

# **Kansas**

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## **Adequacy of Prenatal Care Utilization Index Kansas, 2003**



# **Research Summary**

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# **Adequacy of Prenatal Care Utilization Index**

The Kansas Department of Health and Environment (KDHE) annually publishes an Adequacy of Prenatal Care Utilization (APNCU) Index, utilizing information readily available on the Kansas birth certificate (number of prenatal care visits, month prenatal care began, and gestational length of pregnancy). The APNCU Index combines information on the adequacy of initiation of prenatal care and the adequacy of received services to characterize adequacy of pregnancy-related health services provided to an expectant mother between conception and delivery. Prenatal care has long been endorsed as a major means to identify and reduce the risks of bearing infants who are low birth weight, are stillborn, or die within the first year of life. Therefore, the APNCU categorizes care as inadequate, intermediate, adequate or adequate plus in an attempt to measure progress toward reducing such risks. The index does not assess quality of the prenatal care that is delivered, only its utilization.

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# KANSAS ADEQUACY OF PRENATAL CARE UTILIZATION (APNCU) INDEX

## I. Month prenatal care began (Adequacy of Initiation of Prenatal Care)

Adequate Plus: 1<sup>st</sup> or 2<sup>nd</sup> month

Adequate: 3<sup>rd</sup> or 4<sup>th</sup> month

Intermediate: 5<sup>th</sup> or 6<sup>th</sup> month

Inadequate: 7<sup>th</sup> month or later, or no prenatal care

## II. Proportion of the number of visits recommended by the American College of Obstetricians and Gynecologists (ACOG) received from the time prenatal care began until delivery (Adequacy of Received Services)

Adequate Plus: 110% or more

Adequate: 80% - 109%

Intermediate: 50% - 79%

Inadequate: less than 50%

## III. Summary Adequacy of Prenatal Care Utilization Index

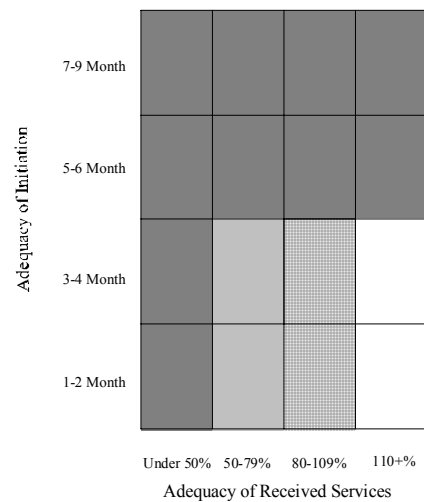
Adequate Plus: Prenatal care begun by the 4<sup>th</sup> month and 110% or more of recommended visits received

Adequate: Prenatal care begun by the 4<sup>th</sup> month and 80% - 109% of recommended visits received

Intermediate: Prenatal care begun by the 4<sup>th</sup> month and 50% - 79% of recommended visits received

Inadequate: Prenatal care begun after the 4<sup>th</sup> month or less than 50% of recommended visits received

Adequacy of Prenatal Care Utilization Index Matrix



**NOTE:** The APNCU Index requires the use of the following data elements reported on the live birth certificate: number of prenatal care visits, month prenatal care began, and gestational length of pregnancy.

**APNCU Reference:** Kotelchuck M. An evaluation of the Kessner Adequacy of Prenatal Care Index and a proposed Adequacy of Prenatal Care Utilization Index. *American Journal of Public Health*, 1994;84:1414-1420.

**Source:** Children & Families Section, Bureau for Children, Youth, and Families, Kansas Department of Health & Environment, 785-296-1306





Office of Health Care Information, Center for Health & Environmental Statistics, Kansas Department of Health & Environment, 785-296-5644

This product can be found on the Worldwide Web at: <http://www.kdhe.state.ks.us/ches/>

**Adequacy of Prenatal Care Utilization Index  
Kansas Residents\*, 2003**

<b>Adequacy of Initiation</b>	7-9 Month	278	136	208	262
	5-6 Month	74	261	583	794
	3-4 Month	242	1,091	4,673	2,419
	1-2 Month	264	3,129	16,910	7,537
		Under 50%	50-79%	80-109%	110+%
		<b>Adequacy of Received Services</b>			

**Summary Index**

-  Inadequate
-  Intermediate
-  Adequate
-  Adequate Plus

\*Includes only the 38,861 Kansas resident live births for which number of prenatal visits and month care began were reported on the the birth certificate.

Adequacy of Prenatal Care Utilization (APNCU) Index  
By County of Residence  
Kansas, 2003

County of Residence	Live Births*	APNCU Category**								Not Stated
		Adequate Plus		Adequate		Intermediate		Inadequate		
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Kansas.....	38,861	9,956	25.6	21,583	55.5	4,220	10.9	3,102	8.0	492
Allen.....	182	63	34.6	74	40.7	27	14.8	18	9.9	1
Anderson.....	103	36	35.0	55	53.4	7	6.8	5	4.8	0
Atchison.....	221	64	29.0	125	56.6	16	7.2	16	7.2	1
Barber.....	39	5	12.8	23	59.0	2	5.1	9	23.1	0
Barton.....	354	76	21.5	208	58.8	37	10.4	33	9.3	17
Bourbon.....	220	90	40.9	114	51.8	12	5.5	4	1.8	0
Brown.....	127	36	28.3	79	62.2	8	6.3	4	3.2	4
Butler.....	698	127	18.2	478	68.5	55	7.9	38	5.4	6
Chase.....	34	10	29.4	13	38.2	7	20.6	4	11.8	1
Chautauqua.....	38	14	36.8	17	44.7	5	13.2	2	5.3	0
Cherokee.....	263	71	27.0	135	51.3	22	8.4	35	13.3	2
Cheyenne.....	22	2	9.1	9	40.9	9	40.9	2	9.1	0
Clark.....	21	6	28.6	8	38.1	6	28.6	1	4.7	0
Clay.....	81	18	22.2	41	50.6	14	17.3	8	9.9	0
Cloud.....	113	24	21.2	67	59.3	11	9.8	11	9.7	0
Coffey.....	107	39	36.4	58	54.2	6	5.6	4	3.8	1
Comanche.....	12	0	0.0	10	83.4	1	8.3	1	8.3	0
Cowley.....	461	145	31.4	240	52.1	37	8.0	39	8.5	0
Crawford.....	530	255	48.1	216	40.8	27	5.1	32	6.0	4
Decatur.....	28	4	14.3	22	78.6	0	0.0	2	7.1	0
Dickinson.....	209	59	28.3	110	52.6	23	11.0	17	8.1	3
Doniphan.....	76	13	17.1	52	68.4	6	7.9	5	6.6	0
Douglas.....	1,167	376	32.2	575	49.3	147	12.6	69	5.9	62
Edwards.....	39	6	15.4	21	53.8	8	20.5	4	10.3	2
Elk.....	22	7	31.8	12	54.6	1	4.5	2	9.1	0
Ellis.....	359	72	20.1	220	61.3	50	13.9	17	4.7	0
Ellsworth.....	45	10	22.2	28	62.2	4	8.9	3	6.7	0
Finney.....	743	140	18.8	274	36.9	191	25.7	138	18.6	8
Ford.....	705	126	17.9	298	42.3	155	22.0	126	17.8	16
Franklin.....	333	118	35.4	157	47.2	29	8.7	29	8.7	6
Geary.....	609	121	19.9	307	50.4	127	20.8	54	8.9	0
Gove.....	33	8	24.2	17	51.5	3	9.1	5	15.2	0
Graham.....	25	1	4.0	15	60.0	7	28.0	2	8.0	0
Grant.....	139	24	17.3	70	50.3	25	18.0	20	14.4	1
Gray.....	93	13	14.0	46	49.5	20	21.5	14	15.0	2
Greeley.....	6	0	0.0	5	83.3	0	0.0	1	16.7	0
Greenwood.....	81	26	32.1	48	59.2	5	6.2	2	2.5	0
Hamilton.....	40	4	10.0	24	60.0	7	17.5	5	12.5	0
Harper.....	67	14	20.9	41	61.2	6	9.0	6	8.9	2
Harvey.....	431	137	31.8	231	53.6	24	5.6	39	9.0	1
Haskell.....	70	8	11.4	34	48.6	15	21.4	13	18.6	3
Hodgeman.....	31	4	12.9	14	45.2	8	25.8	5	16.1	0
Jackson.....	185	63	34.1	95	51.4	21	11.3	6	3.2	9
Jefferson.....	226	83	36.8	111	49.1	22	9.7	10	4.4	5
Jewell.....	26	7	26.9	16	61.5	1	3.9	2	7.7	0
Johnson.....	7,436	2,334	31.4	4,280	57.6	530	7.1	292	3.9	39
Kearny.....	62	13	21.0	25	40.3	17	27.4	7	11.3	0
Kingman.....	78	17	21.8	48	61.5	5	6.4	8	10.3	0
Kiowa.....	38	5	13.2	22	57.9	9	23.7	2	5.2	0
Labette.....	251	88	35.1	119	47.4	24	9.5	20	8.0	0
Lane.....	22	4	18.2	9	40.9	3	13.6	6	27.3	0
Leavenworth.....	968	306	31.6	488	50.4	107	11.1	67	6.9	2
Lincoln.....	31	8	25.8	20	64.5	2	6.5	1	3.2	0
Linn.....	104	39	37.5	48	46.2	12	11.5	5	4.8	1
Logan.....	31	5	16.1	18	58.1	7	22.6	1	3.2	0

Adequacy of Prenatal Care Utilization (APNCU) Index  
By County of Residence  
Kansas, 2003

County of Residence	Live Births*	APNCU Category**								Not Stated
		Adequate Plus		Adequate		Intermediate		Inadequate		
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Lyon.....	543	140	25.8	313	57.6	28	5.2	62	11.4	14
Marion.....	134	44	32.9	70	52.2	9	6.7	11	8.2	0
Marshall.....	111	25	22.5	54	48.7	22	19.8	10	9.0	4
McPherson.....	341	77	22.6	219	64.2	35	10.3	10	2.9	1
Meade.....	64	15	23.4	29	45.3	8	12.5	12	18.8	4
Miami.....	434	136	31.3	238	54.8	41	9.5	19	4.4	1
Mitchell.....	57	18	31.6	35	61.4	1	1.7	3	5.3	0
Montgomery.....	411	176	42.8	159	38.7	40	9.7	36	8.8	5
Morris.....	61	12	19.7	29	47.5	13	21.3	7	11.5	0
Morton.....	32	5	15.6	13	40.6	3	9.4	11	34.4	3
Nemaha.....	125	33	26.4	64	51.2	19	15.2	9	7.2	6
Neosho.....	212	92	43.4	93	43.9	16	7.5	11	5.2	1
Ness.....	31	7	22.6	14	45.2	5	16.1	5	16.1	0
Norton.....	44	12	27.3	24	54.5	8	18.2	0	0.0	0
Osage.....	187	74	39.6	88	47.0	11	5.9	14	7.5	1
Osborne.....	37	10	27.0	18	48.7	5	13.5	4	10.8	0
Ottawa.....	66	14	21.2	46	69.7	3	4.6	3	4.5	0
Pawnee.....	59	16	27.1	30	50.8	7	11.9	6	10.2	2
Phillips.....	59	16	27.1	30	50.9	10	16.9	3	5.1	2
Pottawatomie.....	283	93	32.9	122	43.1	47	16.6	21	7.4	9
Pratt.....	104	20	19.2	59	56.7	13	12.5	12	11.6	1
Rawlins.....	17	5	29.4	7	41.2	3	17.6	2	11.8	0
Reno.....	801	200	25.0	457	57.0	77	9.6	67	8.4	8
Republic.....	44	10	22.7	27	61.4	3	6.8	4	9.1	0
Rice.....	117	23	19.7	65	55.6	19	16.2	10	8.5	2
Riley.....	896	174	19.4	405	45.2	229	25.6	88	9.8	4
Rooks.....	59	13	22.0	33	55.9	8	13.6	5	8.5	0
Rush.....	37	3	8.1	29	78.4	3	8.1	2	5.4	1
Russell.....	82	14	17.1	43	52.4	16	19.5	9	11.0	0
Saline.....	741	194	26.2	430	58.0	79	10.7	38	5.1	1
Scott.....	65	10	15.4	28	43.1	9	13.8	18	27.7	1
Sedgwick.....	7,436	1,029	13.8	5,184	69.7	632	8.5	591	8.0	132
Seward.....	485	143	29.5	184	37.9	36	7.4	122	25.2	46
Shawnee.....	2,452	890	36.3	1,226	50.0	193	7.9	143	5.8	8
Sheridan.....	26	5	19.2	18	69.2	3	11.6	0	0.0	0
Sherman.....	72	18	25.0	33	45.8	12	16.7	9	12.5	0
Smith.....	36	17	47.2	15	41.7	2	5.6	2	5.5	0
Stafford.....	46	9	19.6	27	58.7	8	17.4	2	4.3	1
Stanton.....	36	9	25.0	16	44.4	5	13.9	6	16.7	0
Stevens.....	76	16	21.1	35	46.0	7	9.2	18	23.7	8
Sumner.....	294	47	16.0	198	67.3	35	11.9	14	4.8	3
Thomas.....	91	16	17.6	57	62.6	13	14.3	5	5.5	0
Trego.....	31	10	32.3	17	54.8	3	9.7	1	3.2	0
Wabaunsee.....	74	27	36.5	38	51.4	6	8.1	3	4.0	0
Wallace.....	21	2	9.5	13	61.9	5	23.8	1	4.8	0
Washington.....	60	21	35.0	32	53.4	5	8.3	2	3.3	0
Wichita.....	38	9	23.7	21	55.3	5	13.1	3	7.9	0
Wilson.....	108	52	48.1	41	38.0	6	5.6	9	8.3	3
Woodson.....	39	17	43.6	16	41.0	3	7.7	3	7.7	0
Wyandotte.....	2,751	594	21.6	1,251	45.5	521	18.9	385	14.0	21

\*Includes only Kansas resident live births for which number of prenatal visits and month care began were reported on the birth certificate.  
Residence data.

Number and Percent of Live Births by Race and Hispanic Origin  
By Adequacy of Prenatal Care Utilization (APNCU) Index  
Kansas, 2003

Race and Hispanic Origin	Live Births*	APNCU Category								Not Stated
		Adequate Plus		Adequate		Intermediate		Inadequate		
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Total.....	38,861	9,956	25.6	21,583	55.5	4,220	10.9	3,102	8.0	492
White.....	34,372	8,953	26.0	19,271	56.1	3,615	10.5	2,533	7.4	429
Black.....	2,723	577	21.2	1,340	49.2	411	15.1	395	14.5	30
American Indian.....	458	134	29.3	226	49.3	41	9.0	57	12.4	12
Asian/Pacific Islander.....	1,203	280	23.3	695	57.8	131	10.9	97	8.0	15
Other NonWhite.....	27	2	7.4	11	40.8	7	25.9	7	25.9	1
Not Stated.....	78	10	n/a	40	n/a	15	n/a	13	n/a	5
Hispanic**.....	5,258	940	17.9	2,485	47.3	949	18.0	884	16.8	159

n/a Not applicable

\*Includes only Kansas resident live births for which number of prenatal visits and month care began were reported on the birth certificate.

\*\*Hispanic origin can be of any race

Residence data.

Source: Center for Health & Environmental Statistics  
Kansas Department of Health and Environment



Number and Percent of Live Births by Birth Weight  
By Adequacy of Prenatal Care Utilization (APNCU) Index  
Kansas, 2003

Birth Weight (Grams)	Live Births*	APNCU Category								Not Stated
		Adequate Plus		Adequate		Intermediate		Inadequate		
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Total.....	38,861	9,956	25.6	21,583	55.5	4,220	10.9	3,102	8.0	492
Under 2,500(Low).....	2,842	1,724	60.7	702	24.7	158	5.5	258	9.1	60
2,500-4,499(Normal)...	35,490	8,125	22.9	20,571	58.0	3,991	11.2	2,803	7.9	429
4,500 and Over(High).	526	107	20.4	310	58.9	71	13.5	38	7.2	3
Not Stated.....	3	0	n/a	0	n/a	0	n/a	3	n/a	0

n/a Not applicable

\*Includes only Kansas resident live births for which number of prenatal visits and month care began were reported on the birth certificate.  
Residence data.

Source: Center for Health & Environmental Statistics  
Kansas Department of Health and Environment