

Kansas Health Statistics

Kansas Department of Health and Environment – Center for Health and Environmental Statistics – No. 9 May 2001



Birth Risk Factor Analyses for Medicaid and Non-Medicaid Populations

In a number of states, information from birth certificates has been identified as an excellent source of risk factor data for evaluating the health of babies. This population-based data is gathered through the national civil registration process and is used extensively across the country for health assessments.

Staff within the Kansas Department of Health and Environment's Center for Health and Environmental Statistics (KDHE/CHES) and the Kansas Department of Social and Rehabilitation Services' (SRS) Division of Health Care Policy linked 1999 birth certificate and Medicaid data, and evaluated risk factor data for Medicaid and non-Medicaid populations. This work was conducted as part of a grant from the Health Resources and Services Administration (HRSA) and included the evaluation of prenatal and pregnancy experiences in Kansas. The study focuses on differences observed for key public health issues related to live births. Key findings in the preliminary analyses include:

- Over 36 percent of Kansas births in 1999 were designated as "Medicaid births".
- Demographically, more Medicaid mothers are identified as minorities or of Hispanic ethnicity than the non-Medicaid population.
- Data indicate that Medicaid mothers more frequently have low birth weight babies, placing the infant into a high risk category, have shorter gestational periods (<37 weeks), and more often gain less than 15 pounds during pregnancy.
- Medicaid mothers seek prenatal care one third less frequently than their non-Medicaid counterparts. In addition, Medicaid mothers seek prenatal care later in their pregnancies.
- Medicaid mothers have shorter intervals between repeat pregnancies Medicaid clients have repeat pregnancies in less than 17 months, three times more frequently than their non-Medicaid counterparts.
- Data indicate that Medicaid mothers do not finish high school three times more frequently than non-Medicaid mothers. More than two-thirds of Medicaid mothers are less than 24 years of age.
- Approximately 60 percent of Medicaid mothers were not married at the time of the baby's birth, while only 11 percent of the non-Medicaid mothers were not married.
- Medicaid mothers reported smoking 3.5 times more frequently than non-Medicaid mothers. The literature indicates that smoking can contribute to low birth weights, reduced weight gain, and shorter gestational periods.

Birth certificates and the Medicaid claims data do not indicate if a mother has pre-existing variables such as low socioeconomic status; long or short term Medicaid recipient status; previous history of insurance coverage (or no insurance at time of birth); history of documented high risk behaviors; or other environmental risk factors that may confound the data presented here. In addition, much of the data on the birth certificate is self-reported. Presented data provide documentation that Medicaid infants are at greater risk for poorer pregnancy outcomes at birth than the non-Medicaid infants. Additional analyses will be

conducted with linked birth certificate and Medicaid data files to further evaluate the health of Kansas infants and children. These analyses will be used by the Health Care Policy Division of SRS to determine any preventive and/or health promotional activities needed to better serve its clients.

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Redistricting Census Data Released

The US Census Bureau has released population data necessary for redistricting legislative and congressional districts. This data, known as PL 94-171 data, is available in many different forms. The Census Bureau web site's American Factfinder <http://factfinder.census.gov/servlet/BasicFactsServlet> is the ideal way for most individuals to extract information about a particular geographic area of Kansas.

Since the data is used for redistricting, it lacks the level of demographic detail desired by many researchers. The data has breakouts for total population and population over 18 years of age by individual or combination of races and Hispanic ethnicity.

Information on the redistricting process in Kansas can be found at <http://skyways.lib.ks.us/ksleg/KLRD/redistr.htm>. The redistricting of legislative and congressional districts will be finalized in the 2002 legislative session.

Individuals needing more information about the PL 94-171 data than can be obtained through the American Factfinder can either contact the Kansas State Library, the census data center for Kansas, or visit the Missouri Census Data Center (MCDC).

The MCDC, has prepared trend analyses of the 1990 and 2000 Kansas census results using the PL 94-171 data. These analyses, covering county, place, and census tract level population trends, can be accessed at the MCDC Web site at <http://mcdc2.missouri.edu/webprts/pl94trend/>.

Census Data Aggregated to 63 Racial Categories

As a result of the Office of Management and Budget directive for multi-race reporting, Kansas could report themselves in different single- or multi-race groups in the 2000 Census. The Census Bureau aggregated this information into 63 racial categories.

The six single races are: White, Black, American Indian or Alaska Native, Asian, Native Hawaiian and other Pacific Islander, and some other race. The remaining racial groups represent all of the possible combinations of the six

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single categories.

Census takers tabulated 56,496 multi-racial Kansans; 53,344 persons of two races; 2,929 persons of three races; 175 persons of four races; 45 persons of five races; and three persons of all six races. See page 6 for Kansas population by racial groups.

Population data was formerly reported as single-race categories (Table 1). The 2000 Census racial tallies demonstrate just how perplexing the new information will be for public health research. The racial data is reported two ways. One is by single-race category and a multi-race total (Single race column of Table 2). The other tally (shown in the Single & multi-race column of Table 2) distributes an individual among racial categories chosen in either a single category or multi-race group.

Kansas Population 1990		
Population Group	Total Population	Percent
1990 Census Total	2,477,574	100.0
Hispanic or Latino **	93,670	4.0
White	2,231,986	90.0
White: Non Hispanic	2,190,524	88.0
Black	143,076	6.0
Asian or Pac Islander	31,750	1.0
Am. Indian/Alaska Ntv	21,965	1.0
Some Other Race	48,797	2.0

Source: Missouri Census Data Center, US Census Bureau

** Hispanic may be of any race

Table 1

Kansas Population 2000				
Population Group	Total Population		Percent	
	Single Race	Single & Multi-Race*	Single Race	Single & Multi-Race*
2000 Census Total	2,688,418		100.0	
Hispanic or Latino **	188,252		7.0	
White	2,313,944	2,363,412	86.1	87.9
White: Non Hispanic	2,233,997	2,271,436	83.1	84.5
Black	154,198	170,610	5.7	6.3
Asian	46,806	56,049	1.7	2.1
Am. Indian/Alaska Ntv	24,936	47,363	0.9	1.8
Hawaiian or other PI	1,313	3,117	0.0	0.1
Some Other Race	90,725	107,789	3.4	4.0
Total Multiracial	56,496		2.0	

Source: Missouri Census Data Center, US Census Bureau

* Column will not add to 2000 Census Total or 100%

** Hispanic may be of any race

Table 2

The dilemma for researchers is where to assign the multi-race population, representing two percent of the state's population, for calculating population-based rates. More problematic is the fact that vital event data in Kansas is not yet being collected with multi-race group categories. It will be 2003 or later before new vital statistics certificates are implemented collecting race data in the new format. In the interim, calculating population-based rates will be more inconsistent

One approach would be to use the six single race categories with a seventh representing the multi-race category. Since the Center for Health and Environmental Statistics has occasionally had to collapse race groups due to the small number of events in some races, the approach of reporting race statistics for categories of White, Black and Other may be most practical.

The growth in the number of persons who identify themselves as Hispanic requires increased breakouts of vital statistics by Hispanic ethnicity. Since Hispanics may be of any race separate analyses must be performed.

Census figures show that just 42.2 percent of Hispanics identified their race as White. This challenges the validity of

creating race-ethnicity categories of White Non-Hispanic and White Hispanic as a way to calculate population-based rates for the Hispanic population. Such an approach, based on the flawed assumption all Hispanics were White, would miss over half the Hispanic residents of Kansas.

Kansas natality and mortality data contain Hispanic indicators. Using the ethnicity will enable more complete calculation of population-based rates for Hispanic births and deaths.

As this issue of *Kansas Health Statistics* was going to print, the Census Bureau was in the process of releasing Census 2000 demographic profiles. This will provide greater demographic detail on the race and ethnicity of smaller Kansas geographic units.

Greg Crawford
Vital Statistics Data Analysis

Mental Health Conditions Rank High in Children's Hospitalizations

(Editor's Note: For an explanation of the differences between ICD-9CM codes versus DRG codes see Hospital Data: Different Codes Tell Different Stories on page 7)

The February 2001 issue of *Kansas Health Statistics* described children's Top 20 inpatient conditions by Diagnosis-Related Group (DRG), the coding system from which hospitals are paid for services. Surprisingly, mental health conditions occupied approximately 13.2% of the DRGs in the top twenty. Since DRGs represent the system for hospital payment, data were evaluated by using the International Classification of Disease (ICD) system that provides more detailed information about disease conditions.

In evaluating data provided courtesy of the Kansas Hospital Association and its members, ICD categories were grouped according to major body systems and ranked into the top 5 conditions (Table 3). Diseases of the Respiratory System including conditions such as asthma and pneumonia still dominate children's hospitalizations.

Inpatient Conditions by ICD-9 Major Groupings Children Ages 5-17 Years, 1995-1999		
ICD-9 Grouping	Frequency	Percent all Discharges
Respiratory System (460-519)	8,961	18.5
Mental Disorders (290-319)	7,698	15.9
Injury and Poisoning (800-999)	7,584	15.7
Digestive System (520-579)	5,353	11.1
Endocrine, Nutr, Metabolic Diseases (240-279)	3,097	6.4
Infectious & Parasitic Diseases (001-139)	2,521	5.2
Symptoms, Signs, Ill Defined Conditions (780-799)	2,421	5.0
Genitourinary System (580-629)	2,072	4.3
Nervous System & Sense Organs (320-389)	1,458	3.0
Musculoskeletal System (710-739)	1,386	2.9
Blood/Blood-forming Organs (280-289)	1,185	2.5
Skin/Subcutaneous Tissue (680-709)	807	1.7
Congenital Anomalies (740-759)	795	1.6
Neoplasms (140-239)	775	1.6
Circulatory System (390-459)	493	1.0
Pregnancy, Childbirth/Puerperium (630-677)	5	0.0
Other	1,736	3.6
Total	48,347	100.0

Table 3

Injuries and poisonings have traditionally been identified as a major source of morbidity for children. With this new

information, mental disorders have been found to contribute significantly to illness among children. Continued evaluation of these data will enable program managers to better understand the health status of children in Kansas.

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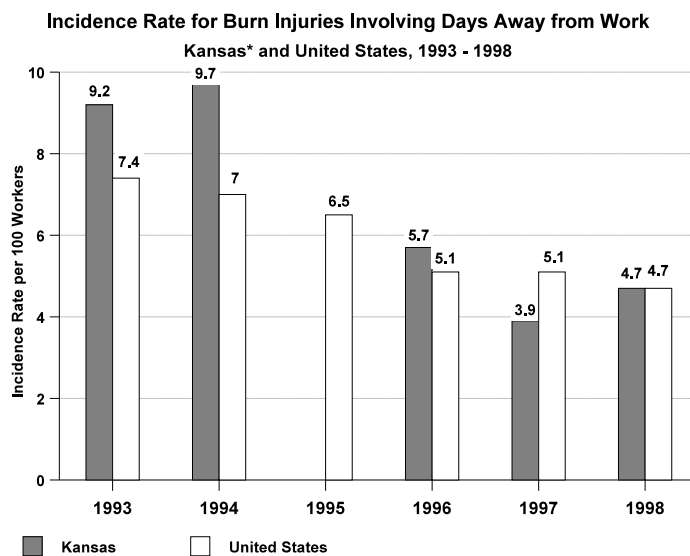
291-3612.

Charlie Sann
Occupational Injury Surveillance

Burn Injuries in the Kansas Workplace

Burn injuries among Kansas workers have mirrored national trends and have been declining since 1994 when 764 burn incidents were reported in Kansas workplaces. In 1998, this total was 417, a 45% decrease.

Compared to 1998 national figures, Kansas equaled the national incidence rate of 4.7 work related burns for every 10,000 workers (Figure 1). However, if some of the industry divisions are compared differences emerge between Kansas and national statistics for the year. Most notable is the difference in the construction industry.



* No data for the year 1995 available for Kansas

Figure 1

The Kansas incidence rate of 14.8 per 10,000 workers was 89.7% higher than the nation (7.8) for work-related burns. In the manufacturing industry, although the overall incidence rate for burns was only slightly higher in Kansas than for the nation, 6.1 and 6.0 respectively, the incidence rate for chemical burns was 100% higher in the Kansas workplace. In Kansas, 4.0 of every 10,000 workers contended with an injury produced by chemical burns. The national incidence rate for chemical burns in the manufacturing industry was 2.0.

Of the individual case characteristics from 1993 to 1998, males tended to incur the majority of burn injuries, but percentages vary from year to year. In 1994, 81.4% of all the burn injuries across Kansas occurred to men. However, in 1996 it was essentially an even distribution, with 51% of burn injuries occurring to men, and 48.7% to women. In 1998, the division was again unevenly weighted, men with 86% of all burn related accidents, and women the remaining 14%.

If you desire further information about the statistics in this article, or other work-related injury and illness statistical summary data, send your request to the Office of Health Care Information, Landon State Office Building, 900 SW Jackson, Suite 1002 North, Topeka, Kansas, 66612-1290. You may also make requests or inquiries by phone, 785-296-1058, or by fax, 785-

Suicide Study Released

The suicide mortality rate for Kansans aged 15 to 24 has grown to the extent that suicide was the second leading cause of death for that age-group in 1998. This finding is contained in a Kansas Department of Health and Environment (KDHE) research summary "Suicides, Kansas, 1989-1998."

The study, authored by KDHE's Center for Health and Environmental Statistics (CHES), characterizes the 3,108 suicide deaths reported between 1989 and 1998. A copy of the study is at <http://www.kdhe.state.ks.us/ches/Suicides8998.pdf>

Kansas has seen a shift in suicide death rates among age groups over time. In a comparison of two five-year periods, 1981-1985 and 1994-1998, the highest, statistically significant increase occurred in the 15-24 year-old age-group (Table 4).

Ages	1981-1985			1994-1998		
	Total	Male	Female	Total	Male	Female
All Ages						
Rate	12.9	20.9	5.3	12.3	20.5	4.2
Number	1,431	1,127	304	1,583	1,307	276
5-14						
Rate	0.8	1.2	0.2	1.3	2.0	0.5
Number	13	11	2	25	20	5
15-24						
Rate	11.7	19.1	3.9	15.4	25.9	4.2
Number	245	205	40	286	248	38
25-34						
Rate	16.7	26.2	6.9	17.1	28.9	5.2
Number	340	271	69	311	264	47
35-44						
Rate	13.5	20.7	6.4	16.6	26.9	6.2
Number	189	144	45	348	284	64
45-54						
Rate	17.7	25.4	10.2	13.6	21.2	6.2
Number	197	139	58	207	159	48
55-64						
Rate	14.9	23.7	6.9	11.2	16.9	6.0
Number	168	127	41	116	84	32
65-74						
Rate	16.6	31.0	5.4	12.6	23.8	3.4
Number	146	119	27	115	98	17
75+						
Rate	18.7	45.1	4.7	20.2	48.2	4.5
Number	133	111	22	174	149	25

* Rate per 100,000 population

Table 4

The suicide mortality rate for individuals aged 15-24 increased 31.6% over two five-year time periods. The next highest rate of increase occurred to Kansans aged 35-44, 23.0%.

Kansas suicide mortality rates are increasing at a time when nationally the rate is declining. The Kansas rate increased 2.6 percent between 1997 and 1998, while the national rate fell 1.9 percent.

Guns continue to be the most common method of suicide for males and females, accounting for almost 64 percent (63.9) of all suicide deaths in the ten year period.

The study did not find a difference in suicide mortality rates in any age group between urban counties and rural counties. Rural counties were defined as those having less than 40 persons per square mile.

A copy of the suicide report can be obtained by contacting the Office of Health Care Information at 785-296-8627 or through the Center's web site: <http://www.kdhe.state.ks.us/ches/>. County level suicide data can be obtained through the Center's Kansas Information for Communities interactive data system, <http://kic.kdhe.state.ks.us/kic/>.

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Abortion Report Issued

The Center for Health and Environmental Statistics released its preliminary analysis of 2000 abortion reports in late March. A total of 12,323 abortions were reported to the Center: 5,971 occurred in Kansas to out-of-state residents, 6,254 occurred in Kansas to in-state residents, and 98 occurred out-of-state to Kansas residents.

The number of procedures performed decreased by almost one percent (.98%) compared to 1999. The number of women aged 15-19 obtaining abortions decreased 8.3%, while the number of women 30-34 years of age receiving abortions increased 6.8%.

While there were no major changes in the racial makeup of the women obtaining abortions, the number of women of Hispanic origin increased by 86.1% over 1999 figures. Women of Hispanic origin obtained 7.8% of all abortions reported to the Center in 2000 (Table 5).

Abortions in Kansas, 2000		
	N	Percent
<i>Residence</i>		
Total Reported	12,323	100.0
In-state residents	6,352	51.5
Out-of-state residents	5,971	48.5
<i>Age Group</i>		
Under 15 years	102	0.8
15-19 years	2,412	19.6
20-24 years	4,204	34.1
25-29 years	2,681	21.8
30-34 years	1,605	13.0
35-39 years	980	8.0
40-44 years	321	2.6
45 years and over	18	0.1
<i>Hispanic Origin</i>		
Hispanic	960	7.8
Non-Hispanic	11,363	92.2
<i>Marital Status</i>		
Married	2,433	19.8
Unmarried	9,852	80.2
Not Stated *	38	n.a.
<i>Weeks Gestation</i>		
Less than 9 weeks	7,226	58.7
9-12 weeks	3,059	24.9
13-16 weeks	854	6.9
17-21 weeks	525	4.3
22 weeks & over	639	5.2
Not Stated *	20	n.a.

* Patient refused to provide information
Table 5

Over four out of five abortions occurred to women who were not married (80.2%). Over 83% of the procedures performed (83.6%) were at 12 weeks or less gestation.

The Center's preliminary report of 2000 abortions is available at <http://www.kdhe.state.ks.us/ches/> or by calling the Office of Health Care Information at 785-296-8627.

Office of Health Care Information

Dynamics of HealthWave and Medicaid Enrollment

The Kansas Health Institute has prepared an issue brief on its evaluation of the Kansas HealthWave, the State Children's Health Insurance Program for low-income families.

KHI researchers found that the turnover among HealthWave and Medicaid enrollees is significant, limiting the growth in the number of publicly-insured children. The researchers determined that while the program had been envisioned as a way to reach new working class families not previously served by assistance programs, many HealthWave families have prior experience with Medicaid.

About one-third of children leaving HealthWave each month transfer into the Medicaid program. The Institute reports the insurance status of the remaining two-thirds is unknown and those children are at increased risk of being uninsured.

KHI concludes that "the high rate of enrollee flux into, out of, and between HealthWave and Medicaid, suggests that system streamlining and integration could improve children's ability to receive necessary and continuous health care."

A copy of Issue Brief, number 11, can be obtained by contacting the Kansas Health Institute, 785-233-5443.

Kansas Health Institute

Heart Disease in Kansas

Although heart disease mortality has been declining for over 20 years (Figure 2), it continues to kill more Kansans each year than any other disease. Of the 23,928 Kansans who died in 1998, 7,164 (29.9%) died from heart disease¹.

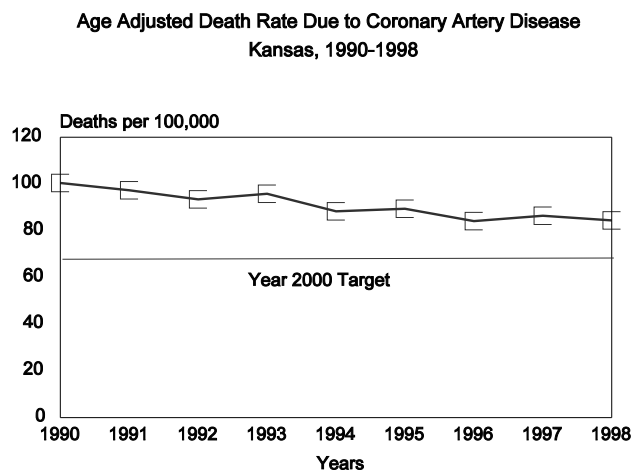


Figure 2

Healthy Kansans Objective: Reduce deaths due to coronary artery disease to no more than 65/100,000.

Current Status: 84.4/100,000 (1998)

CDC Wonder & KDHE Center for Health and Environmental Statistics
Rates adjusted to 1940 standard population

Three-fourths of the heart disease deaths result from cholesterol plaques clogging the small blood vessels which feed the heart (coronary artery disease [CAD])². Blockage of one of these blood vessels is the most common cause of a heart attack.

Approximately 50,000 Kansans currently have known or suspected CAD³, and acute care for this illness results in over 17,000 hospital admissions in Kansas annually⁴ at an estimated direct health care cost of \$700 million^{2,3}.

In addition to being an effective killer, heart disease causes substantial disability. Of the approximately 350,000 Kansans who are limited in their activity due to an impairment or health problem, 30,000 (8%) identify heart disease as the primary cause of the activity limitation⁵.

Although not all risk factors for the development of heart disease have been identified, many are known. The most important known factors are: 1) advanced age, 2) male gender or post-menopausal female, 3) elevated serum cholesterol, 4) high blood pressure, 5) diabetes mellitus, 6) early age onset of CAD in a close relative, 7) tobacco smoking, and 8) lack of physical activity⁶.

Overweight is another important risk factor for heart disease; the prevalence of overweight in Kansas has increased sharply in the last few years (Figure 3). However, it is unknown whether the risk is mediated entirely through its contribution to other risk factors (e.g. diabetes, high blood pressure and high cholesterol). All four of the risk factors identified in the Healthy Kansas 2000 process as high priority (nutrition, physical activity, tobacco use, and impaired access to preventive care) are important contributors to premature morbidity and mortality due to heart disease.

Prevalence of Overweight Among Kansans, 1992-1998

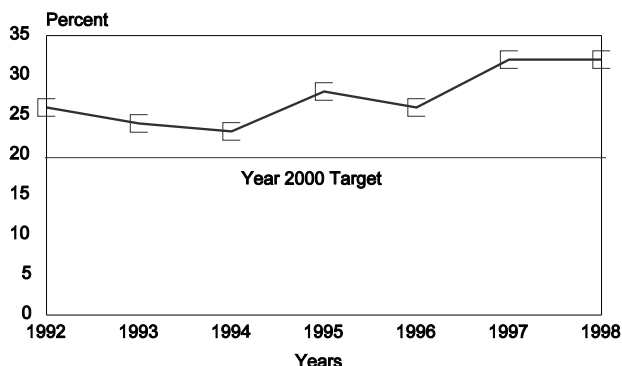


Figure 3

Healthy Kansas Objective: Decrease to 20% the proportion of adult Kansans who are overweight.

Current Status: 32% (1998)

Kansas Behavioral Risk Factor Surveillance System

African Americans in Kansas have consistently had higher rates of heart disease mortality than the general population¹ (Figure 4). The reasons for this higher disease burden among African-Americans are not known. Certainly some of the risk factors which contribute to the development of heart disease (e.g., diabetes, hypertension, overweight) are more prevalent among African-American populations than in the general Kansas population, as are some societal risk factors (e.g., access to care, low socioeconomic status).⁵

Although heart disease mortality has been decreasing for several decades, some heart disease risk factors are demonstrating unfavorable trends. For example, the proportion

Age Adjusted Death Rate Due to Coronary Artery Disease Among African-Americans, Kansas, 1990-1998

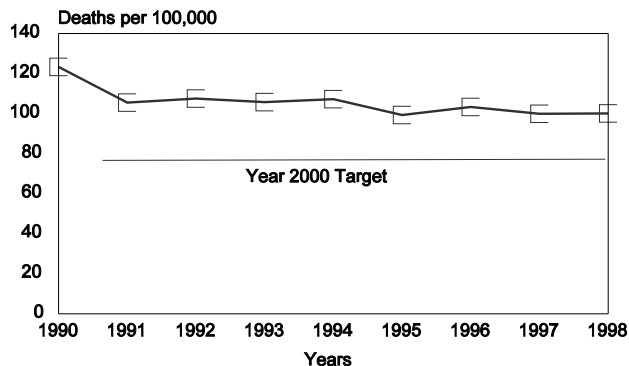


Figure 4

Healthy Kansas Objective: Reduce coronary artery disease deaths among African-Americans to no more than 74/100,000.

Current Status: 100.1/100,000 (1998)

CDC Wonder and KDHE Center for Health and Environmental Statistics Rates adjusted to 1940 standard population

of Kansans who were overweight and the proportion of Kansans who were physically inactive increased significantly between 1992 and 1998.

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User's Guide developed for KIC

The Office of Health Care Information has created a user's guide to assist first-time users of the Kansas Information for Communities interactive data query system. The guide describes how individuals can pose queries to the system, which currently has birth data from 1990 to 1999 and death data from 1990 to 1998. The four-page guide covers the creation of tables and maps through KIC.

The new guide is in the Adobe Acrobat format and can be downloaded at <http://kic.kdhe.state.ks.us/kic/guide.pdf>. An online version of it is at <http://kic.kdhe.state.ks.us/kic/guide.html>.

Interest in KIC has been high. OHCI has received favorable comments on the new system. More enhancements to the system are planned for this summer.

Office of Health Care Information

EMS Board Licensure Trends, 1997-1999

Kansas Emergency Medical Services are a key component in maintaining the health of Kansans by insuring that injured and seriously ill individuals receive immediate medical attention to stabilize and transport to fully equipped treatment facilities. However, the numbers of available EMS attendants and their distribution within the state limit ability of this critical link in the health care system to respond effectively in some cases.

An analysis of the trends in the number of EMS attendants licensed in Kansas during 1997-1999 showed:

- a decline in the number of attendants from 10,353 in 1997 to 9,366 in 1999,
- a reduction of 9.5%, or 987, EMS attendants overall,
- the ratio of persons per EMS attendant increased from 261.2 persons/per EMS attendant in 1997 to 300.0 in 1999, an increase of 14.9%,
- the non-metropolitan counties of the state experienced a greater decline in the number of EMS attendants than the metropolitan counties (13.1% vs 8.3% respectively),
- the ratio of persons per EMS attendant in metropolitan counties was 400.9, higher than the ratio in non-metropolitan counties of 225.4.

The last two bullets exemplify the difficulties in providing emergency services in non-metropolitan areas. First, the ratio of persons per attendant statistic is accounted for by the larger geographic area of responsibility and correspondingly greater travel times required to respond to a call and transport a patient to a treatment facility for attendants in rural areas. Secondly, EMS attendants in non-metropolitan areas more frequently work part-time or on a volunteer basis compared to metropolitan areas (Table 6).

Metropolitan/Non-Metropolitan Work Status

	Metropolitan	Non-Metropolitan
None	23.80%	22.06%
Full Time	57.91%	27.32%
Part Time	4.12%	10.64%
Volunteer	14.17%	40.09%

Table 6

Further analyses of EMS service availability will provide valuable information about this critical health resource.

*David L Bunch
Health Care Data Analysis*

Teen Births Rise

The March 5, 2001 issue of *U.S. News and World Report* stated that "the United States leads the developed world in teen pregnancy," and shows Kansas in the midrange of states, with 12.6 percent of live births to teens in 1997. While the percent of Kansas resident live births to teens rose from 1989 to 1999, from 11.8 to 12.8 percent, the rate of teen births per 1,000 females aged 10 to 19 dropped. According to the *1999 Annual Summary of Vital Statistics*, published by the Center for Health and Environmental Statistics, "the pregnancy rate for females aged 10-19 decreased 4.5 percent from 33.4 pregnancies per 1,000 in 1989 to 31.9 in 1999."

Of the Kansas births to teen mothers over the same time period, there was a decline in the number of births to teens who were already a mother, from 24.1 percent in 1989 to 21.7 percent in 1999.

A related concern of the *U.S. News and World Report* article

was the percent of mothers with less than 12 years of education. From 1989 to 1999, there was an increase in the percent of Kansas births to women with less than 12 years of education, from 17.1 percent in 1989 to 18.7 percent in 1999.

Vital Statistics Data Analysis

Health Insurance Coverage Estimated

The Agency for Healthcare Research and Quality (AHRQ) has estimated 15.8 percent of the civilian noninstitutionalized U.S. Population, about 42.8 million people, lacked insurance during the first half of 1999. The information is contained in the AHRQ report, *Health Insurance Status of the Civilian Noninstitutionalized Population*. Among the non-elderly population 17.9 percent lacked health care coverage.

During the period covered in the report, AHRQ researchers reported the probability that an individual would be uninsured during the period covered in the report was especially high for young adults, ages 19-24 and members of racial and ethnic minorities (especially Hispanics).

Agency for Healthcare Research and Quality

2000 Kansas Population by Racial Category

	Kansas	Percent
Total:	2,688,418	
Population of one race:	2,631,922	97.9%
White alone	2,313,944	86.1%
Black or African American alone	154,198	5.7%
American Indian and Alaska Native alone	24,936	0.9%
Asian alone	46,806	1.7%
Native Hawaiian and Other Pacific Islander alone	1,313	0.0%
Some other race alone	90,725	3.4%
Population of two or more races:	56,496	2.1%
Population of two races:	53,344	2.0%
White; Black or African American	9,970	0.4%
White; American Indian and Alaska Native	17,539	0.7%
White; Asian	5,781	0.2%
White; Native Hawaiian and Other Pacific Islander	613	0.0%
White; Some other race	12,631	0.5%
Black or African American; American Indian and Alaska Native	1,951	0.1%
Black or African American; Asian	661	0.0%
Black or African American; Native Hawaiian and Other Pacific Islander	132	0.0%
Black or African American; Some other race	1,514	0.1%
American Indian and Alaska Native; Asian	242	0.0%
American Indian and Alaska Native; Native Hawaiian and Other Pacific Islander	41	0.0%
American Indian and Alaska Native; Some other race	581	0.0%
Asian; Native Hawaiian and Other Pacific Islander	433	0.0%
Asian; Some other race	1,104	0.0%
Native Hawaiian and Other Pacific Islander; Some other race	151	0.0%
Population of three races:	2,929	0.1%
White; Black or African American; American Indian and Alaska Native	1,213	0.0%
White; Black or African American; Asian	176	0.0%
White; Black or African American; Native Hawaiian and Other Pacific Islander	19	0.0%
White; Black or African American; Some other race	401	0.0%
White; American Indian and Alaska Native; Asian	173	0.0%

	Kansas	Percent
White; American Indian and Alaska Native; Native Hawaiian and Other Pacific Islander	33	0.0%
White; American Indian and Alaska Native; Some other race	325	0.0%
White; Asian; Native Hawaiian and Other Pacific Islander	197	0.0%
White; Asian; Some other race	155	0.0%
White; Native Hawaiian and Other Pacific Islander; Some other race	29	0.0%
Black or African American; American Indian and Alaska Native; Asian	53	0.0%
Black or African American; American Indian and Alaska Native; Native Hawaiian and Other Pacific Islander	5	0.0%
Black or African American; American Indian and Alaska Native; Some other race	51	0.0%
Black or African American; Asian; Native Hawaiian and Other Pacific Islander	20	0.0%
Black or African American; Asian; Some other race	34	0.0%
Black or African American; Native Hawaiian and Other Pacific Islander; Some other race	11	0.0%
American Indian and Alaska Native; Asian; Native Hawaiian and Other Pacific Islander	12	0.0%
American Indian and Alaska Native; Asian; Some other race	11	0.0%
American Indian and Alaska Native; Native Hawaiian and Other Pacific Islander; Some other race	4	0.0%
Asian; Native Hawaiian and Other Pacific Islander; Some other race	7	0.0%
Population of four races:	175	0.0%
White; Black or African American; American Indian and Alaska Native; Asian	89	0.0%
White; Black or African American; American Indian and Alaska Native; Native Hawaiian and Other Pacific Islander	5	0.0%
White; Black or African American; American Indian and Alaska Native; Some other race	28	0.0%
White; Black or African American; Asian; Native Hawaiian and Other Pacific Islander	16	0.0%
White; Black or African American; Asian; Some other race	3	0.0%
White; Black or African American; Native Hawaiian and Other Pacific Islander; Some other race	5	0.0%
White; American Indian and Alaska Native; Asian; Native Hawaiian and Other Pacific Islander	10	0.0%
White; American Indian and Alaska Native; Asian; Some other race	3	0.0%
White; American Indian and Alaska Native; Native Hawaiian and Other Pacific Islander; Some other race	1	0.0%
White; Asian; Native Hawaiian and Other Pacific Islander; Some other race	5	0.0%
Black or African American; American Indian and Alaska Native; Asian; Native Hawaiian and Other Pacific Islander	6	0.0%
Black or African American; American Indian and Alaska Native; Asian; Some other race	2	0.0%
Black or African American; American Indian and Alaska Native; Native Hawaiian and Other Pacific Islander; Some other race	0	0.0%
Black or African American; Asian; Native Hawaiian and Other Pacific Islander; Some other race	1	0.0%
American Indian and Alaska Native; Asian; Native Hawaiian and Other Pacific Islander; Some other race	1	0.0%
Population of five races:	45	0.0%
White; Black or African American; American Indian and Alaska Native; Asian; Native Hawaiian and Other Pacific Islander	42	0.0%

	Kansas	Percent
White; Black or African American; American Indian and Alaska Native; Asian; Some other race	1	0.0%
White; Black or African American; American Indian and Alaska Native; Native Hawaiian and Other Pacific Islander; Some other race	0	0.0%
White; Black or African American; Asian; Native Hawaiian and Other Pacific Islander; Some other race	0	0.0%
White; American Indian and Alaska Native; Asian; Native Hawaiian and Other Pacific Islander; Some other race	2	0.0%
Black or African American; American Indian and Alaska Native; Asian; Native Hawaiian and Other Pacific Islander; Some other race	0	0.0%
Population of six races:	3	0.0%
White; Black or African American; American Indian and Alaska Native; Asian; Native Hawaiian and Other Pacific Islander; Some other race	3	0.0%

Original Source: US Census Bureau PL1. RACE [71] - Universe: Total population. Census 2000 <http://factfinder.census.gov/servlet/DTTable>

Hospital Data: Different Codes Tell Different Stories

As you may know, we are in the information age and information is the way we describe ourselves, our experiences and our lives. Capturing this information in a way that can be understood by others is always a challenge. Coding systems were devised along with the evolution of computers to store information in a short amount of space but still describe an event or condition.

Recently, the Kansas Hospital Association, Health Care Data Governing Board and participating KDHE programs negotiated acquisition of a dataset that includes ICD-9 CM codes and Diagnosis Related Group (DRG) codes for hospital discharges in Kansas. The February, 2001 issue of Kansas Health Statistics described children's inpatient conditions by using DRGs groupings. This follow-up article discusses the advantages and disadvantages of summarizing data by DRGs.

Three levels of codes may be included in hospital discharge data: ICD-9 CM diagnosis and procedure codes, Diagnosis Related Group (DRG) codes, and Major Diagnostic Category (MDC) codes. Understanding how each of the coding systems are assigned may be helpful when considering how to most appropriately analyze or aggregate hospitalization data.

The International Classification of Diseases system (ICD) was developed to describe the reason why a person died. This information was used by public health officials to combat disease. The ICD system was also modified to describe the reasons why a person was sick. Today, the ICD, 9th version or ICD-9 CM, is a complex system used by health care providers and medical records coders to describe health conditions and treatment procedures for quality improvement, research and payment purposes. The ICD-9 CM denotes that the diagnosis or procedure codes are used for hospitalizations not mortality.

Combining events into DRGs (Diagnostic Related Groups) is a method of grouping ICD codes and is used in the payment system for hospitals. These codes establish patient categories which are defined by diagnoses or procedures and modified by age, complications, co-existing conditions or discharge status.

Each DRG groups patients with like ailments and anticipates the level of care required during hospitalization. Under the DRG payment system, a health facility is paid what the hospitalization is expected to cost instead of its actual cost. Because the DRG system is designed primarily as a payment mechanism, the DRG groups may not always give us a precise understanding of

specific clinical conditions.

Subtle changes in ICD-9 CM code assignments, such as inclusion of the specific organism associated with pneumonia, or changing the sequence of the assigned codes may result in different DRG assignments. In addition, DRG categories may vary in their level of clinical specificity; while some are very specific and include only a single clinical condition, others may be much more broad and group together many related conditions. As a result, data aggregated at the DRG level may tell a different story than data aggregated by specific ICD-9 CM codes.

Major Diagnostic Categories (MDCs) may be used to group hospitalization data into even broader categories based on major body system, for example MDC 04: Diseases and Disorders of the Respiratory System, or MDC 08: Diseases and Disorders of the Musculoskeletal System & Connective Tissue.

When analyzing and summarizing hospital discharge data, it is important to consider the trade-offs between ease of use and clinical relevance that may be associated with each of the coding systems, and to select the method that is best suited for the analytic question. Broader classification systems, such as MDCs and DRGs are easier and more efficient to use for data summary than ICD-9 CM codes, but may not provide sufficient information if a specific clinical condition is of interest. ICD-9 CM data provide a more comprehensive way to group and evaluate inpatient health conditions in Kansas. Watch for more public health and population-based analyses of hospital discharge data in future issues.

Note for future use: nosologists in the U.S have moved to ICD-10 for coding deaths. Revisions to create ICD-10 CM for morbidity coding are underway and implementation is pending.

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