



Preliminary Birth Report Kansas, 2021

Bureau of Epidemiology and Public Health Informatics

Division of Public Health

Kansas Department of Health and Environment

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Our Vision – Healthy Kansans living in safe and sustainable environments.

Our Mission –To protect and improve the health and environment of all Kansans.

Introduction

This report from the Kansas Department of Health and Environment (KDHE) presents a preliminary summary of Kansas births for 2021. Selected birth counts and rates are compared to those in the *Kansas Annual Summary of Vital Statistics, 2020*. Release of preliminary statistics enables program managers and policy analysts to obtain an early picture of selected birth trends. Since full data is not available, statistics based on final counts and published in the *Kansas Annual Summary of Vital Statistics, 2021* may be slightly different.

Methods

The KDHE Bureau of Epidemiology and Public Health Informatics (BEPHI) maintains the Kansas civil registration system through the Office of Vital Statistics (OVS). All vital events that occur in Kansas are reported to OVS. Vital events occurring in other states to Kansas residents are reported to OVS via inter-state jurisdictional exchange agreements. The analysis in this research brief is based on a preliminary annual history file of births that occurred in 2021 and were registered with OVS by April 1, 2022. All data reported herein are Kansas residence data, regardless of where the event occurred.

Changes in rates or percentages referenced in this report are statistically significant unless otherwise noted. Some changes, while statistically significant, may be of such a small magnitude that they are not pertinent from a program management perspective. It is always wise to use caution when interpreting results based on small counts.

State and county birth rates use population estimates for state and county population totals as of July 1, 2021, released by the US Census Bureau in early 2022.

Findings

As of April 1, 2022, OVS recorded 34,696 births to Kansas resident mothers in 2021, an increase of 1.0 percent from 34,368 births in 2020. The final count may be slightly higher, since additional births may be reported for Kansas residents who gave birth in other states.

The preliminary birth rate for 2021 was 11.8 per 1,000 population, unchanged from 2020. This is the lowest birth rate for Kansas residents since the state created a centralized Vital Records system in 1911, and is consistent with trends since 2008 (Figure 1).

Seven counties (Douglas, Geary, Johnson, Leavenworth, Sedgwick, Shawnee and Wyandotte)¹ accounted for 59.7 percent of births in 2021 (Table 1), compared to 60.5 percent for these seven counties in 2020. The number of births for five of these counties was lower than in 2019. Geary County births decreased by 9.5 percent (from 1,034 to 936), Wyandotte County births decreased by 6.9 percent (from 2,481 to 2,310), Shawnee County births decreased by 1.8 percent (from 1,993 to 1,957), Leavenworth County births decreased by 0.3 percent (from 914 to 911), and Sedgwick County births decreased by less than 0.1 percent (from 6,516 to 6,514). Douglas County births increased by 3.8 percent (from 1,021 to 1,060), and Johnson County births increased by 2.8 percent (from 6,821 to 7,014).

There were 12,441 births to unmarried mothers in 2021 (35.9% of all births where the mother's marital status was known), down from 12,659 (36.9%) in 2020.

The number of births to teens aged 15-19 years declined from 1,749 in 2020 to 1,615 in 2021. The overall percentage decreased from 5.1 percent in 2020 to 4.7 percent in 2021.

There were 2,571 low birth weight (less than 2,500 grams) infants born to Kansas resident mothers in 2021 (7.4% of all births where the infant's birth weight was known), up from 2,505 (7.3%) in 2020.

Premature births (less than 37 completed weeks of gestation) decreased to 3,398 in 2021 (9.8% of all births where the clinical estimate of gestation was known), from 3,425 (10.0%) in 2020. Early-term births (37-38 weeks gestation) increased to 9,992 (28.8%) in 2021, from 9,414 (27.4%) in 2020. Full term births (39 weeks or longer gestation) decreased to 21,269 (61.3%) in 2021, from 21,498 (62.6%) in 2020.

The percentage of births where prenatal care began in the first trimester increased to 81.0 percent (28,084 births) in 2021, from 80.3 percent (27,589 births) in 2020.

¹ The state's six urban counties and one semi-urban county (Geary) that usually have a large number of births. Each had over 900 births in 2021.

Births with reported maternal cigarette smoking during pregnancy declined to 2,394 in 2021 (6.9% of all births where maternal cigarette status was known), down from 2,798 (8.2%) in 2020.

Discussion

The Kansas resident birth rate in 2021 was unchanged from 2020 (11.8 per 1,000 population), continuing the trend that started in 2008. During this period (2008-2021) the average annual percent change (-1.8%) shows a statistically significant downward trend². The 2021 Kansas preliminary birth rate of 11.8 per 1,000 population is higher than the most current (2020 final) U.S. birth rate of 11.0.³

Based on preliminary statistics, 84.1 percent of Kansas infants were born to mothers who received adequate or better care. This surpassed the Healthy People 2030⁴ target of 80.5 percent of infants born to mothers with adequate prenatal care (MICH-08).

The Kansas rate for live births to mothers who smoked during pregnancy in 2021 was 6.9 percent, down 15.9 percent from 8.2 percent in 2020. This does not meet the Healthy People 2030 target of no more than 4.3 percent of live births to mothers who smoked during pregnancy (objective MICH-10).

The percentage of infants born prematurely (before 37 weeks gestation) decreased by 2.0 percent from 2020 (10.0%) to preliminary 2021 (9.8%). This is higher than the Healthy People 2030 target of no more than 9.4 percent of live births before 37 weeks gestation (objective MICH-07).

The percentage of infants born with birth weights under 2500 grams increased by 1.4 percent, from 7.3 percent in 2020 to 7.4 percent in 2021.

Births to teens aged 15-19 years have decreased since 2009. Based on preliminary 2021 data (4.7%), teen birth percentages decreased by 7.8 percent from 2020 (5.1%), and by 53.9 percent since 2009 (10.2%).

The *2021 Annual Summary of Vital Statistics* will contain additional analyses, as well as the final version of the analyses presented here. It will be based on the final birth history file created in July 2022.

² National Cancer Institute Joinpoint Regression Program v3.4.5 [Internet]. Bethesda MD. [Accessed 2022 Sep 14] Available from: <http://surveillance.cancer.gov/joinpoint/>.

³ Osterman MJK, Hamilton BE, Martin JA, Driscoll AK, Valenzuela CP. Births: Final Data for 2020. National Vital Statistics Reports Vol. 70, No. 17 (February 2, 2022).

⁴ Healthy People 2030 Objectives for Pregnancy and Childbirth [Internet] [cited 2021 April 27]. Available from: <https://health.gov/healthypeople/objectives-and-data/browse-objectives/pregnancy-and-childbirth>.

Table 1. Preliminary Live Births and Rates by County of Residence, by Age of Mother, Kansas 2021
Age-Group of Mother

| County | Total | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45 & Over | n.s. | Rate |
|------------|--------|-------|-------|-------|--------|-------|-------|-------|-----------|------|------|
| Kansas | 34,696 | 15 | 1,615 | 6,981 | 10,739 | 9,914 | 4,607 | 778 | 43 | 4 | 11.8 |
| Allen | 124 | 0 | 7 | 28 | 45 | 34 | 7 | 3 | 0 | 0 | 9.9 |
| Anderson | 103 | 0 | 10 | 25 | 34 | 23 | 8 | 3 | 0 | 0 | 13.2 |
| Atchison | 178 | 0 | 9 | 42 | 70 | 34 | 21 | 2 | 0 | 0 | 11.0 |
| Barber | 40 | 0 | 0 | 11 | 17 | 7 | 4 | 1 | 0 | 0 | 9.7 |
| Barton | 316 | 0 | 16 | 89 | 104 | 78 | 25 | 4 | 0 | 0 | 12.5 |
| Bourbon | 198 | 0 | 10 | 45 | 73 | 43 | 20 | 7 | 0 | 0 | 13.8 |
| Brown | 117 | 0 | 2 | 36 | 37 | 33 | 9 | 0 | 0 | 0 | 12.4 |
| Butler | 738 | 2 | 19 | 134 | 264 | 208 | 98 | 12 | 1 | 0 | 10.9 |
| Chase | 35 | 0 | 2 | 6 | 12 | 9 | 6 | 0 | 0 | 0 | 13.5 |
| Chautauqua | 25 | 0 | 2 | 9 | 10 | 4 | 0 | 0 | 0 | 0 | 7.4 |
| Cherokee | 208 | 0 | 18 | 60 | 73 | 42 | 10 | 5 | 0 | 0 | 10.9 |
| Cheyenne | 37 | 0 | 0 | 10 | 13 | 9 | 4 | 1 | 0 | 0 | 14.1 |
| Clark | 20 | 0 | 0 | 2 | 12 | 6 | 0 | 0 | 0 | 0 | 10.1 |
| Clay | 79 | 0 | 3 | 16 | 23 | 26 | 10 | 1 | 0 | 0 | 9.8 |
| Cloud | 104 | 1 | 8 | 21 | 38 | 23 | 11 | 2 | 0 | 0 | 11.6 |
| Coffey | 70 | 0 | 1 | 16 | 29 | 18 | 5 | 1 | 0 | 0 | 8.4 |
| Comanche | 17 | 0 | 1 | 5 | 6 | 4 | 1 | 0 | 0 | 0 | 10.2 |
| Cowley | 408 | 0 | 34 | 109 | 126 | 92 | 38 | 9 | 0 | 0 | 11.8 |
| Crawford. | 469 | 0 | 34 | 113 | 156 | 111 | 47 | 6 | 2 | 0 | 12.0 |
| Decatur | 34 | 0 | 1 | 4 | 12 | 11 | 5 | 1 | 0 | 0 | 12.4 |
| Dickinson | 181 | 0 | 10 | 39 | 58 | 54 | 16 | 4 | 0 | 0 | 9.8 |
| Doniphan | 88 | 0 | 5 | 17 | 30 | 26 | 6 | 4 | 0 | 0 | 11.8 |
| Douglas | 1,060 | 0 | 20 | 190 | 309 | 335 | 176 | 27 | 3 | 0 | 8.9 |
| Edwards | 29 | 0 | 2 | 8 | 11 | 6 | 2 | 0 | 0 | 0 | 10.2 |
| Elk | 19 | 0 | 3 | 2 | 5 | 7 | 1 | 1 | 0 | 0 | 7.8 |
| Ellis | 270 | 0 | 11 | 48 | 100 | 81 | 27 | 3 | 0 | 0 | 9.4 |
| Ellsworth | 54 | 0 | 3 | 16 | 14 | 12 | 7 | 2 | 0 | 0 | 8.5 |
| Finney | 552 | 1 | 47 | 144 | 181 | 113 | 46 | 20 | 0 | 0 | 14.5 |
| Ford | 592 | 1 | 57 | 138 | 178 | 132 | 63 | 21 | 2 | 0 | 17.3 |
| Franklin | 284 | 0 | 13 | 75 | 103 | 67 | 22 | 4 | 0 | 0 | 10.9 |
| Geary | 936 | 0 | 39 | 328 | 310 | 172 | 76 | 11 | 0 | 0 | 26.0 |
| Gove | 32 | 0 | 0 | 8 | 14 | 4 | 6 | 0 | 0 | 0 | 11.6 |
| Graham | 26 | 0 | 0 | 11 | 6 | 5 | 4 | 0 | 0 | 0 | 10.8 |
| Grant | 116 | 0 | 12 | 31 | 40 | 13 | 14 | 5 | 1 | 0 | 15.8 |
| Gray | 82 | 0 | 0 | 16 | 38 | 22 | 5 | 1 | 0 | 0 | 14.5 |

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|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|------|------|
| Greeley | 16 | 0 | 1 | 2 | 5 | 4 | 3 | 1 | 0 | 0 | 12.3 |
| Greenwood | 49 | 0 | 3 | 17 | 13 | 11 | 5 | 0 | 0 | 0 | 8.3 |
| Hamilton | 45 | 0 | 7 | 13 | 12 | 9 | 2 | 2 | 0 | 0 | 18.1 |
| Harper | 76 | 0 | 1 | 19 | 24 | 22 | 10 | 0 | 0 | 0 | 14.3 |
| Harvey | 340 | 0 | 19 | 78 | 116 | 81 | 42 | 4 | 0 | 0 | 10.1 |
| Haskell | 57 | 0 | 3 | 15 | 22 | 8 | 8 | 1 | 0 | 0 | 15.5 |
| Hodgeman | 11 | 0 | 1 | 4 | 3 | 2 | 1 | 0 | 0 | 0 | 6.4 |
| Jackson | 176 | 0 | 12 | 32 | 61 | 46 | 22 | 3 | 0 | 0 | 13.3 |
| Jefferson | 157 | 0 | 3 | 33 | 52 | 40 | 26 | 3 | 0 | 0 | 8.5 |
| Jewell | 33 | 0 | 3 | 4 | 14 | 11 | 1 | 0 | 0 | 0 | 11.2 |
| Johnson | 7,014 | 1 | 112 | 616 | 1,823 | 2,779 | 1,444 | 225 | 14 | 0 | 11.4 |
| Kearny | 70 | 0 | 3 | 21 | 18 | 22 | 4 | 1 | 1 | 0 | 18.0 |
| Kingman | 79 | 0 | 4 | 16 | 31 | 20 | 6 | 2 | 0 | 0 | 10.7 |
| Kiowa | 28 | 0 | 3 | 3 | 13 | 5 | 2 | 2 | 0 | 0 | 11.7 |
| Labette | 231 | 0 | 18 | 60 | 76 | 51 | 20 | 6 | 0 | 0 | 11.6 |
| Lane | 18 | 0 | 1 | 3 | 9 | 5 | 0 | 0 | 0 | 0 | 11.5 |
| Leavenworth | 911 | 0 | 34 | 178 | 281 | 269 | 123 | 25 | 1 | 0 | 11.1 |
| Lincoln | 29 | 0 | 1 | 7 | 5 | 9 | 7 | 0 | 0 | 0 | 10.0 |
| Linn | 90 | 0 | 7 | 26 | 29 | 18 | 9 | 1 | 0 | 0 | 9.2 |
| Logan | 35 | 0 | 2 | 4 | 14 | 12 | 2 | 1 | 0 | 0 | 12.9 |
| Lyon | 369 | 0 | 17 | 86 | 120 | 101 | 39 | 6 | 0 | 0 | 11.5 |
| McPherson | 325 | 0 | 22 | 61 | 107 | 100 | 34 | 1 | 0 | 0 | 10.8 |
| Marion | 114 | 0 | 3 | 24 | 37 | 36 | 13 | 1 | 0 | 0 | 9.7 |
| Marshall | 104 | 0 | 7 | 19 | 33 | 28 | 15 | 2 | 0 | 0 | 10.4 |
| Meade | 49 | 0 | 2 | 12 | 19 | 11 | 4 | 1 | 0 | 0 | 12.2 |
| Miami | 371 | 0 | 7 | 62 | 129 | 112 | 57 | 4 | 0 | 0 | 10.7 |
| Mitchell | 68 | 0 | 1 | 18 | 20 | 16 | 12 | 1 | 0 | 0 | 11.8 |
| Montgomery | 347 | 0 | 36 | 91 | 111 | 76 | 25 | 6 | 2 | 0 | 11.1 |
| Morris | 52 | 0 | 0 | 8 | 13 | 22 | 7 | 2 | 0 | 0 | 9.7 |
| Morton | 29 | 0 | 2 | 7 | 9 | 8 | 2 | 1 | 0 | 0 | 10.8 |
| Nemaha | 126 | 0 | 5 | 18 | 53 | 42 | 8 | 0 | 0 | 0 | 12.3 |
| Neosho | 189 | 0 | 13 | 63 | 55 | 35 | 21 | 2 | 0 | 0 | 12.0 |
| Ness | 32 | 0 | 1 | 10 | 12 | 6 | 3 | 0 | 0 | 0 | 12.0 |
| Norton | 52 | 0 | 3 | 8 | 23 | 13 | 4 | 1 | 0 | 0 | 9.7 |
| Osage | 162 | 0 | 6 | 41 | 58 | 40 | 16 | 0 | 1 | 0 | 10.3 |

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|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|------|------|
| Osborne | 35 | 0 | 1 | 9 | 13 | 7 | 5 | 0 | 0 | 0 | 10.0 |
| Ottawa | 61 | 0 | 2 | 15 | 26 | 13 | 3 | 2 | 0 | 0 | 10.4 |
| Pawnee | 60 | 0 | 3 | 19 | 18 | 12 | 7 | 1 | 0 | 0 | 9.6 |
| Phillips | 56 | 0 | 1 | 16 | 17 | 17 | 4 | 1 | 0 | 0 | 11.6 |
| Pottawatomie | 368 | 0 | 6 | 47 | 117 | 132 | 55 | 11 | 0 | 0 | 14.3 |
| Pratt | 114 | 0 | 7 | 22 | 41 | 28 | 15 | 1 | 0 | 0 | 12.4 |
| Rawlins | 25 | 0 | 1 | 5 | 10 | 6 | 3 | 0 | 0 | 0 | 9.8 |
| Reno | 663 | 1 | 40 | 172 | 205 | 169 | 71 | 5 | 0 | 0 | 10.8 |
| Republic | 59 | 0 | 2 | 13 | 18 | 13 | 12 | 1 | 0 | 0 | 12.7 |
| Rice | 103 | 0 | 4 | 28 | 37 | 20 | 11 | 2 | 1 | 0 | 11.0 |
| Riley | 724 | 0 | 24 | 142 | 241 | 219 | 85 | 10 | 1 | 2 | 10.0 |
| Rooks | 53 | 0 | 1 | 15 | 17 | 14 | 6 | 0 | 0 | 0 | 11.0 |
| Rush | 27 | 0 | 0 | 8 | 9 | 8 | 1 | 1 | 0 | 0 | 9.1 |
| Russell | 65 | 0 | 1 | 12 | 22 | 21 | 8 | 1 | 0 | 0 | 9.7 |
| Saline | 591 | 0 | 25 | 146 | 193 | 157 | 59 | 10 | 1 | 0 | 11.0 |
| Scott | 69 | 0 | 5 | 21 | 25 | 11 | 7 | 0 | 0 | 0 | 13.4 |
| Sedgwick | 6,514 | 3 | 365 | 1,449 | 2,011 | 1,740 | 809 | 132 | 4 | 1 | 12.4 |
| Seward | 390 | 1 | 32 | 103 | 132 | 77 | 33 | 12 | 0 | 0 | 17.9 |
| Shawnee | 1,957 | 0 | 126 | 433 | 595 | 517 | 234 | 47 | 4 | 1 | 11.0 |
| Sheridan | 28 | 0 | 2 | 7 | 11 | 4 | 3 | 1 | 0 | 0 | 11.3 |
| Sherman | 79 | 0 | 1 | 20 | 25 | 21 | 12 | 0 | 0 | 0 | 13.4 |
| Smith | 42 | 0 | 0 | 7 | 15 | 13 | 7 | 0 | 0 | 0 | 11.7 |
| Stafford | 42 | 0 | 5 | 8 | 12 | 14 | 2 | 1 | 0 | 0 | 10.4 |
| Stanton | 16 | 0 | 1 | 4 | 6 | 3 | 1 | 1 | 0 | 0 | 7.8 |
| Stevens | 59 | 0 | 1 | 19 | 15 | 16 | 6 | 2 | 0 | 0 | 11.1 |
| Sumner | 220 | 0 | 10 | 58 | 85 | 48 | 17 | 2 | 0 | 0 | 9.8 |
| Thomas | 120 | 0 | 2 | 26 | 41 | 37 | 11 | 2 | 1 | 0 | 15.2 |
| Trego | 28 | 0 | 1 | 5 | 9 | 9 | 4 | 0 | 0 | 0 | 10.0 |
| Wabaunsee | 81 | 0 | 3 | 21 | 17 | 21 | 13 | 6 | 0 | 0 | 11.6 |
| Wallace | 24 | 0 | 0 | 1 | 12 | 7 | 3 | 1 | 0 | 0 | 15.9 |
| Washington | 77 | 0 | 1 | 9 | 28 | 28 | 10 | 0 | 1 | 0 | 14.0 |
| Wichita | 37 | 0 | 0 | 6 | 13 | 11 | 7 | 0 | 0 | 0 | 17.8 |
| Wilson | 77 | 0 | 1 | 18 | 27 | 21 | 7 | 3 | 0 | 0 | 9.0 |
| Woodson | 25 | 0 | 5 | 4 | 8 | 5 | 3 | 0 | 0 | 0 | 8.1 |
| Wyandotte | 2,310 | 4 | 174 | 562 | 696 | 541 | 275 | 56 | 2 | 0 | 13.8 |
| n.s.‡ | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | n/a |

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Age-Group of Mother

| County | Total | Age-Group of Mother | | | | | | | | | Rate† | |
|-------------------------|--------|---------------------|-------|-------|-------|-------|-------|-------|-----------|------|-------|--|
| | | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45 & Over | n.s. | | |
| Peer Group | | | | | | | | | | | | |
| Frontier | 1,250 | 0 | 55 | 294 | 433 | 321 | 127 | 19 | 1 | 0 | 11.4 | |
| Rural | 2,733 | 1 | 120 | 633 | 946 | 689 | 291 | 49 | 4 | 0 | 11.2 | |
| Densely - Settled Rural | 5,482 | 3 | 353 | 1,285 | 1,816 | 1,351 | 545 | 126 | 3 | 0 | 12.4 | |
| Semi-Urban | 5,463 | 3 | 256 | 1,341 | 1,828 | 1,372 | 582 | 72 | 7 | 2 | 12.0 | |
| Urban | 19,766 | 8 | 831 | 3,428 | 5,715 | 6,181 | 3,061 | 512 | 28 | 2 | 11.7 | |

* Based on 2021 births registered by April 1, 2022

† Rates are per 1,000 population.

‡ Some records without valid county data may be deleted from the final history file, or may be assigned to a Kansas county based on other address information in the record.