

School Survey Year: The time period the survey was conducted, when the children were enrolled in Kansas public school kindergarten classes.

Percent of 2-Year-Olds Immunized with Antigen: Based on survey results, estimated coverage rates for children at the time they were two years old.

DTP4: Four doses of diphtheria, tetanus, and pertussis.

Polio3: Three doses of polio.


MMR1: One dose of measles, mumps, and rubella.

Combined 4-3-1: A combination of DTP4, Polio3, and MMR1.

User Note

Refer to the BEDP website (www.kdhe.state.ks.us/bedp/) for more information on immunization and the retrospective immunization survey.

Pregnancies by Outcome, Age Group and Race/Ethnicity of Mother

 **Original Data Source:** Office of Health Care Information, Kansas Department of Health and Environment (1994-1998)

Published reference:

Center for Health and Environmental Statistics, Kansas Department of Health and Environment. (1998). Annual Summary of Vital Statistics: 1997.

Definitions

Pregnancy: A live birth, still birth, or abortion.

Live Birth:

The complete expulsion or extraction of a product of human conception from its mother, irrespective of the duration of pregnancy, that, after such expulsion or extraction, shows any evidence of life such as breathing, heartbeat, pulsation of the umbilical cord, or voluntary muscle movement, whether or not the umbilical cord has been cut or the placenta attached.

KDHE, 1998

Fetal Death: Also referred to as “stillbirth” in some publications.

Any complete expulsion or extraction from its mother of a product of human conception the weight of which is in excess of 350 grams, irrespective of the duration of pregnancy, resulting in other than a live birth, and which is not an induced termination of pregnancy.

KDHE, 1998

Age: Age of mother at end of pregnancy.

Abortion (Induced Termination of Pregnancy):

The purposeful interruption of pregnancy with the intention other than to produce a live born infant or to remove a dead fetus and which does not result in a live birth.

KDHE, 1998

Race: Reported by race and of mother. See also Vital Statistics User Note # 5 on page 4 of this document.

Ethnicity (i.e., Hispanic Ethnicity): Reported by ethnicity of mother. Information on Hispanic ethnicity is obtained from the ancestry given on the birth certificate. Includes mothers listed as having one of these five ancestries: “Mexican”, “Puerto Rican”, “Cuban”, “Central or South American”, and “Other & Unknown Spanish”. (See also Vital Statistic User Note #5 on page 4 of this document.)

Percent: Number divided by “Total” for each group of data. For example, percent abortions is


$$\text{Abortions} / \text{Total Pregnancies} \times 100$$

All other percentages are calculated similarly.

 **User Notes:**

1. Read Vital Statistics User Notes on pages 4 through 6 of this *User’s Guide*.
2. Note that counts by race may not some to totals due to mothers of unknown race. Also note that Hispanic persons may be of any race, so Hispanic mothers are also counted in one of the three racial groups, most commonly “White”.
3. Note that pregnancy counts are reported by the **mother’s county of residence**, even if the live birth, still birth, or abortion occurred out of state.
4. Prior to July 1, 1995, only Kansas hospitals were required to report abortions to KDHE. Nonhospital providers reported abortions only on a voluntary basis. Effective July 1, 1995, every medical care facility and every person licensed to practice medicine and surgery are required to report abortions. Abortions prior to July 1, 1995 may have been underreported.

Birth and Pregnancy Rates by Age Group and Race/Ethnicity of Mother

 **Original Data Source:** Office of Health Care Information, Kansas Department of Health and Environment (1994-1998)

Published reference:

Center for Health and Environmental Statistics, Kansas Department of Health and Environment. (1998). Annual Summary of Vital Statistics: 1997.

 **Definitions**

Age, Race, Ethnicity: See definitions in previous section. Also see Vital Statistics User Note #5 on page 5 of this document.

Birth Rate: Live births in specified age/race group per 1,000 females in specified age/race group.

For example, the 15-19 Hispanic birth rate would be calculated as follows:

$$\frac{\text{Total Number of Live Births to Hispanic Females Aged 15 to 19 (1994–1998)}}{\text{Total Hispanic Female Population Aged 15 to 19 (1994–1998)}} \times 1,000$$

Fertility Rate: Live births to women of *any* age (under 15, 15-44, over 44, or unknown age) in specified race/ethnicity group per 1,000 females aged 15-44 in specified race/ethnicity group.

For example, the Black fertility rate would be calculated as follows:

$$\frac{\text{Total Number of Live Births to All Black Females (1994–1998)}}{\text{Black Female Population, Aged 15 to 44 (1994–1998)}} \times 1,000$$

White, Other-Non White, Hispanic, and Total fertility rates are calculated similarly.

Pregnancy Rate: Live births, still births, and abortions in specified age/race group per 1,000 females in specified age/race group. The pregnancy rate for by race/ethnicity for all ages is per 1,000 females aged 15-44.

For example, the total pregnancy rate (all ages) would be calculated as follows (all numbers are 1994-1998 totals):

$$\frac{\text{Live Births} + \text{Still Births} + \text{Abortions}}{\text{Female Population Aged 15–44}} \times 1,000$$

User Notes:

1. Read Vital Statistics User Notes on pages 4 through 6 of this *User's Guide*.
2. The difference between birth rates and fertility rates can be confusing, and you may find terminology differences in various publications. In general, the **birth rate** or **crude birth rate** for the **total population** is total number of live births per 1,000 persons (*all* persons, *all* ages, i.e., the total population). The **crude birth rate** for the total population is not reported in the *CHP*. Instead, the fertility rate (total live births per 1,000 *females age 15-44*) is given. Since the (crude) birth rate is always much less than the fertility rate, make sure you understand the definitions when comparing birth and fertility rates in the *CHP* with other publications.
3. The rate of live births per 1,000 female population in a specified age group is referred to as a **birth rate** in the *CHP* (e.g., Age 35-44 birth rate). This is consistent with terminology currently used in National Center for Health Statistics (NCHS) publications. However, the *Annual Summary of Vital Statistics* refers to these as “age-specific fertility rates.”
4. Note that birth or pregnancy rates based on less than five events are not included. Additionally, birth or pregnancy rates based on denominator (i.e., population) values less than five are excluded, even if there were five or more births or pregnancies. (It is certainly possible, for example, that six pregnancies occurred to a population of four women over a five-year period. However, the resulting rate of 300.0 would be based on small numbers and would probably not be reflective of the true underlying rate of the population.)


Interpret rates based on pregnancy and birth counts less than 20 with caution. Refer to CHP pages 102-104 for birth and pregnancy counts.

5. Note the graph on *CHP* page 106 displays birth rates by age group for County, Peer Group, and Kansas, while the graphs on *CHP* pages 108 and 109 display birth rates by race and ethnicity for your Peers and Kansas, respectively. A County race/ethnicity graph was not included due to small numbers for minority races and Hispanics for many frontier and rural counties.

↔ **Comparability Notes**

1. “Fertility Rates” reported in Table 9 of the *1994 County Health Profile* should be directly comparable to “Birth Rates” and “Fertility Rates (All Ages)” in the *1999 CHP*. Only the terminology is different; the methodology used is the same.
2. “Pregnancy Rates” reported in Table 10 of the *1994 County Health Profile* should be directly comparable to “Pregnancy Rates” reported in the *1999 CHP* except abortion reporting by nonhospital providers was not mandatory until July 1, 1995. (KDHE advises that the number of unreported abortions prior to this was relatively small.)
3. Note that Age 10-19 was used for teens in the *1994 Profiles* while Age 15-19 was used in the *1999 CHP*.
4. In general, the “White” and “Black” races and “Hispanic” ethnicity used on *1994 Profile* Tables 9 and 10 are directly comparable to corresponding race/ethnicity categories in the *1999 CHP*. In the *1994 Profiles*, “Native American”, “American Indian”, and “Other” races were distinct while in the *1999 CHP* these races are combined into “Other Non-White”. Thus, the Other-Non White rates are *not* comparable to *any* 1994 CHP statistics. (The number of pregnancies and births occurring to Other Non-White races is very small for most counties.) Also, the *1994 Profiles* imputed records of unknown race (i.e., assigned these records a race according to specified rules) while the *1999 CHP* excluded unknowns from the race/ethnicity analysis.

Teen Pregnancy Rates by Age Group, Race/Ethnicity, and Marital Status of Mother _____

 **Original Data Source:** Office of Health Care Information, Kansas Department of Health and Environment (1994-1998)

Definitions

Age, Race, Ethnicity: See definitions on *User’s Guide* pages 50-51. Also see Vital Statistics User Note #5 on page 5 of this document.

Marital Status: Mother’s marital status. The mother is counted as “married” for live births and still births if she was married at delivery, conception, or any time in between. For abortion records, the mother’s marital status was recorded at the time of the abortion.

Pregnancy Rate: See *User’s Guide* page 52.


User Notes:

1. Read Vital Statistics User Notes on pages 4 through 6 of this *User's Guide*.
2. Teen pregnancy rates by race and ethnicity are not reported in the *CHP* for 15-17 and 18-19 age groups because
 - a. Population estimates for these age groups by race and ethnicity are not available for intercensal years, and
 - b. The pregnancy counts for minority races were less than five for most frontier and rural counties for each of these age groups.
3. Mothers with unknown marital status are excluded from totals in married and unmarried percentage calculations.
4. Percent married and percent unmarried is reported if *total* pregnancy count is at least 5.
5. Be particularly mindful of small numbers with this table. Counts for 10-14, 15-17, and 18-19 are not reported in the *CHP*, but you can use the 15-19 pregnancy counts on *CHP* page 102 to give you a general idea of numbers for your county. Note that rates corresponding to less than 5 pregnancies are not reported. (Exception: The 15-17 total rate was reported for all counties even though seven small counties had between two and four pregnancies.)
6. Note the graph on *CHP* page 110 displays birth rates by age group for County, Peer Group, and Kansas, while the graphs on *CHP* pages 111 and 112 display birth rates by race and ethnicity for your Peers and Kansas, respectively. A County race/ethnicity graph was not included due to small numbers for minority races and Hispanics for many frontier and rural counties.
7. Teen pregnancy is a common issue of concern, and related data is reported in many sources. Note the definition and age group when comparing teen rates from multiple data sources. Commonly reported “teen” or “adolescent” age groups are 10-17, 10-19, 13-17, 15-17, and 15-19. Also, some sources report teen *birth* rates while others report teen *pregnancy* rates.

Comparability Notes

1. The teen pregnancy rates for females aged 10 to 19 should be directly comparable to the 10-19 rates reported in Table 10 of the *1994 County Health Profile* except abortion reporting by nonhospital providers was not mandatory until July 1, 1995. (KDHE advises that the number of unreported abortions prior to this was relatively small.)
2. See Comparability Note #4 on page 53 of this document.

Prenatal Care Percentages by Age Group and Race/Ethnicity of Mother

 **Original Data Source:** Office of Health Care Information, Kansas Department of Health and Environment (1994-1998)

Definitions

Age, Race, Ethnicity: See definitions on *User's Guide* pages 50-51. Also see Vital Statistics User Note #5 on page 5 of this document.

Care Beginning in the First Trimester Mother had first prenatal care (PNC) visit in first, second, or third month of pregnancy.

Second Trimester (Pie Graph only): Mother had first PNC visit in fourth, fifth, or sixth month of pregnancy.

Care Beginning in Third Trimester or No Care: Mother had first PNC visit in seventh, eighth, or ninth month of pregnancy *or* did not receive care prior to labor and delivery.

Number (First Trimester, Third Trimester or No Care): Number of live births with PNC beginning in the specified trimester.

Percent (First Trimester, Second Trimester, Third Trimester or No Care): Live births with PNC beginning in the specified trimester as a percent of total live births. Live births records with unknown month care began were excluded from totals when calculating percentages.

For example, the percent for Care Beginning in the First Trimester would be calculated as follows:

$$\frac{\text{Number of Live Births where Mother Began Prenatal Care in Months 1, 2, or 3}}{\text{Total LiveBirths where Month Began Prenatal Care is Known}} \times 100$$

Adequacy of Prenatal Care Utilization Index (APNCU): Index measuring adequacy of PNC based on (1) month care began *and* (2) proportion of actual number of visits to the American College of Obstetricians and Gynecologists (ACOG) recommended number of visits. Also know as the "Kotelchuck Index".

Adequate Plus: Prenatal care begun by the 4th month *and* 110% or more of recommended visits received.

Adequate: Prenatal care begun by the 4th month *and* 80% - 109% of recommended visits received.

Intermediate: Prenatal care begun by the 4th month *and* 50% - 79% of recommended visits received.

Inadequate: Prenatal care begun after the 4th month *or* less than 50% of recommended visits received.

Less than Adequate: Intermediate or inadequate.

Number (APCNU): Number of 1998 live births meeting each of the above specified definitions.

Percent (APCNU): Live births (1998) meeting each of the above specified definitions as a percent of total live births. Live births with unknown month care began or unknown number of PNC visits were excluded from totals when calculating percentages.

For example, percent with adequate care would be calculated as follows:

$$\frac{\# \text{ of Live Births with PNC Begun in Mo. 1, 2, 3, or 4 and 80\% to 109\% of Rec. Visits}}{\text{Total \# Live Births with Known Month Care Begun and Known Number of Visits}} \times 100$$


↪ **User Notes:**

1. Numbers for live births with mother beginning PNC in the second trimester (month four, five, or six) are not reported. However, the percent of live births with mothers initiating prenatal care in the second trimester is reported on the pie graph.
2. The number of live births reported in the first trimester and third/no trimester prenatal care tables at the top of *CHP* pages 114 - 116 should *not* be expected to match live birth totals reported on pages *CHP* 102 - 104 because (1) second trimester counts are not included on *CHP* pages 114 - 116 and (2) live births with an unknown month care began are excluded from the analysis.
3. Live births reported in the APCNU Index table at the bottom of *CHP* pages 114 - 116 should *not* be expected to match live births reported at the top of these pages or *CHP* pages 102-104 because (1) the APCNU Index uses 1998 statistics only and (2) the APCNU Index excludes live births with unknown month care began and unknown prenatal visits.
4. The APCNU Index was adopted in 1998 as a measure of adequate prenatal care by KDHE. Thus, the Index has not been calculated for previous years.

↔ **Comparability Notes**

1. Percent with “Care Beginning in the First Trimester” in the *1999 CHP* should be generally comparable to “1st Trimester Prenatal Care Rates” on Table 11 of the *1994 County Health Profile*. Similarly, Percent with “Care Beginning in the First Trimester” in the *1999 CHP* should be generally comparable to “3rd Trimester Prenatal Care Rates” on Table 12 of the *1994 Profile*.
2. See Comparability Note #4 on page 53 of this document.

Low Birth Weight, Preterm Births, and Infant Mortality by Age Group and Race of Mother

 **Original Data Source:** Office of Health Care Information, Kansas Department of Health and Environment (1994-1998)

Published reference:
Center for Health and Environmental Statistics, Kansas Department of Health and Environment. (1998). Annual Summary of Vital Statistics: 1997.

Definitions

Age, Race, Ethnicity: See definitions on *User's Guide* pages 50-51. Also see Vital Statistics User Note #5 on page 5 of this document.

LOW BIRTH WEIGHT BY AGE GROUP AND RACE/ETHNICITY

Low Birth Weight Birth: A live birth where the weight of infant at delivery is less than 2,500 grams (5 pounds, 8 ounces).

Singleton Birth: The delivery of a *single* infant by one mother (as opposed to *multiple* infants delivered by one mother).

Percent Low Birth Weight Births (Singleton): For each specified age or race/ethnicity group, singleton low birth weight live births as a percent of all singleton live births.

For example, the formula for teen (age 15-19) low birth weight births is

$$\frac{\text{Number of Low Weight Singleton Live Births to Mothers Aged 15 - 19}}{\text{Total Number of Singleton Live Births to Mothers Aged 15 - 19}} \times 100$$

Percent Low Birth Weight Births (Total): For each specified age or race/ethnicity group, low birth weight births as a percent of all live births.

For example, the Hispanic low birth weight rate would be calculated as follows

$$\frac{\text{Number of Low Birth Weight Live Births to Mothers of Hispanic Ethnicity}}{\text{Total Number of All Live Births to Mothers of Hispanic Ethnicity}} \times 100$$

PERCENT PRETERM BIRTHS BY RACE/ETHNICITY

Preterm Birth: A live birth occurring prior to 37 weeks gestation.

Percent Preterm Births (Singleton): For each specified race/ethnicity group, preterm singleton live births as a percent of all singleton live births.

Percent Preterm Births (Total): For each specified race/ethnicity group, preterm live births as a percent of all live births.

INFANT MORTALITY RATE BY RACE/ETHNICITY

Infant Death: “The death of a liveborn infant which occurs within the first year of life.” (KDHE, 1998)

Race/Ethnicity: For infant deaths, race and ethnicity are based on the race and ethnicity of the infant.

Infant Mortality Rate: For each specified race/ethnicity group, number of infant deaths per 1,000 live births.

For example, the Black infant mortality rate would be calculated as follows

$$\frac{\text{Number of Black Infant Deaths}}{\text{Live Births to Mothers of Black Race}} \times 1,000$$

User Notes:

1. Read Vital Statistics User Notes on *User's Guide* page 4.
2. The increased use of fertility treatments which may result in multiple births has made multiples more common. “Multiple births often result in shortened gestation and low or very low birth weight infants.” (Federal Bureau of Maternal and Child Health, unpublished document) Both the singleton and total percentages are reported; the “total” percentages are usually higher due to the presence of multiple births.
3. County ranks are not reported by race/ethnicity due to small numbers for most frontier and rural counties. Peer ranks are not reported for Black and Other Non-White races due to small totals for the Frontier counties.
4. As always, interpret rates based on small numbers cautiously. These statistics, in particular, are subject to unstable rates.

Comparability Notes

1. In the *1994 County Health Profile*, the “Low Birth Weight Rate” on Table 13 is per 1,000 live births while the rate is per 100 live births in the *1999 CHP*. Infant mortality rates are generally comparable.
2. See Comparability Note #4 on page 53.