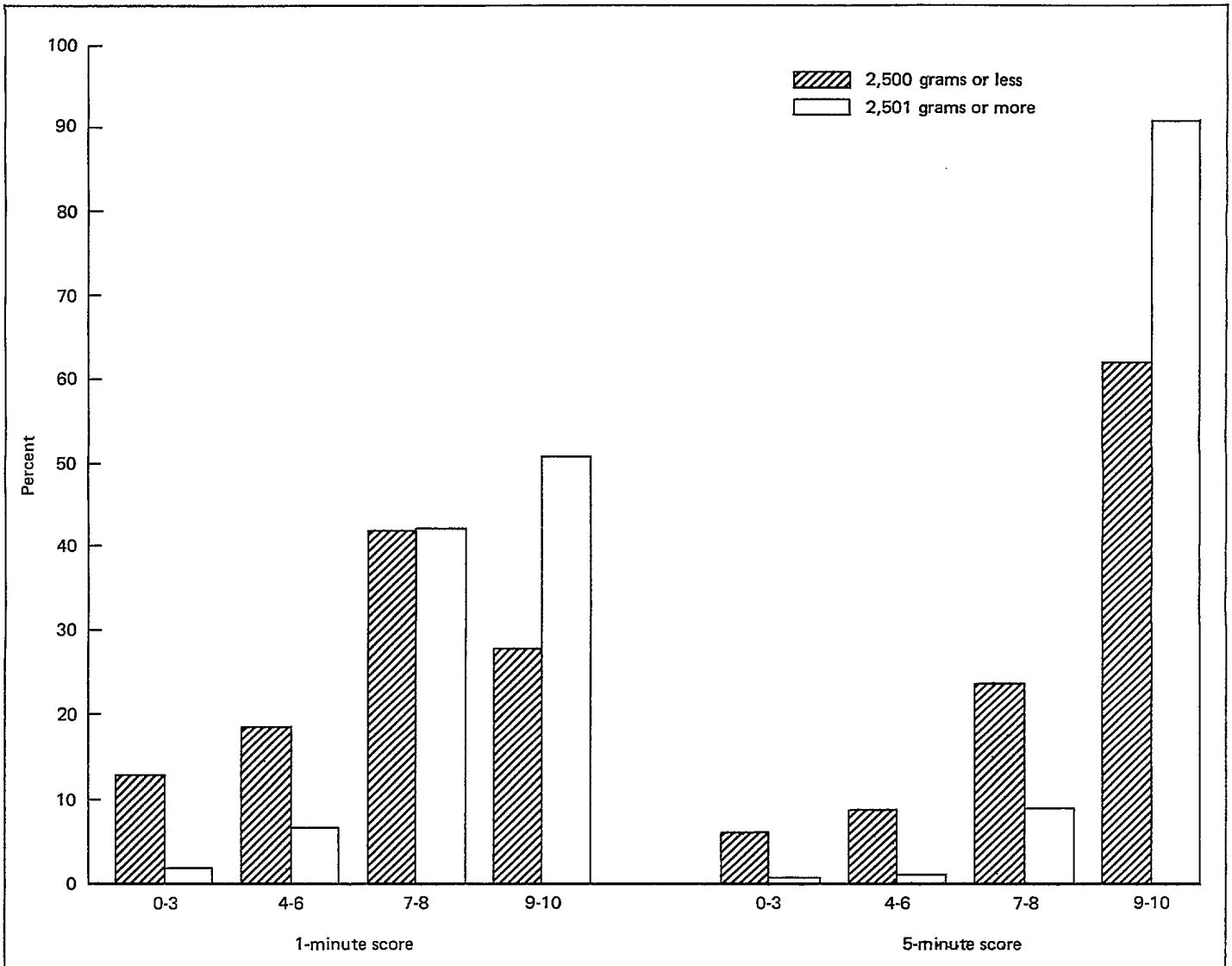


Figure 1. Percent distributions of live births by 1- and 5-minute Apgar scores, according to birth weight: Total of reporting areas, 1978

Table 6. Number of live births and percent distributions by 1- and 5-minute Apgar scores, according to birth weight category and race: Total of reporting areas, 1978

[See "Sources of Data" for the reporting areas]

Birth weight category and race	1-minute score ¹						5-minute score ³					
	Number of births ²	Total	0-3	4-6	7-8	9-10	Number of births ²	Total	0-3	4-6	7-8	9-10
2,500 grams or less												
		Percent distribution										
All races ⁴	165,508	100.0	12.4	18.2	41.6	27.7	164,220	100.0	6.0	8.4	23.6	62.0
White	115,340	100.0	12.1	18.8	42.6	26.6	113,576	100.0	5.6	8.3	24.4	61.7
Black	44,982	100.0	13.3	17.1	38.9	30.7	45,484	100.0	6.8	8.8	22.0	62.4
2,501 grams or more												
All races ⁴	2,213,513	100.0	1.4	6.2	41.8	50.6	2,186,931	100.0	0.3	0.9	8.3	90.5
White	1,834,480	100.0	1.2	6.1	42.3	50.3	1,805,555	100.0	0.2	0.8	8.1	90.8
Black	307,706	100.0	2.0	6.9	38.2	52.8	310,399	100.0	0.5	1.3	9.1	89.1

¹Total of 39 reporting States.

²Includes births with Apgar score not stated, which are excluded from the computation of the percent distribution.

³Total of 38 reporting States and the District of Columbia.

⁴Includes races other than white and black.

heavier infants. Ninety-nine percent of heavier infants, in contrast to 86 percent of the low-weight infants, were given satisfactory scores (7-10) at 5 minutes. Six percent of the small infants remained severely depressed at 5 minutes, compared with less than 1 percent of the larger infants.

Very heavy infants also show less favorable Apgar distributions than do more normal weight infants. Included are babies weighing 4,501 or more grams (9 lb 15 oz or more) at birth, and particularly those weighing 5,001 grams or more. One-minute scores for the latter group indicate severe depression for 6 percent of these infants and moderate depression for an additional 14 percent. In addition, only one-third of babies weighing 5,001 grams or more were given scores of 9-10, in contrast to half of those in the intermediate weight categories. Mothers of large babies often have difficult deliveries, resulting in birth injuries or the need for cesarean delivery, which in turn may result in low Apgar scores. However, later scoring for these infants indicates significant improvement, with approximately 95 percent being scored in the satisfactory range of 7-10 at 5 minutes.

Apgar scores for white and black infants are related to weight at birth in a manner similar to the scores for all races combined (table 6). Among low-birth-weight infants, the racial differential for 1-minute scores was small. However, a slightly higher proportion of black than white low-birth-weight babies had high scores of 9-10 at 1 minute (30.7 compared with 26.6 percent). This difference virtu-

ally disappears at 5 minutes. There are greater racial differences among infants weighing more than 2,500 grams than among low-birth-weight infants. Heavier weight black babies are more likely to score low than are white infants; this differential is larger at 5 minutes than at 1 minute. Although black infants weighing 2,501 grams or more were slightly more likely than white infants of this weight to be given scores of 9-10 at 1 minute, by 5 minutes the proportion of white infants in this category was slightly greater than that of black infants (90.8 vs. 89.1 percent).

Age of mother

Infants born to mothers at the extremes of the childbearing ages are most likely to be assigned low Apgar scores (table 7). The proportion of births with severely depressed 1-minute scores decreased with increasing age of mother from 4.5 percent for those born to mothers under 15 years to 1.9 percent of those born to mothers 25-29 years. Then the proportion increased with age to 4.6 percent for the oldest mothers. The highest proportions of infants with high scores were born to mothers aged 20-39 years. Five-minute score distributions improved for each age group, but the age differential remained.

Both racial groups show the same pattern by age of mother as for total births: the most favorable Apgar distributions for both 1- and 5-minute scores are found for women in the middle childbearing

Table 7. Number of live births and percent distributions by 1- and 5-minute Apgar scores, according to age of mother and race: Total of reporting areas, 1978

[See "Sources of Data" for reporting areas]

Age of mother and race	1-minute score ¹						5-minute score ³						
	Number of births ²	Total	0-3	4-6	7-8	9-10	Number of births ²	Total	0-3	4-6	7-8	9-10	
All races ⁴													
			Percent distribution							Percent distribution			
All ages	2,385,454	100.0	2.2	7.0	41.8	49.0	2,357,543	100.0	0.7	1.4	9.3	88.6	
Under 15 years	6,803	100.0	4.5	10.1	42.3	43.1	6,785	100.0	1.6	2.8	12.8	82.8	
15-19 years	373,980	100.0	2.7	8.4	43.3	45.6	371,539	100.0	0.9	1.9	10.8	86.5	
15 years.	18,920	100.0	3.4	9.0	42.9	44.6	18,828	100.0	1.1	2.3	12.0	84.5	
16 years.	43,570	100.0	3.0	9.2	43.2	44.6	43,428	100.0	1.0	2.2	11.7	85.1	
17 years.	74,232	100.0	2.8	8.5	43.4	45.3	73,785	100.0	0.9	1.9	11.0	86.2	
18 years.	104,657	100.0	2.7	8.3	43.4	45.7	103,894	100.0	0.9	1.9	10.6	86.6	
19 years.	132,601	100.0	2.4	8.0	43.3	46.3	131,604	100.0	0.8	1.7	10.3	87.3	
20-24 years	812,574	100.0	2.1	7.1	42.4	48.4	804,896	100.0	0.7	1.4	9.5	88.4	
25-29 years	736,859	100.0	1.9	6.4	41.1	50.6	726,314	100.0	0.6	1.2	8.6	89.6	
30-34 years	345,901	100.0	2.0	6.5	40.4	51.1	340,113	100.0	0.6	1.3	8.7	89.4	
35-39 years	92,094	100.0	2.6	7.4	40.7	49.3	90,811	100.0	0.7	1.7	9.7	87.8	
40-44 years	16,350	100.0	3.5	8.8	40.8	46.8	16,197	100.0	0.9	2.2	11.0	85.9	
45-49 years	893	100.0	4.6	8.8	41.9	44.7	888	100.0	1.6	1.8	11.4	85.3	
White													
All ages	1,954,726	100.0	1.9	6.8	42.3	48.9	1,923,984	100.0	0.6	1.3	9.1	89.1	
Under 15 years	3,123	100.0	4.1	10.1	43.8	42.0	3,090	100.0	1.3	2.5	12.2	84.0	
15-19 years	270,600	100.0	2.4	8.3	44.5	44.8	267,500	100.0	0.7	1.7	10.6	87.0	
15 years.	10,867	100.0	2.8	9.2	45.1	42.9	10,744	100.0	0.9	2.0	12.0	85.1	
16 years.	28,706	100.0	2.7	9.1	44.6	43.7	28,432	100.0	0.8	1.9	11.5	85.8	
17 years.	52,525	100.0	2.6	8.6	44.8	44.0	51,917	100.0	0.8	1.8	10.9	86.5	
18 years.	76,895	100.0	2.4	8.2	44.5	44.9	75,998	100.0	0.7	1.7	10.5	87.1	
19 years.	101,607	100.0	2.1	8.0	44.2	45.7	100,409	100.0	0.6	1.5	10.1	87.7	
20-24 years	664,960	100.0	1.9	7.0	43.1	48.0	656,255	100.0	0.5	1.3	9.3	88.9	
25-29 years	631,857	100.0	1.7	6.2	41.5	50.6	620,673	100.0	0.5	1.1	8.4	90.0	
30-34 years	295,313	100.0	1.8	6.3	40.7	51.1	289,135	100.0	0.5	1.2	8.5	89.8	
35-39 years	75,310	100.0	2.4	7.0	41.2	49.4	73,956	100.0	0.6	1.5	9.4	88.5	
40-44 years	12,871	100.0	3.2	8.2	42.2	46.4	12,688	100.0	0.7	1.9	10.6	86.8	
45-49 years	692	100.0	4.4	8.7	42.8	44.1	687	100.0	1.1	1.5	11.2	86.2	
Black													
All ages	353,978	100.0	3.5	8.2	38.3	50.0	357,185	100.0	1.3	2.3	10.7	85.7	
Under 15 years	3,553	100.0	5.0	10.2	40.8	44.0	3,568	100.0	1.7	3.1	13.5	81.6	
15-19 years	94,506	100.0	3.6	8.7	39.4	48.3	95,179	100.0	1.4	2.4	11.3	84.9	
15 years.	7,649	100.0	4.3	9.0	39.4	47.3	7,680	100.0	1.4	2.8	12.1	83.6	
16 years.	13,871	100.0	3.9	9.5	40.1	46.5	14,007	100.0	1.3	2.8	12.3	83.6	
17 years.	19,990	100.0	3.5	8.3	39.3	48.8	20,157	100.0	1.3	2.3	11.2	85.2	
18 years.	25,201	100.0	3.4	8.7	39.3	48.6	25,337	100.0	1.3	2.6	11.2	84.9	
19 years.	27,795	100.0	3.4	8.4	39.2	49.0	27,998	100.0	1.4	2.2	10.9	85.5	
20-24 years	126,624	100.0	3.3	7.7	38.4	50.6	127,715	100.0	1.3	2.1	10.3	86.3	
25-29 years	79,083	100.0	3.4	7.8	37.7	51.0	79,876	100.0	1.3	2.1	10.2	86.4	
30-34 years	35,243	100.0	3.7	8.2	36.8	51.2	35,751	100.0	1.4	2.1	10.7	85.8	
35-39 years	12,147	100.0	4.3	9.8	36.2	49.6	12,240	100.0	1.3	3.0	12.0	83.8	
40-44 years	2,662	100.0	5.8	11.8	34.0	48.4	2,694	100.0	1.7	3.8	13.0	81.5	
45-49 years	160	100.0	6.6	6.6	37.1	49.7	162	100.0	3.9	3.3	10.5	82.4	

¹Total of 39 reporting States.
²Includes births with Apgar score not stated, which are excluded from the computation of the percent distribution.
³Total of 38 reporting States and the District of Columbia.
⁴Includes races other than white and black.

years. Consistently higher proportions of black than white births were assigned scores of 0-3 at both 1 minute and 5 minutes for each age group. For the oldest and youngest mothers, black births were slightly more likely than white births to have high scores of 9-10 at 1 minute. For mothers of other ages, the proportions are nearly identical. However, for all ages the proportion of newborn white infants with

5-minute scores of 9-10 exceeded the proportion of black infants with scores this high.

Figure 2 shows the proportion of white and black infants that were moderately or severely depressed at 1 minute and 5 minutes by age of mother. It is obvious that the racial differential is smallest for young mothers, for whom the risk of childbearing is great for both racial groups. The differential is

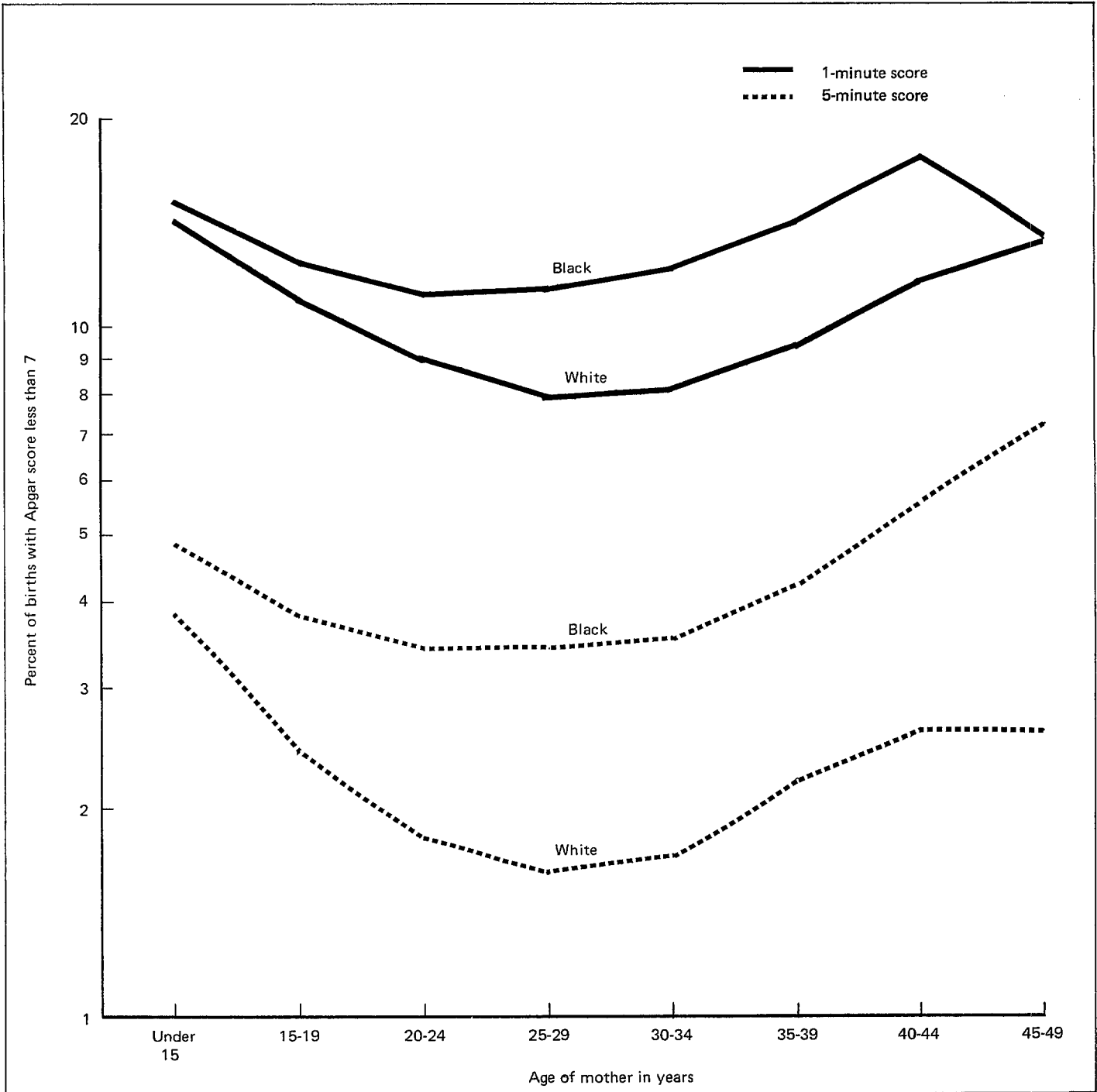


Figure 2. Percent of live births with 1- and 5-minute Apgar scores less than 7, by age of mother and race: Total of reporting areas, 1978

greater at older ages (except for ages 45-49 years where the percents are based on very small numbers). The racial differences are greater at 5 minutes than at 1 minute due to the greater improvement in 5-minute scores for white infants. As noted earlier, this may be a result of the larger proportion of black infants of low birth weight, for whom the improvement is less than for the heavier babies.

Educational attainment of mother

Educational attainment of the mother is an indication of her socioeconomic status, which is related to her health and, in turn, to that of her child. As shown in table 8, the risk of bearing a child with an Apgar score of 0-3 at 1 minute was lower for the mothers with more education. Al-

though scores improved by 5 minutes for each education group, children of mothers with more years of education still had higher Apgar scores. High scores of 9-10 were slightly more likely to be found for infants of more educated mothers at both 1 and 5 minutes.

The same pattern is found for white and black births as for those of all races. Figure 3 shows that births to mothers with more education generally are less likely to have scores of less than 7. The racial differential is greater at 5 minutes than at 1 minute due to the greater improvement for white infants.

Since the lower education categories have a disproportionate number of young teenagers, who are at greater risk of having a low-birth-weight or otherwise unhealthy infant, it is useful to examine education differences by age of mother, as shown in table

Table 8. Number of live births and percent distributions by 1- and 5-minute Apgar scores, according to educational attainment of mother and race: Total of reporting areas, 1978

[See "Sources of Data" for reporting areas]

Years of school completed by mother and race	Number of births ²	1-minute score ¹				5-minute score ³						
		Total	0-3	4-6	7-8	9-10	Total	0-3	4-6	7-8	9-10	
All races⁴		Percent distribution				Percent distribution						
Total	2,385,454	100.0	2.2	7.0	41.8	49.0	2,357,543	100.0	0.7	1.4	9.3	88.6
0-8 years	136,613	100.0	2.7	7.5	41.2	48.6	135,585	100.0	0.8	1.7	10.1	87.4
9-11 years	466,226	100.0	2.6	7.9	42.2	47.3	463,346	100.0	0.9	1.8	10.4	87.0
12 years	1,017,066	100.0	2.1	7.0	41.8	49.2	1,008,216	100.0	0.7	1.4	9.2	88.7
13-15 years	416,634	100.0	1.9	6.6	42.5	49.0	410,873	100.0	0.5	1.3	9.0	89.2
16 years or more	307,241	100.0	1.7	5.9	40.7	51.7	302,399	100.0	0.5	1.0	8.0	90.4
Not stated	41,674	100.0	3.7	8.0	40.3	48.1	37,124	100.0	1.9	2.1	10.7	85.4
White		Percent distribution				Percent distribution						
Total	1,954,726	100.0	1.9	6.8	42.3	48.9	1,923,984	100.0	0.6	1.3	9.1	89.1
0-8 years	112,402	100.0	2.5	7.4	41.9	48.2	111,245	100.0	0.7	1.6	10.0	87.8
9-11 years	341,158	100.0	2.3	7.8	43.3	46.7	337,258	100.0	0.7	1.5	10.2	87.6
12 years	847,818	100.0	1.9	6.8	42.2	49.1	837,165	100.0	0.6	1.3	9.0	89.2
13-15 years	350,188	100.0	1.7	6.5	43.0	48.9	344,097	100.0	0.5	1.2	8.8	89.6
16 years or more	271,517	100.0	1.6	5.9	40.9	51.6	266,494	100.0	0.4	1.0	8.0	90.6
Not stated	31,643	100.0	3.3	7.9	40.6	48.2	27,725	100.0	1.5	1.9	10.3	86.4
Black		Percent distribution				Percent distribution						
Total	353,978	100.0	3.5	8.2	38.3	50.0	357,185	100.0	1.3	2.3	10.7	85.7
0-8 years	18,428	100.0	3.7	8.8	36.2	51.2	18,578	100.0	1.4	2.4	11.0	85.2
9-11 years	111,834	100.0	3.6	8.5	38.4	49.4	112,890	100.0	1.4	2.5	11.1	85.1
12 years	144,841	100.0	3.4	8.0	38.4	50.2	146,714	100.0	1.3	2.2	10.6	85.9
13-15 years	51,321	100.0	3.3	8.0	38.5	50.2	51,734	100.0	1.1	2.1	10.2	86.6
16 years or more	19,965	100.0	3.2	7.3	37.7	51.9	20,266	100.0	1.1	1.9	9.8	87.1
Not stated	7,589	100.0	6.0	8.5	37.9	47.6	7,003	100.0	3.5	3.1	12.7	80.7

¹Total of 39 reporting States.

²Includes births with Apgar score not stated, which are excluded from the computation of the percent distribution.

³Total of 38 reporting States and the District of Columbia.

⁴Includes races other than white and black.

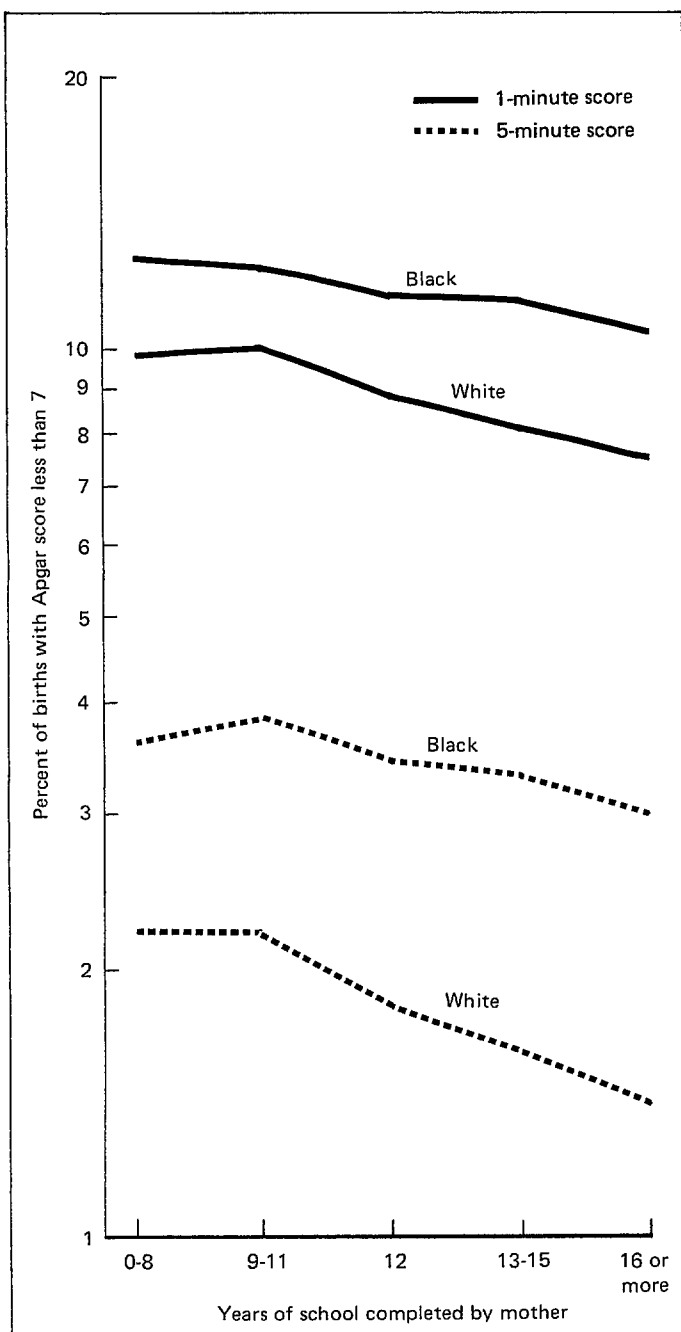


Figure 3. Percent of live births with 1- and 5-minute Apgar scores less than 7, by educational attainment of mother and race: Total of reporting areas, 1978

9. For teenage mothers, educational attainment is not necessarily a good indication of socioeconomic status since their young age is in itself a limit to their educational opportunity. The proportion of births with 1- and 5-minute scores indicating moderate to severe depression generally decreased with increasing education for most age groups. The relationship became stronger as age of mother increased. Patterns for both racial groups were similar to the pattern for all races combined.

Prenatal care

For births to mothers who had some prenatal care, there were only minimal differences in Apgar score distributions by month of pregnancy prenatal care began (table 10). At 1 minute approximately 2 percent of infants were scored 0-3, and 9-10 percent scored below 7, regardless of when care began. However, there was a larger difference in these proportions between women receiving some care and those receiving no care. Six percent of infants whose mothers had no care received scores of 0-3, and 15 percent had scores of less than 7. At 5 minutes also, differences were found only by whether or not care was received. Improvements between 1- and 5-minute scores were greater for infants whose mothers had received some care. Reductions in the proportion with scores less than 7 were 77-79 percent for those whose mothers received care, in contrast to 56 percent for the no-care group. Similar patterns were found by race.

Since education is associated with Apgar score and is also an important factor in initiation of prenatal care, it is useful to examine the relationship of Apgar score and prenatal care by educational attainment. Table 11 shows that as long as some prenatal care was received, the proportion of births with Apgar score less than 7 at both 1 and 5 minutes showed a definite tendency to decrease as mother's education increased, regardless of when prenatal care began. Within each education category there was virtually no difference by trimester care began in the proportion scoring low; however, large differences still existed between mothers having some care and mothers having no care. It is noteworthy that the percent scoring less than 7 among mothers receiving no care tended to increase, rather than decrease, with increasing education. Further examination of the data provides no explanation. However, it does indicate that this pattern is not a result of a disproportionate number of older women or of premature births among better educated mothers who had no prenatal care.

Marital status

Because 11 States did not report marital status in 1978, both Apgar score and marital status data are available only for 32 States for 1-minute scores and for 32 States and the District of Columbia for 5-minute scores. As shown in table 12, 9.0 percent of births to married women scored less than 7 at 1 minute, compared with 12.4 percent of births to unmarried women. There were improvements for both groups by 5 minutes, but a difference remained.

Table 9. Percent of live births with Apgar score less than 7 at 1 minute and at 5 minutes after birth, by educational attainment of mother, age of mother, and race: Total of reporting areas, 1978

[See "Sources of Data" for reporting areas]

Age of mother and race	1-minute score ¹						5-minute score ²					
	Years of school completed by mother						Years of school completed by mother					
	Total	0-8 years	9-11 years	12 years	13-15 years	16 years or more	Total	0-8 years	9-11 years	12 years	13-15 years	16 years or more
All races ³												
All ages	9.2	10.0	10.5	9.1	8.5	7.6	2.1	2.4	2.6	2.1	1.8	1.5
Under 15 years	14.6	15.0	13.4	-	-	-	4.4	4.5	4.0	-	-	-
15-17 years	11.8	11.3	12.0	10.4	10.1	-	3.0	3.1	3.0	2.6	6.0	-
18-19 years	10.7	9.9	10.7	10.6	10.9	8.5	2.6	2.2	2.6	2.6	2.6	3.3
20-24 years	9.2	9.4	9.5	9.1	9.0	8.4	2.1	2.2	2.3	2.0	1.9	1.7
25-29 years	8.3	9.2	9.8	8.3	8.0	7.6	1.8	2.0	2.5	1.8	1.7	1.5
30-34 years	8.5	10.0	10.7	8.9	8.3	7.2	1.9	2.4	2.7	2.1	1.8	1.4
35-39 years	10.0	12.1	12.5	10.0	9.6	7.9	2.4	3.1	3.3	2.4	2.3	1.7
40-49 years	12.4	14.1	14.7	11.9	12.2	9.0	3.1	3.4	4.1	2.9	2.8	2.4
White												
All ages	8.7	9.8	10.0	8.7	8.1	7.5	1.8	2.2	2.2	1.8	1.6	1.4
Under 15 years	14.2	15.1	11.7	-	-	-	3.8	4.1	3.4	-	-	-
15-17 years	11.4	11.1	11.6	9.8	10.7	-	2.7	2.9	2.6	2.5	4.7	-
18-19 years	10.3	9.7	10.4	10.2	9.7	6.3	2.3	2.1	2.3	2.2	2.0	3.3
20-24 years	8.9	9.4	9.1	8.8	8.6	8.2	1.8	2.1	2.0	1.8	1.7	1.6
25-29 years	7.9	8.9	9.1	7.9	7.7	7.5	1.6	1.9	2.0	1.6	1.5	1.4
30-34 years	8.1	9.6	10.1	8.4	7.9	7.1	1.7	2.2	2.3	1.9	1.6	1.3
35-39 years	9.4	11.8	11.2	9.4	8.9	7.6	2.2	2.9	2.8	2.1	2.0	1.5
40-49 years	11.5	12.9	13.3	10.9	11.8	9.0	2.6	3.1	3.3	2.5	2.2	2.2
Black												
All ages	11.7	12.2	12.2	11.4	11.3	10.4	3.6	3.6	3.8	3.4	3.3	3.0
Under 15 years	15.1	15.1	14.8	-	-	-	4.8	4.9	4.6	-	-	-
15-17 years	12.6	12.3	12.7	11.6	9.8	-	3.9	3.8	3.9	3.0	8.5	-
18-19 years	11.9	11.7	11.8	11.8	13.0	12.5	3.7	3.0	3.8	3.6	3.7	4.2
20-24 years	11.0	10.1	11.2	11.0	10.8	9.8	3.4	3.3	3.6	3.3	3.1	2.9
25-29 years	11.2	11.6	12.1	11.1	10.9	11.0	3.4	3.5	3.9	3.4	3.2	3.3
30-34 years	12.0	13.4	12.7	12.2	11.8	9.7	3.5	4.0	3.8	3.7	3.0	2.5
35-39 years	14.1	15.4	16.0	13.0	15.5	11.1	4.2	4.2	4.7	3.8	4.7	3.8
40-49 years	17.3	19.7	17.6	17.1	18.5	11.2	5.6	4.7	5.7	5.1	8.2	4.6

¹Total of 39 reporting States.

²Total of 38 reporting States and the District of Columbia.

³Includes races other than white and black.

The difference by marital status was much greater for white than black births. The proportion scoring low at 1 minute was almost 40 percent higher for births to unmarried than to married white mothers, and it was only 15 percent higher for unmarried than for married black mothers. Although the differential had increased for both races by 5 minutes, it was greater for white births, for whom the marital status differential increased to 61 percent, than for black births, for whom it increased to 21 percent.

Unmarried mothers are likely to be younger, higher-risk women than are married mothers. Therefore, marital status differences should be examined

by age of mother. Table 13 indicates that marital status differences in the proportion of births assigned scores less than 7 at 1 minute are least among teenagers and especially among young teenagers, for whom the risk of having low-Apgar-score births is high regardless of marital status. Differences by marital status were greatest among births to women aged 25-39 years, where the proportion scored under 7 was at least 50 percent higher for births to unmarried women.

By 5 minutes, differences by marital status had increased despite improvements for both groups. Again, the smallest differential (22 percent) is found

Table 10. Number of live births and percent distributions by 1- and 5-minute Apgar scores, according to month of pregnancy prenatal care began and race: Total of reporting areas, 1978

[See "Sources of Data" for reporting areas]

Month of pregnancy prenatal care began and race	1-minute score ¹						5-minute score ³					
	Number of births ²	Total	0-3	4-6	7-8	9-10	Number of births ²	Total	0-3	4-6	7-8	9-10
All races ⁴												
Total	2,385,454	100.0	2.2	7.0	41.8	49.0	2,357,543	100.0	0.7	1.4	9.3	88.6
1st and 2d month	1,143,513	100.0	2.0	6.7	41.4	50.0	1,125,221	100.0	0.6	1.3	8.9	89.2
3d month	606,197	100.0	2.0	7.0	42.2	48.8	599,970	100.0	0.6	1.3	9.3	88.8
4th-6th month	446,614	100.0	2.4	7.6	42.2	47.8	444,752	100.0	0.7	1.6	9.9	87.7
7th-9th month	87,437	100.0	2.2	7.4	42.1	48.3	87,292	100.0	0.5	1.5	9.9	88.0
No prenatal care	29,560	100.0	6.0	9.0	38.0	46.9	29,929	100.0	3.2	3.4	11.8	81.7
Not stated	72,133	100.0	3.4	8.5	42.8	45.3	70,379	100.0	1.6	2.1	11.5	84.8
White												
Total	1,954,726	100.0	1.9	6.8	42.3	48.9	1,923,984	100.0	0.6	1.3	9.1	89.1
1st and 2d month	988,498	100.0	1.8	6.5	41.7	50.0	970,001	100.0	0.5	1.2	8.7	89.6
3d month	504,231	100.0	1.8	6.8	42.7	48.6	497,919	100.0	0.5	1.2	9.1	89.2
4th-6th month	327,056	100.0	2.1	7.4	43.5	46.9	324,458	100.0	0.6	1.5	9.7	88.2
7th-9th month	61,364	100.0	2.1	7.4	43.6	47.0	61,000	100.0	0.5	1.3	9.9	88.3
No prenatal care	18,096	100.0	5.2	9.0	39.9	45.8	18,011	100.0	2.5	3.2	11.6	82.7
Not stated	55,481	100.0	3.2	8.3	42.5	46.0	52,595	100.0	1.4	1.9	11.1	85.7
Black												
Total	353,978	100.0	3.5	8.2	38.3	50.0	357,185	100.0	1.3	2.3	10.7	85.7
1st and 2d month	122,902	100.0	3.5	8.1	38.7	49.8	123,329	100.0	1.3	2.2	10.5	86.1
3d month	82,831	100.0	3.4	8.0	38.5	50.1	83,026	100.0	1.2	2.2	10.7	85.9
4th-6th month	102,188	100.0	3.3	8.3	37.5	50.9	102,940	100.0	1.2	2.3	10.8	85.8
7th-9th month	21,634	100.0	2.7	7.6	37.5	52.1	21,861	100.0	0.7	2.0	10.1	87.2
No prenatal care	10,341	100.0	7.3	9.2	34.5	49.0	10,791	100.0	4.2	3.8	12.1	79.9
Not stated	14,082	100.0	4.7	9.1	43.8	42.4	15,238	100.0	2.4	2.8	12.7	82.1

¹Total of 39 reporting States.

²Includes births with Apgar score not stated, which are excluded from the computation of the percent distribution.

³Total of 38 reporting States and the District of Columbia.

⁴Includes races other than white and black.

among the youngest teenagers; the largest differences are found among women 25-29 and 30-34 years, for whom the proportion of births scored less than 7 is at least twice as high for unmarried women.

Marital status differences are generally greater

for white than for black births at both 1 and 5 minutes. These differences, for the most part, peaked at the same ages for white and black women as for women of all races combined.

Table 11. Percent of live births with Apgar score less than 7 at 1 minute and at 5 minutes after birth, by educational attainment of mother and month of pregnancy prenatal care began: Total of reporting areas, 1978

[See "Sources of Data" for reporting areas]

Month of pregnancy prenatal care began and time of score	Years of school completed by mother					
	Total	0-8 years	9-11 years	12 years	13-15 years	16 years or more
1-minute score¹						
Total	9.2	10.2	10.5	9.1	8.5	7.6
1st and 2d month	8.6	10.2	10.2	8.7	8.2	7.4
3d month	9.0	9.9	10.3	8.9	8.5	7.5
4th-6th month	10.0	10.1	10.7	9.7	9.4	8.5
7th-9th month	9.6	9.7	9.8	9.7	9.1	7.2
No prenatal care	15.1	13.2	15.4	14.9	16.1	17.3
5-minute score²						
Total	2.1	2.5	2.6	2.1	1.8	1.5
1st and 2d month	1.9	2.5	2.5	2.0	1.7	1.5
3d month	1.9	2.3	2.4	1.9	1.7	1.5
4th-6th month	2.4	2.3	2.6	2.3	2.2	2.0
7th-9th month	2.0	2.0	2.1	2.0	2.1	1.3
No prenatal care	6.5	5.5	6.5	6.4	6.9	8.7

¹Total of 39 reporting States.

²Total of 38 reporting States and the District of Columbia.

Table 12. Number of live births and percent distributions by 1- and 5-minute Apgar scores, according to marital status of mother and race: Total of reporting areas, 1978

[See "Sources of Data" for reporting areas]

Marital status of mother and race	Number of births ²	1-minute score ¹					5-minute score ³					
		Total	0-3	4-6	7-8	9-10	Total	0-3	4-6	7-8	9-10	
All races⁴												
Total	1,433,349	100.0	2.2	7.3	43.0	47.5	1,442,732	100.0	0.7	1.5	9.6	88.2
Married	1,212,193	100.0	2.0	7.0	43.0	48.0	1,216,546	100.0	0.6	1.4	9.3	88.8
Unmarried	221,156	100.0	3.4	9.0	43.0	44.7	226,186	100.0	1.1	2.3	11.6	85.0
White												
Total	1,176,594	100.0	1.9	7.1	43.7	47.2	1,178,009	100.0	0.6	1.3	9.4	88.7
Married	1,076,329	100.0	1.8	6.9	43.5	47.8	1,077,585	100.0	0.5	1.3	9.2	89.0
Unmarried	100,265	100.0	2.9	9.1	46.4	41.5	100,424	100.0	0.9	2.0	11.5	85.6
Black												
Total	215,860	100.0	3.5	8.3	38.5	49.7	223,708	100.0	1.3	2.4	11.0	85.3
Married	102,400	100.0	3.2	7.8	37.3	51.7	105,407	100.0	1.2	2.1	10.2	86.4
Unmarried	113,460	100.0	3.8	8.8	39.6	47.8	118,301	100.0	1.4	2.6	11.7	84.3

¹Total of 32 reporting States.

²Includes births with Apgar score not stated, which are excluded from the computation of the percent distribution.

³Total of 32 reporting States and the District of Columbia.

⁴Includes races other than white and black.

Table 13. Percent of live births with Apgar score less than 7 at 1 minute and at 5 minutes after birth, by age of mother, marital status of mother, and race: Total of reporting areas, 1978

[See "Sources of Data" for reporting areas]

Time of score, marital status of mother, and race	Age of mother								
	All ages	Under 15 years	15-17 years	18-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-49 years
1-minute score ¹									
All races ²									
Total	9.5	14.5	12.1	11.0	9.4	8.5	8.8	10.3	13.3
Married	9.0	13.9	11.1	10.3	9.0	8.3	8.6	9.9	12.9
Unmarried	12.3	14.6	12.8	12.2	11.6	12.5	13.0	15.8	17.0
White									
Total	9.1	14.6	11.8	10.6	9.1	8.2	8.4	9.7	12.0
Married	8.8	13.3	11.2	10.3	8.9	8.1	8.4	9.4	11.8
Unmarried	12.1	15.2	12.7	11.8	11.7	12.2	10.7	15.4	15.5
Black									
Total	11.8	14.7	12.8	12.3	11.0	11.1	12.5	15.1	18.5
Married	11.0	23.1	10.9	11.3	10.3	10.5	11.6	14.7	18.5
Unmarried	12.6	14.6	13.0	12.6	11.7	12.7	15.3	16.5	18.6
5-minute score ³									
All races ²									
Total	2.2	4.3	3.2	2.7	2.1	1.9	2.0	2.6	3.2
Married	2.0	3.6	2.7	2.4	1.9	1.8	1.9	2.5	3.0
Unmarried	3.4	4.4	3.6	3.4	3.2	3.7	3.8	4.5	4.8
White									
Total	1.9	3.7	2.8	2.4	1.9	1.7	1.7	2.4	2.7
Married	1.8	3.5	2.6	2.3	1.8	1.6	1.7	2.3	2.6
Unmarried	2.9	3.8	3.0	2.7	2.6	3.4	2.6	4.7	4.2
Black									
Total	3.7	4.6	4.0	3.8	3.5	3.4	3.7	4.3	5.3
Married	3.3	2.3	4.0	3.1	3.2	3.2	3.3	4.4	5.2
Unmarried	4.0	4.7	4.1	4.1	3.7	4.0	4.9	4.2	5.4

¹Total of 32 reporting States.²Includes races other than white and black.³Total of 32 reporting States and the District of Columbia.

Sources of data

States reporting neither 1-minute nor 5-minute Apgar score in 1978 were Delaware, Florida, Georgia, Illinois, Louisiana, Maryland, Minnesota, New Mexico, Oklahoma, Texas, and Washington. In addition 1-minute Apgar score was not reported by the District of Columbia, and 5-minute Apgar score was not reported by Connecticut. The following States reported Apgar score but did not report marital status: California, Connecticut, Michigan, Montana, Nevada, New York, and Ohio.

Data shown in this report are for births to mothers residing in the States which reported Apgar score on

their birth certificates, regardless of where the birth occurred. The 1978 data are based on 100 percent of the birth certificates from 28 reporting States which provided data through the Cooperative Health Statistics System in 1978. Data from the remaining reporting areas (Arizona, Arkansas, California, Connecticut, the District of Columbia, Hawaii, Mississippi, New Jersey, North Dakota, Pennsylvania, South Dakota, and Wyoming) are based on a 50-percent sample of birth certificates filed in those areas.

Symbols

- Data not available
 - ... Category not applicable
 - Quantity zero
 - 0.0 Quantity more than 0 but less than 0.05
 - * Figure does not meet standards of reliability or precision
-

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