

Kansas

Abridged Life Tables Kansas, 2000



**Research
Summary**

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Kansas Abridged Life Tables, 2000

Introduction

Period (or current) life tables present what would happen to a hypothetical cohort if it experienced throughout its entire life the mortality conditions of a particular period in time. A period life table can be characterized as a snapshot of current mortality experience and shows the long-range implications of a set of age-specific death rates that prevailed in a given year. The most frequently used life table statistic is life expectancy (e_x), which is the average number of years of life remaining for persons who have attained a given age (x).

An abridged or collapsed version of the complete life table can be prepared that shows life table functions for five year rather than single-year intervals. Life expectancy at age 30 (e_{30}) for example, has the same value regardless of whether the age interval is 30-31 years or 30-35 years.

The KDHE Center for Health and Environmental Statistics (CHES) uses an abridged period life table data in calculating years of potential life lost for selected causes of death. Since the 1992 Annual Summary of Vital Statistics, CHES has used 1990 life tables prepared by the Kansas Division of Budget.

Data and Methods

The data used to prepare the 2000 Kansas abridged life tables are final deaths for the year 2000 and final births for 1999 and 2000, as reported by CHES. The 1990 abridged life tables are comprised of final 1990 death data and final birth data from 1989 and 1990. Population data is actual census data for 1990 and 2000. The National Center for Health Statistics provided a spreadsheet used to calculate the values. The spreadsheet takes into account the birth year of the infants that died during the year in question. The spreadsheet also factors in an end value constant that adjusts an abridged life table to be consistent with the adjustments to the mortality curve at the older ages made in the standard table. Abridged life tables were prepared where at least 1,000 Kansas resident deaths occurred. Gene Blobaum of the actuarial firm of Miller and Newberg, Kansas City, Kansas, reviewed the findings and methodology.

Results

Tables 1-5 show abridged life tables for all Kansans, males, females, Blacks and whites. Life expectancy for a Kansas resident born in 2000 was 77.4 years. This is a 0.4 year increase over life expectancy for a Kansas resident born in 1990 (Table 6). The U.S. life expectancy at birth was 76.9 years in 2000.

Life expectancy for males was 74.9 years, increasing 1.4 years from a life expectancy of 73.5 years in 1990 (Table 7). U.S. life expectancy for males was 74.1 years in 2000.

Life expectancy for females was 79.8 years, a decrease of 0.5 years from a life expectancy of 80.3 years in 1990 (Table 8). U.S. life expectancy for females was 79.5 years in 2000. Since life expectancy at birth values reflect the mortality experience of a given year, small decreases may be noted when comparing different years. Such decreases in life expectancy are also noted in national life tables.

Life expectancy for the Kansas white population born in 2000 was 77.2 years. The U.S. white population life expectancy was 77.4 years. Life expectancy for the Kansas black population born in 2000 was 71.2 years. The U.S. black population life expectancy was 71.7 years. The difference in the Kansas life expectancy between the white and black populations was 6.0 years. This compares to a 5.7 year difference between the two populations in the U.S. life expectancy.

The Kansas Division of Budget did not prepare comparable abridged life tables by race for 1990.

References

Anderson RN, Method For Constructing Complete Annual U.S. Life Tables. National Center for Health Statistics. Vital Health Stat 2(129). 1999.

Arias E. United States Life Tables. National Vital Statistics Reports; vol 51 no 3. Hyattsville, MD: National Center for Health Statistics. 2002.

Anderson RN, DeTurk PB. United States Life Tables. National Vital Statistics Reports; vol 50 no 6. Hyattsville, MD: National Center for Health Statistics. 2002.

Center for Health and Environmental Statistics. Natality and mortality data, annual history files (1989-1990,1999-2000). Topeka, KS: Kansas Department of Health and Environment.

U.S. Bureau of the Census. Summary File 1: U.S. population by age race and sex from the census (1990, 2000). Washington, DC: U.S. Department of Commerce. 1991, 2001.

Blobaum G. Miller & Newberg, Inc. Olathe, KS. Personal communication. January 24, 2003.

Anderson RN. National Center for Health Statistics. Hyattsville, MD. Personal communication. October 31, 2002.

Table 1. Abridged Life Table - Both Sexes, Kansas, 2000

Age	Deaths	Population	Proportion dying during age interval	Number living at beginning of age interval	Number dying during age interval	Stationary Population in the age interval	Cumulative person years lived	Life expectancy at beginning of age interval
			nq_x	l_x	$n d_x$	nL_x	T_x	e_x
<1 yrs	266	37,977	0.006728	100,000	673	99,413	7,742,938	77.4
1-4 yrs	64	150,731	0.001697	99,327	169	396,972	7,643,525	77.0
5-9 yrs	25	195,574	0.000639	99,159	63	495,635	7,246,553	73.1
10-14 yrs	49	204,018	0.001200	99,095	119	495,179	6,750,918	68.1
15-19 yrs	163	210,118	0.003871	98,976	383	493,924	6,255,739	63.2
20-24 yrs	171	190,167	0.004486	98,593	442	491,860	5,761,816	58.4
25-29 yrs	164	172,975	0.004729	98,151	464	489,594	5,269,955	53.7
30-34 yrs	167	175,878	0.004736	97,687	463	487,277	4,780,361	48.9
35-39 yrs	297	207,549	0.007129	97,224	693	484,387	4,293,084	44.2
40-44 yrs	434	212,802	0.010146	96,531	979	480,206	3,808,697	39.5
45-49 yrs	563	192,679	0.014504	95,552	1,386	474,293	3,328,491	34.8
50-54 yrs	714	161,468	0.021868	94,166	2,059	465,680	2,854,198	30.3
55-59 yrs	880	121,645	0.035528	92,106	3,272	452,351	2,388,518	25.9
60-64 yrs	1,166	98,608	0.057425	88,834	5,101	431,417	1,936,167	21.8
65-69 yrs	1,625	90,085	0.086301	83,733	7,226	400,598	1,504,750	18.0
70-74 yrs	2,435	85,831	0.132454	76,507	10,134	357,199	1,104,151	14.4
75-79 yrs	3,364	75,125	0.201353	66,373	13,364	298,454	746,953	11.3
80-84 yrs	3,819	53,418	0.303261	53,009	16,075	224,854	448,499	8.5
85+ yrs	8,310	51,770	1.000000	36,933	36,933	223,645	223,645	6.1

Source: US Census Bureau and KDHE Center for Health and Environmental Statistics
 Prepared by the Center for Health and Environmental Statistics

Table 3. Abridged Life Table - Males, Kansas, 2000

Age	Deaths	Population	Proportion dying during age interval	Number living at beginning of age interval	Number dying during age interval	Stationary Population in the age interval	Cumulative person years lived	Life expectancy at beginning of age interval
			nq_x	l_x	$n d_x$	nL_x	T_x	e_x
<1 yrs	149	19,751	0.007327	100,000	733	99,376	7,488,887	74.9
1-4 yrs	35	77,261	0.001810	99,267	180	396,710	7,389,512	74.4
5-9 yrs	12	100,433	0.000597	99,088	59	495,290	6,992,802	70.6
10-14 yrs	31	104,981	0.001475	99,028	146	494,777	6,497,512	65.6
15-19 yrs	120	108,040	0.005538	98,882	548	493,042	6,002,736	60.7
20-24 yrs	129	98,767	0.006509	98,335	640	490,073	5,509,693	56.0
25-29 yrs	122	89,034	0.006828	97,695	667	486,805	5,019,620	51.4
30-34 yrs	119	89,610	0.006618	97,028	642	483,532	4,532,815	46.7
35-39 yrs	178	103,934	0.008527	96,385	822	479,872	4,049,283	42.0
40-44 yrs	274	106,394	0.012794	95,564	1,223	474,761	3,569,410	37.4
45-49 yrs	340	96,544	0.017455	94,341	1,647	467,588	3,094,649	32.8
50-54 yrs	465	81,121	0.028256	92,694	2,619	456,923	2,627,062	28.3
55-59 yrs	530	59,523	0.043551	90,075	3,923	440,568	2,170,139	24.1
60-64 yrs	660	47,566	0.067051	86,152	5,777	416,319	1,729,571	20.1
65-69 yrs	891	41,641	0.101554	80,376	8,162	381,472	1,313,252	16.3
70-74 yrs	1,331	38,309	0.159836	72,213	11,542	332,210	931,780	12.9
75-79 yrs	1,753	31,357	0.245247	60,671	14,879	266,156	599,570	9.9
80-84 yrs	1,827	19,596	0.378050	45,792	17,311	185,679	333,414	7.3
85+ yrs	2,738	14,612	1.000000	28,480	28,480	147,735	147,735	5.2

Source: US Census Bureau and KDHE Center for Health and Environmental Statistics
 Prepared by the Center for Health U.S. Census Bureau

Table 2. Abridged Life Table - Females, Kansas, 2000

Age	Deaths	Population	Proportion dying during age interval	Number living at beginning of age interval	Number dying during age interval	Stationary Population in the age interval	Cumulative person years lived	Life expectancy at beginning of age interval
			nq_x	l_x	$n d_x$	nL_x	T_x	e_x
<1 yrs	117	18,226	0.006091	100,000	609	99,454	7,984,353	79.8
1-4 yrs	29	73,470	0.001578	99,391	157	397,250	7,884,899	79.3
5-9 yrs	13	95,141	0.000683	99,234	68	496,001	7,487,649	75.5
10-14 yrs	18	99,037	0.000908	99,166	90	495,607	6,991,648	70.5
15-19 yrs	43	102,078	0.002104	99,076	208	494,860	6,496,041	65.6
20-24 yrs	42	91,400	0.002295	98,868	227	493,772	6,001,181	60.7
25-29 yrs	42	83,941	0.002499	98,641	246	492,588	5,507,409	55.8
30-34 yrs	48	86,268	0.002778	98,394	273	491,289	5,014,821	51.0
35-39 yrs	119	103,615	0.005726	98,121	562	489,201	4,523,532	46.1
40-44 yrs	160	106,408	0.007490	97,559	731	485,970	4,034,331	41.4
45-49 yrs	223	96,135	0.011531	96,829	1,117	481,351	3,548,361	36.6
50-54 yrs	249	80,347	0.015376	95,712	1,472	474,881	3,067,010	32.0
55-59 yrs	350	62,122	0.027779	94,240	2,618	464,657	2,592,129	27.5
60-64 yrs	506	51,042	0.048368	91,622	4,432	447,033	2,127,473	23.2
65-69 yrs	734	48,444	0.072993	87,191	6,364	420,043	1,680,440	19.3
70-74 yrs	1,104	47,522	0.109781	80,826	8,873	381,949	1,260,397	15.6
75-79 yrs	1,611	43,768	0.168531	71,953	12,126	329,451	878,447	12.2
80-84 yrs	1,992	33,822	0.256688	59,827	15,357	260,743	548,997	9.2
85+ yrs	5,572	37,158	1.000000	44,470	44,470	288,254	288,254	6.5

Source: US Census Bureau and KDHE Ce KDHE Center for Health and Environmental Statistics
Prepared by the Center for Health U.S. Census Bureau

Table 4. Abridged Life Table - Blacks, Kansas, 2000

Age	Deaths	Population	Proportion dying during age interval	Number living at beginning of age interval	Number dying during age interval	Stationary Population in the age interval	Cumulative person years lived	Life expectancy at beginning of age interval
			nq_x	l_x	nd_x	nL_x	T_x	e_x
<1 yrs	33	2,643	0.008663	100,000	866	99,213	7,118,954	71.2
1-4 yrs	14	10,692	0.005224	99,134	518	395,499	7,019,741	70.8
5-9 yrs	2	14,520	0.000688	98,616	68	492,909	6,624,242	67.2
10-14 yrs	10	14,316	0.003487	98,548	344	491,881	6,131,333	62.2
15-19 yrs	14	13,981	0.004994	98,204	490	489,796	5,639,452	57.4
20-24 yrs	30	12,973	0.011496	97,714	1,123	485,761	5,149,657	52.7
25-29 yrs	17	11,265	0.007517	96,591	726	481,138	4,663,895	48.3
30-34 yrs	17	10,941	0.007739	95,864	742	477,468	4,182,758	43.6
35-39 yrs	36	12,818	0.013945	95,123	1,326	472,297	3,705,290	39.0
40-44 yrs	46	12,266	0.018577	93,796	1,742	464,625	3,232,993	34.5
45-49 yrs	70	9,343	0.036772	92,054	3,385	451,806	2,768,369	30.1
50-54 yrs	68	7,209	0.046077	88,669	4,086	433,129	2,316,563	26.1
55-59 yrs	66	5,110	0.062559	84,583	5,291	409,687	1,883,433	22.3
60-64 yrs	79	4,197	0.089885	79,292	7,127	378,640	1,473,747	18.6
65-69 yrs	132	3,678	0.164671	72,165	11,883	331,114	1,095,106	15.2
70-74 yrs	103	3,004	0.157903	60,281	9,519	277,609	763,992	12.7
75-79 yrs	159	2,291	0.295704	50,763	15,011	216,286	486,383	9.6
80-84 yrs	137	1,504	0.370972	35,752	13,263	145,602	270,097	7.6
85+ yrs	241	1,447	1.000000	22,489	22,489	124,495	124,495	5.5
	1,274	154,198						

* Also called Chiang's a_x . This value is the average number of years lived in an interval by those dying in the interval. Often (as in this table), it is assumed that death occurs, on average, in the middle of the interval. Under this assumption, $nax=0.5n$. More precise values can be calculated from a standard table using the following formula: $nax=n-((n * l_x - nL_x)/nd_x)$.

Source: US Census Bureau and KDHE KDHE Center for Health and Environmental Statistics

Prepared by the Center for Health and Environmental Statistics, U.S. Census Bureau

Table 5. Abridged Life Table - Whites, Kansas, 2000

Age	Deaths	Population	Proportion dying during age interval	Number living at beginning of age interval	Number dying during age interval	Stationary Population in the age interval	Cumulative person years lived	Life expectancy at beginning of age interval
			nq_x	l_x	nd_x	nL_x	T_x	e_x
<1 yrs	224	29,532	0.006634	100,000	663	99,426	7,720,337	77.2
1-4 yrs	49	118,848	0.001648	99,337	164	397,019	7,620,912	76.7
5-9 yrs	23	157,703	0.000729	99,173	72	495,684	7,223,893	72.8
10-14 yrs	38	168,989	0.001124	99,101	111	495,225	6,728,209	67.9
15-19 yrs	146	175,247	0.004157	98,989	411	493,918	6,232,984	63.0
20-24 yrs	139	154,861	0.004478	98,578	441	491,785	5,739,066	58.2
25-29 yrs	140	140,276	0.004978	98,136	488	489,461	5,247,281	53.5
30-34 yrs	148	146,713	0.005031	97,648	491	487,011	4,757,820	48.7
35-39 yrs	256	178,749	0.007135	97,157	693	484,050	4,270,809	44.0
40-44 yrs	383	186,840	0.010197	96,463	984	479,858	3,786,759	39.3
45-49 yrs	485	172,424	0.013966	95,480	1,333	474,065	3,306,902	34.6
50-54 yrs	634	145,931	0.021489	94,146	2,023	465,673	2,832,837	30.1
55-59 yrs	802	111,085	0.035458	92,123	3,267	452,449	2,367,163	25.7
60-64 yrs	1,071	90,438	0.057509	88,857	5,110	431,508	1,914,714	21.5
65-69 yrs	1,479	83,513	0.084795	83,746	7,101	400,979	1,483,207	17.7
70-74 yrs	2,308	80,743	0.133390	76,645	10,224	357,667	1,082,227	14.1
75-79 yrs	3,188	71,325	0.201022	66,421	13,352	298,727	724,561	10.9
80-84 yrs	3,651	51,067	0.303267	53,069	16,094	225,111	425,834	8.0
85+ yrs	8,041	49,660	1.000000	36,975	36,975	200,722	200,722	5.4

Source: US Census Bureau and KDHE Center for Health and Environmental Statistics
 Prepared by the Center for Health and Environmental Statistics

Table 6. Abridged Life Table - Both Sexes, Kansas, 1990

Age	Deaths	Population	Proportion dying during age interval	Number living at beginning of age interval	Number dying during age interval	Stationary Population in the age interval	Cumulative person years lived	Life expectancy at beginning of age interval
			nq_x	l_x	$n d_x$	nL_x	T_x	e_x
<1 yrs	325	38,789	0.008369	100,000	837	99,310	7,698,686	77.0
1-4 yrs	65	152,283	0.001706	99,163	169	396,314	7,599,376	76.6
5-9 yrs	49	195,351	0.001253	98,994	124	494,659	7,203,062	72.8
10-14 yrs	42	179,053	0.001172	98,870	116	494,059	6,708,403	67.9
15-19 yrs	149	172,968	0.004298	98,754	424	492,709	6,214,343	62.9
20-24 yrs	156	180,791	0.004305	98,330	423	490,589	5,721,635	58.2
25-29 yrs	188	201,049	0.004665	97,906	457	488,389	5,231,045	53.4
30-34 yrs	215	211,687	0.005065	97,450	494	486,013	4,742,656	48.7
35-39 yrs	262	194,830	0.006701	96,956	650	483,155	4,256,643	43.9
40-44 yrs	273	165,913	0.008193	96,306	789	479,558	3,773,488	39.2
45-49 yrs	387	127,404	0.015073	95,517	1,440	473,986	3,293,930	34.5
50-54 yrs	521	106,911	0.024073	94,077	2,265	464,725	2,819,944	30.0
55-59 yrs	859	103,405	0.040691	91,813	3,736	449,723	2,355,219	25.7
60-64 yrs	1350	105,163	0.062190	88,077	5,478	426,690	1,905,496	21.6
65-69 yrs	1946	101,221	0.091718	82,599	7,576	394,056	1,478,806	17.9
70-74 yrs	2502	83,329	0.139645	75,023	10,477	348,925	1,084,750	14.5
75-79 yrs	3088	67,602	0.204987	64,547	13,231	289,655	735,825	11.4
80-84 yrs	3481	47,993	0.306991	51,315	15,753	217,194	446,169	8.7
85+ yrs	6315	41,832	1.000000	35,562	35,562	228,975	228,975	6.4

Source: US Census Bureau and KDHE KDHE Center for Health and Environmental Statistics
 Prepared by the Center for He U.S. Census Bureau

Table 7. Abridged Life Table - Males, Kansas, 1990

Age	Deaths	Population	Proportion dying during age interval	Number living at beginning of age interval	Number dying during age interval	Stationary Population in the age interval	Cumulative person years lived	Life expectancy at beginning of age interval
	nq_x	l_x	nq_x	l_x	nq_x	nL_x	T_x	e_x
<1 yrs	187	19,991	0.009366	100,000	937	99,249	7,351,522	73.5
1-4 yrs	44	78,231	0.002247	99,063	223	395,808	7,252,273	73.2
5-9 yrs	29	100,184	0.001446	98,841	143	493,846	6,856,465	69.4
10-14 yrs	25	92,251	0.001354	98,698	134	493,155	6,362,618	64.5
15-19 yrs	113	88,825	0.006341	98,564	625	491,258	5,869,463	59.5
20-24 yrs	131	93,745	0.006963	97,939	682	487,991	5,378,205	54.9
25-29 yrs	131	101,494	0.006433	97,257	626	484,722	4,890,213	50.3
30-34 yrs	162	106,305	0.007591	96,632	733	481,325	4,405,491	45.6
35-39 yrs	195	98,434	0.009856	95,898	945	477,128	3,924,166	40.9
40-44 yrs	176	83,642	0.010466	94,953	994	472,280	3,447,039	36.3
45-49 yrs	244	63,210	0.019116	93,959	1,796	465,306	2,974,758	31.7
50-54 yrs	312	52,321	0.029378	92,163	2,708	454,046	2,509,453	27.2
55-59 yrs	553	49,707	0.054121	89,455	4,841	435,174	2,055,407	23.0
60-64 yrs	834	49,894	0.080225	84,614	6,788	406,100	1,620,233	19.1
65-69 yrs	1167	46,289	0.118582	77,826	9,229	366,058	1,214,133	15.6
70-74 yrs	1455	35,389	0.186412	68,597	12,787	311,018	848,075	12.4
75-79 yrs	1665	26,543	0.271124	55,810	15,131	241,221	537,057	9.6
80-84 yrs	1614	16,699	0.389216	40,678	15,833	163,811	295,836	7.3
85+ yrs	2099	11,475	1.000000	24,846	24,846	132,026	132,026	5.3

Source: US Census Bureau and KDHE Center for Health and Environmental Statistics
 Prepared by the Center for Health and Environmental Statistics

Table 8. Abridged Life Table - Females, Kansas, 1990

Age	Deaths	Population	Proportion dying during age interval	Number living at beginning of age interval	Number dying during age interval	Stationary Population in the age interval	Cumulative person years lived	Life expectancy at beginning of age interval
	nq_x	l_x	nq_x	l_x	nq_x	nL_x	T_x	e_x
<1 yrs	138	18,798	0.007313	100,000	731	99,375	8,034,998	80.3
1-4 yrs	21	74,052	0.001134	99,269	113	396,850	7,935,623	79.9
5-9 yrs	20	95,167	0.001050	99,156	104	495,520	7,538,774	76.0
10-14 yrs	17	86,802	0.000979	99,052	97	495,018	7,043,253	71.1
15-19 yrs	36	84,143	0.002137	98,955	211	494,247	6,548,236	66.2
20-24 yrs	25	87,046	0.001435	98,744	142	493,364	6,053,989	61.3
25-29 yrs	57	99,555	0.002859	98,602	282	492,305	5,560,626	56.4
30-34 yrs	53	105,382	0.002512	98,320	247	490,983	5,068,321	51.5
35-39 yrs	67	96,396	0.003469	98,073	340	489,515	4,577,338	46.7
40-44 yrs	97	82,271	0.005878	97,733	574	487,228	4,087,823	41.8
45-49 yrs	143	64,194	0.011076	97,158	1,076	483,102	3,600,595	37.1
50-54 yrs	209	54,590	0.018961	96,082	1,822	475,857	3,117,494	32.4
55-59 yrs	306	53,698	0.028092	94,260	2,648	464,682	2,641,637	28.0
60-64 yrs	516	55,269	0.045616	91,612	4,179	447,614	2,176,955	23.8
65-69 yrs	779	54,932	0.068478	87,433	5,987	422,199	1,729,341	19.8
70-74 yrs	1047	47,940	0.103545	81,446	8,433	386,147	1,307,142	16.0
75-79 yrs	1423	41,059	0.159470	73,013	11,643	335,955	920,995	12.6
80-84 yrs	1867	31,294	0.259583	61,369	15,930	267,021	585,039	9.5
85+ yrs	4216	30,357	1.000000	45,439	45,439	318,019	318,019	7.0

Source: US Census Bureau and KDHE Center for Health and Environmental Statistics
 Prepared by the Center for Health and Environmental Statistics