

Kansas Health Statistics

Kansas Department of Health and Environment – Center for Health and Environmental Statistics – No. 7 November 2000

New Chair to Health Care Data Governing Board Appointed

Lorne A. Phillips, Ph.D., Director of the KDHE's Center for Health and Environmental Statistics (CHES) and State Registrar, has been appointed the new chair of the Health Care Data Governing Board. Dr. Phillips replaces Senator Sandy Praeger who was instrumental in pushing through legislation that solidified the Board's role in collecting health services utilization data for Kansas. Senator Praeger will continue to support the Board's activities in the legislature.

Dr. Phillips will lead the board as it develops the plan to acquire, analyze and disseminate data from all health care settings for health policy development. Significant issues will face Kansas in the future with regard to patient safety, health care quality, health care professional shortages and creeping costs. Health information gathered by the Governing Board will be critical as Kansas addresses these issues.

Dr. Phillips is a well-respected steward of public health data in the state and is looking forward to the challenges of leading the effort to acquire relevant health information for policy development and program management. Dr. Phillips, State Registrar since 1987, established the Center in 1988. He has overseen the modernization of the collection of vital events data and expanded the analytical capacity of Kansas health care data.

CHES awarded HRSA grant for Health Data Enhancement

The Center for Health and Environmental Statistics (CHES) has been awarded a grant from HRSA that provides funding to improve three critical Kansas data deficits. These deficits were identified by the Joint State Health Needs Assessment process, initiated through a partnership between the Bureau of Children Youth and Families, Office of Local and Rural Health Systems, the Bureau of Epidemiology and Disease Prevention and CHES.

The goal of the grant is to initiate activities that address:

- 1) developing and institutionalizing a Medicaid claims/birth records matching process within KDHE,
- 2) implementing a queryable information system available on the World Wide Web, that can transform health data maintained within KDHE into a decision-support tool for state and local data users and
- 3) improving external cause of injury code (E-code) data reporting in Kansas hospital discharge data from 40 percent to no less than 85 percent in three years.

These initiatives will significantly improve public health information quality, availability and accessibility in Kansas.

*Elizabeth W. Saadi, PhD
Office of Health Care Information*

Pharmaceutical Costs in Kansas, 1997 - 1998

Staff of the Health Care Data section of the Center for Health and Environmental Statistics have completed an analysis of insurance claims data captured by the Kansas Health Insurance Information System (KHIIS). This evaluation identified increased costs associated with pharmaceutical claims between 1997 and 1998 as follows:

Total charge per member month: Analyses indicate that the total charge per member month increased approximately 16

percent during this time period. Charge per member month is a ratio of the sum of the pharmaceutical charges to the sum of the eligible months of coverage in the population of interest. Charge per member month is among the primary indices of the insurance industry as it becomes a basis for the establishment of premiums. Other findings include:

Increased usage: Analyses identified a five percent increase in the number of pharmaceutical claims presented to insurance carriers.

Impact of advertising: Newly patented and heavily advertised pharmaceuticals appear high in the list of those which generate the greatest dollar volume.

High costs associated with specialized medications: The most expensive pharmaceuticals per dispensing include medications for the treatment of multiple sclerosis and infertility. While these drugs approach \$800 to \$1,000 per dispensing, they account for a very small proportion of the total dollar volume generated by pharmaceutical claims.

Effect of brand name pharmaceuticals: Brand name pharmaceuticals account for 61 percent of claims and 85 percent of the dollar volume generated while generic drugs account for 39 percent of claims.

In comparing the top five drugs ranked by dollar volume, cost increased slightly and the top ranking drugs were nearly identical between 1997 and 1998 (Table 1).

Comparison of the Top Five Drugs Ranked by Total Dollar Volume in 1998*					
Medication	1997 Rank	Allowed Charge Per Prescription	1998 Rank	Allowed Charge Per Prescription	% Change
Lipitor	3	\$86.80	1	\$87.08	0.3%
PriLOSEC	2	\$107.83	2	\$112.89	4.7%
Prozac	1	\$90.34	3	\$94.71	4.8%
Premarin	5	\$33.10	4	\$34.29	3.6%
Zoloft	6	\$67.50	5	\$70.41	4.3%

* Figures represent partial claims submissions for 1997 and 1998.

+ Prescription indicates a single dispensing, it does not indicate a standard number of units for a given drug.

Table 1

In conclusion, claim-level data submitted to KHIIS in 1997 and 1998 by companies serving Kansas residents mirror national trends by showing increases in the costs associated with pharmaceutical claims. Some factors found to contribute to the increase in pharmaceutical

costs at the national level appear to be present in these data. For example, brand name drugs account for a significant proportion of the allowed charges for pharmaceutical claims. Some newly patented pharmaceuticals and highly advertised medications appear high on the list of those drugs which generate the greatest allowed charges. Drugs with the

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highest allowed charges per claim account only for a very small proportion of the dollar volume generated by all pharmaceutical claims.

Sam Hopper
Health Care Data

Teen Pregnancy Rates Dropping in Kansas

Kansas' teen pregnancy rate dropped to 13.1 per 1,000 females 10-17 years of age during 1999. The rate is a 5.1 percent decline from 1998, although the decline is not statistically significant.

The pregnancy rate for females ages 10-17 has been dropping since 1995, when the rate was 16.1. The five-year 1995-1999 teen pregnancy rate for Kansas was 14.8 (Table 2).

These and other figures are contained in the *Teenage Pregnancy Report, 1999*, published by the Center for Health and Environmental Statistics. The report, available at <http://www.kdhe.state.ks.us/hci/tnpreg99.pdf>, is prepared annually for the KDHE Bureau of Children, Youth, and Families for use in their teenage pregnancy prevention programs and made available to the public. The report is based on Kansas residence data.

Pregnancies are comprised of live births, fetal deaths, and abortions. The total of all three events is divided by the population of the appropriate age group of women to arrive at a rate.

In 1999, total pregnancies for 10-17 year olds were 2,082: 1,542 live births, 12 fetal deaths, and 528 abortions. Of that total, 1,979 occurred to women ages 15-17 and 103 to women ages 10-14.

Pregnancies to Kansas Women 10-17 Years of Age						
	1995	1996	1997	1998	1999	1995-1999
Number of Pregnancies	2,485	2,409	2,383	2,195	2,082	11,554
Pregnancy Rate	16.1	15.6	15.3	13.8	13.1	14.8

Residence Data
Table 2

Twenty-seven of the state's 105 counties had five-year teen pregnancy rates at or greater than the state rate of 14.8. The lowest five-year rate in the state was in Sheridan County with 2.2 pregnancies per 1,000 females 10-17 years of age. The highest rate was in Wyandotte County with 31.7 per 1,000 females 10-17 years of age. Pregnancy rates for women 10-19 and 15-19 have also decreased in 1999.

While the five-year average rate tends to smooth random variation in vital statistics, one should use caution when comparing rates between counties of significantly different population sizes to avoid misleading conclusions.

Kansas teen pregnancy reports back to 1995 are available at the KDHE web site: <http://www.kdhe.state.ks.us/hci>.

Karen Sommer
Vital Statistics Data Analysis

Congenital Anomalies Leading Cause of Death for Kansas Infants

A special CHES analysis of births and infant deaths between 1995-1998 showed overall, and for infants born to white mothers, congenital anomalies were the leading cause of death. For infants born to black mothers, the leading cause was the group of disorders related to short gestation and low birth weight. SIDS

was the cause of approximately ten percent of infant deaths for all races. While multiple risk factors may contribute to an individual infant death, the five leading causes accounted for over half of the deaths (Table 3) to infants in the 1995-1998 period.

Infant deaths and mortality rates* for leading causes of infant death by race and Hispanic origin of mother: Kansas, 1995-1998								
Cause of death (ICD-9 codes)	All races**		White		Black		Hispanic Origin***	
	N	Rate	N	Rate	N	Rate	N	Rate
Altauses	1,076	721.3	882	663.7	161	1,439.0	84	626.5
Congenital anomalies (740-759)	208	139.4	189	142.2	18	160.9	16	119.3
Disorders related to short gestation and low birth weight (765)	87	58.3	52	39.1	32	286.0	8	59.7
Sudden infant death syndrome (798.0)	106	71.1	86	64.7	17	151.9	10	74.6
Respiratory distress syndrome (770)	70	46.9	54	40.6	12	107.3	5	37.3
Newborn affected by maternal complications of pregnancy (760-761, 763-764)	69	46.3	53	39.9	15	134.1	4	29.8

* Rate per 100,000 live births in specified group

** Total includes those not stated

*** Hispanic origin may be of any race.

Table 3

For all the leading causes of death, mortality rates were higher for infants born to black mothers (1,439.0 per 100,000 live births) than they were overall (721.3). For each cause other than congenital anomalies, the black rate was over twice as high as the overall rate, and for disorders related to short gestation and low birth weight the rate was almost 5 times as high. Mortality rates for infants born to mothers of Hispanic origin were comparable to overall rates for each cause of death.

Overall, the mortality rate was highest for infants of teenage mothers, at 10.1 deaths per 1,000 live births. Rates declined steadily with increasing age of mother to reach a low of 5.6 for the 35-39 year old age-group. Mortality rates for infants born to black mothers (14.4) were the highest of any racial group, but for them the variations by age-group of mother were not statistically significant, with rates ranging from 13.4 for 30-34 and 35-39 year-olds to 14.7 for 20-24 year-olds. Therefore, even though over one-fourth (26.1 percent) of infants born to black mothers were teenagers, that fact did not seem to contribute to the higher infant mortality rate for such births.

For all races combined, the infant mortality rate for infants born in plural births (37.3) was almost six times as high as that for infants born in single births (6.4). A similar ratio appeared for infants born to white mothers, but for infants born to black mothers the difference was not as great. For them, the rate of 47.3 for multiple births was only 3.5 times the rate of 13.4 for single births. However, the narrowed gap is due to an infant mortality rate for single births (13.4) which is significantly higher for blacks than that for any other race.

For infants born to mothers of Hispanic origin the mortality rate for multiple births (59.7) was over eleven times the rate of 5.2 for single births.

Infant mortality rates for various infant and maternal

characteristics were calculated from Kansas' linked birth/death files for 1995-1998. In the data set information from the death certificates for each infant under one year of age in a particular calendar year is evaluated against information from the corresponding birth certificate. For analytical purposes it is especially useful to combine information from the birth and death certificates to utilize many of the additional variables available from the birth certificate.

Karen Sommer
Joy Crevoiserat
Vital Statistics Data Analysis

Kansas Preterm Delivery Rate Ratio

The ratio for Kansas' singleton Preterm Delivery Rate (PDR) between non-Hispanic black women and non-Hispanic white women decreased only slightly between 1990 and 1997. The ratio decreased from 2.0 in 1990 to 1.8 in 1997 (Table 4). The data were published in *Morbidity and Mortality Weekly Report*, published by the Centers for Disease Control and Prevention.

Kansas Preterm Delivery Rate (PDR) and Rate Ratio (RR) among non-Hispanic Black and White Mothers			
Year	White PDR	Black PDR	Black/White RR
1990	76.7	150.7	2.0
1997	82.9	150.9	1.8

Table 4

The ratio is an indicator of racial disparity in birth outcomes, with a value of 1.0 indicating no disparity between groups. National infant mortality rates among non-Hispanic black women are twice those of non-Hispanic white women. Recent studies have attributed two-thirds of this disparity to a higher rate of preterm delivery among blacks. The drop in the Kansas ratio is due to a relatively unchanged rate among blacks and an increase in preterm deliveries among whites.

CDC reports the preterm delivery disparity in the U.S. has narrowed between blacks and whites, but a 1.5 to 2.4 fold excess risk for preterm delivery among blacks remains a public health concern. Eliminating the disparity is a 2010 national goal.

The study used birth certificate data from all reporting jurisdictions. It defined a preterm delivery as between 17 and 37 weeks gestation, calculating that figure by subtracting date of last menses, when known, from date of birth. Birth records with incomplete data were not included in the analysis.

Morbidity and Mortality Weekly Report
US Centers for Disease Control and Prevention

Colorectal Cancer Status and Trends

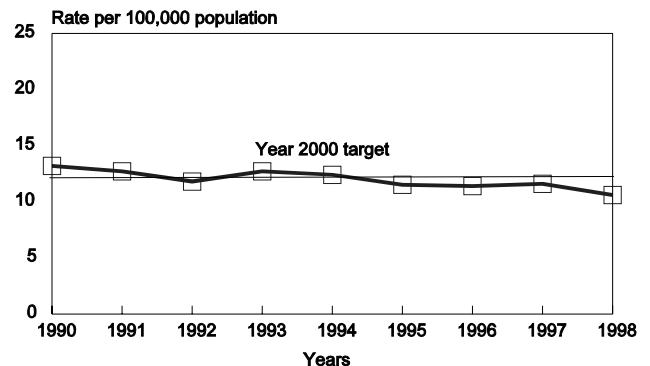
Cancer of the colon and rectum combined (colorectal cancer) is the second leading cause of cancer death in Kansas. Every year more than 1,000 persons in Kansas are diagnosed with colorectal cancer, and approximately 600 persons die due to this disease. Uncommon before age 40, the incidence of colorectal cancer increases rapidly thereafter. Seventy-four percent of newly diagnosed colorectal cancers occur in persons aged 65 years and older. Age, family history, lack of physical activity, high dietary fat intake, and low dietary fiber intake are the important known risk factors for the disease^{3,4}.

Surviving colon cancer is dependent on how advanced the cancer is at the time of diagnosis. If diagnosed and removed while still localized, approximately 90% of persons can be

expected to live five years or more; however, once advanced, it responds poorly to treatment.

In Kansas, the age-adjusted death rate due to colorectal cancer decreased almost 20 percent between 1990 and 1998¹ (Figure 1). The number of new colorectal cancers being diagnosed also appears to have decreased. The reasons for decreasing trends in incidence and mortality are not clearly

Age-Adjusted Death Rates for Colorectal Cancer Kansas 1990-1998



Source: CDC Wonder and Kansas Vital Statistics
Rates adjusted to 1940 standard population

Figure 1

Healthy Kansans Objective: Reduce colorectal cancer deaths to no more than 12.0/100,000 people
Current status: 10.6/100,000 (1998)

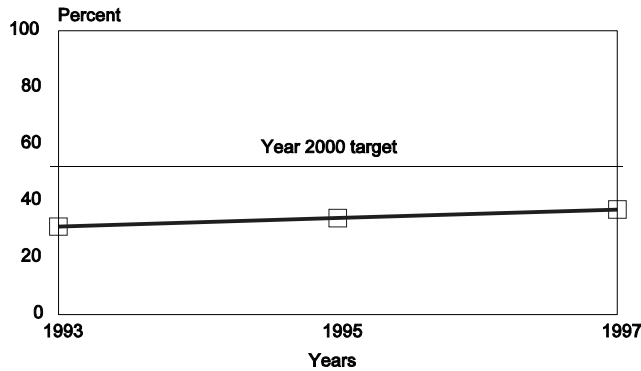
understood. One possible reason for the observed declines in both the number of deaths and the number of new cases of colorectal cancer is early detection and removal of localized colorectal cancers and pre-cancerous growths. Advances in treatment (e.g. newer surgical techniques and adjuvant therapies) and risk prevalence (e.g. change in population dietary patterns and estrogen replacement therapy) may also be contributing to the decreasing rates².

The slow growth rate of most localized colorectal cancers and precancerous growths provides a diagnostic window during which a tumor can be detected and removed. Unfortunately, at an early stage of development most colorectal tumors cause no symptoms. Consequently, the patient has little incentive to seek medical care and the health care provider has little indication of a need to examine the colon⁴. While routine screening using an endoscope (proctosigmoidoscopy) or chemical examination of the stool for hidden blood (fecal occult blood test) is recommended for persons over 50, the optimal frequency is unknown⁶. Although considered safe, endoscopic examination of the colon poses greater risk, cost, and discomfort than screening for breast or cervical cancer. Perhaps as a result of this, routine endoscopic screening is not being widely practiced. In 1997, 69 percent of Kansans ages 50 and over reported that they had not had a fecal occult blood test during the past two years, and 70 percent reported not having proctosigmoidoscopy during the preceding five years (Figure 2).

Although there is clearly a need to develop a more cost-effective and patient-acceptable method of detecting colorectal cancers at an early stage, many premature deaths could be prevented by implementation of current screening guidelines⁵. Strategies for decreasing deaths from colorectal cancer need to address both under-utilization of screening and risk factor reduction.

Steve Pickard, MD

**Percentage of Kansans aged 50 and older who ever had a proctoscopic exam
Kansas 1993-1998**



Source: Behavioral Risk Factor Surveillance System

Figure 2

Healthy Kansans Objective: Increase to at least 50% the proportion of Kansans aged 50 and older who report ever having received a proctoscopic examination.
Current status: 37% (1997)

Denice Curtis, MPH
Bureau of Health Promotion

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Out-of-Wedlock Birth Trends Studied

The National Center for Health Statistics reviewed 60 years of birth data in its recently released report, *Nonmarital Childbearing in the United States, 1940-99*. The report notes that after rising dramatically during the half century from 1940 to 1990, out-of-wedlock childbearing leveled off, or slowed its rate of increase in the 1990s. The NCHS report identifies the main factors contributing to the long-term changes as well as more recent trends. Trends reviewed include marriage patterns, sexual activity, contraceptive use, and abortion.

NCHS notes the number of out-of-wedlock births rose thirteenfold between 1940 and 1994, from 89,500 in 1940 to 1.17 million in 1990. The increase during that period averaged more than five percent per year. The rate of increase has slowed considerably in recent years.

The number of Kansas out-of-wedlock births rose almost eightfold between 1960 and 1999 (Figure 3). The Kansas Out-of-Wedlock Birth Ratio, the ratio of out-of-wedlock births to live births, has increased tenfold between 1961 and 1999. The increase in the Kansas ratio averaged more than seven percent

**Kansas Out-of-Wedlock Birth Ratios
1960-1999**

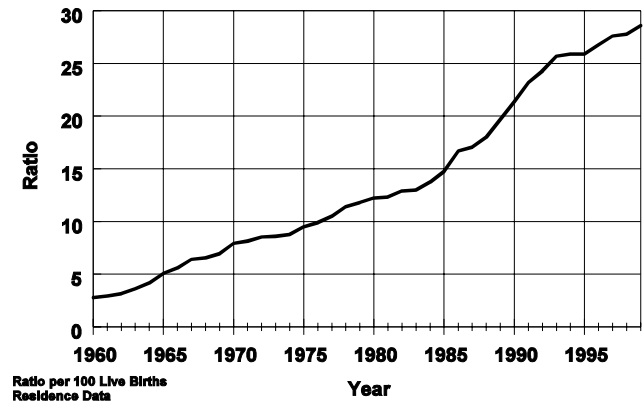


Figure 3

(7.1%) between 1961-1990. The ratio's increase has slowed during the 1990s, averaging 3.8 percent between 1990 and 1999.

National Center for Health Statistics

Census Data Products Forthcoming

The U.S. Census Bureau plans to begin releasing results from the 22nd Decennial Census of Population and Housing in March 2001. The first data product to be released will be a summary file for legislative and Congressional redistricting. The data will include tabulations for the total population and the population 18 years old and over for 63 race categories and Hispanic ethnicity. Detailed tabulations will present data down to the census block level. State and national files will be created. Two versions of the data will be released with one set reflecting corrections for possible overcounts and undercounts.

Several other summary files providing various cross tabulations are planned for release beginning in June 2001 through 2002. A public use microdata file to allow users to create their own customized tabulations is planned for release in 2002 and 2003. Maps and Geographic Products will be released in various stages from 2001 to 2003.

Release of the data is planned through the Internet, CD-ROM and DVD. Printed reports, when issued beginning in 2002, will be available for purchase through the Government Printing Office.

The Census Bureau Web Site is <http://www.census.gov>.

US Census Bureau

Transportation Accidents in the Workplace

Work-related deaths decreased by 17.3 percent from 1998 to 1999, falling from 98 to 81 deaths in Kansas. This represents the lowest state total since the Census of Fatal Occupational Injuries (CFOI) program began collecting data in 1991. CFOI data is collected by the Center for Health and Environmental Statistics' Office of Health Care Information.

The CFOI program gathers information on various aspects of work-related fatalities. The focus of this analysis will be on transportation accidents which constitute nearly half of all work-related deaths in Kansas, types of transportation accidents, and occupations of those involved in these accidents.

Transportation accidents continued to be the leading cause of on-the-job fatalities in Kansas as well as nationwide. In 1999, transportation accidents in Kansas accounted for 49 percent of the work-related deaths, or 40 deaths, which is almost half of the total deaths that occurred while on-the-job. This is a 23 percent decrease from 1998 to 1999.

According to the U.S. Department of Labor, Bureau of Labor Statistics (BLS), transportation accidents accounted for one-fourth of the work-related deaths nationwide and reached the highest level since BLS began collecting work-related fatalities in 1992.

In 1999, highway collision and non-collision fatalities combined accounted for 27 percent of the total transportation accidents, or

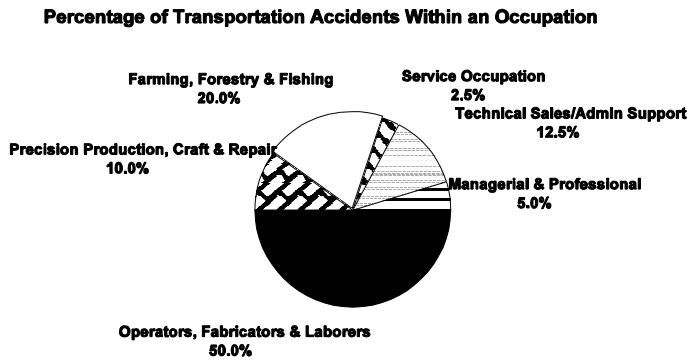


Figure 4

22 deaths in Kansas. Non-collision accidents on the highway doubled from 5 deaths, or five percent of the total deaths in 1998 to 10 deaths, or 12 percent of the total deaths in 1999.

Non-highway accidents and vehicle overturns increased from six percent of the total deaths in 1998 to 9 percent of the total deaths in 1999. Workers being struck by vehicles increased slightly from 1998 with nine percent of the total deaths to 1999 with 10 percent of the total deaths.

While evaluating transportation accidents, it is common to identify the occupation of the injured worker at that time of the accident. In 1999, the occupations with the most transportation accidents in Kansas were operators, fabricators, and laborers with

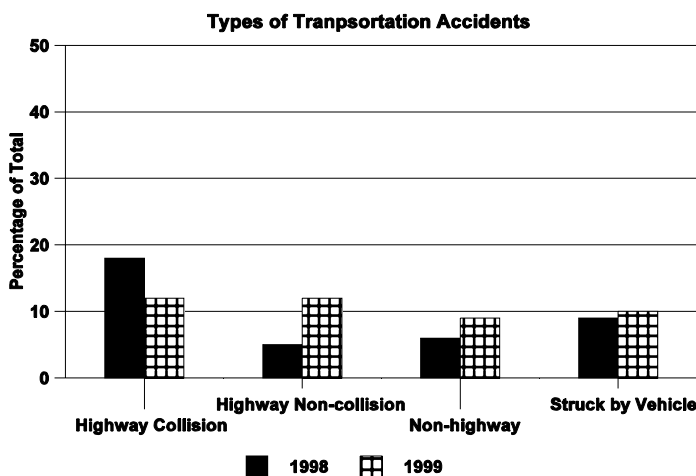


Figure 5

50 percent of the total deaths, or 20 deaths. This occupational group is made up of machine operators, motor vehicle operators, and construction laborers.

Farming, forestry, and fishing had the second most

transportation accidents with 20 percent of the total deaths, or 8 deaths. The remaining occupations involved in transportation accidents accounted for 20 percent of the fatalities with a total of 12 deaths in Kansas for 1999.

For more information about transportation work-related fatalities or other work-related fatalities, contact the Kansas Department of Health and Environment, Office of Health Care Information, 900 SW Jackson, Rm. 1002 N, Topeka, KS, 66612, E-mail rhazelt@kdhe.state.ks.us or call (785) 296-1058.

*Rachell Hazelton
Occupational Injury Surveillance*

Trauma Registry to Collect Health Statistics

In the United States, traumatic injury accounts for more than 140,000 deaths and results in the long term disability of more than 80,000 persons each year. In Kansas, unintentional injury is the leading cause of death for persons 1 - 44 years of age. Studies have shown that many of these deaths are preventable and that the implementation of a statewide trauma system in other states has reduced deaths and improved outcomes from traumatic injury.(1)

In 1998, the Kansas EMS/Trauma Systems Plan was developed through the Kansas EMS/Trauma Planning Project. This was an initial phase of a cooperative effort through the Kansas Department of Health and Environment, the Kansas Board of Emergency Medical Services and the Kansas Medical Society to develop an organized statewide trauma system. As a result of the plan, legislation was enacted in 1999 to establish an advisory committee on trauma and a trauma registry for the state.

KDHE's Office of Local and Rural Health Systems is the lead agency dedicated to assisting in the development and operation of a statewide trauma system. Through continued work by the Advisory Committee on Trauma, plans are now in place to begin a trauma registry data collection coordinated by the Center for Health and Environmental Statistics, with guidance from the HCDGB and its partners.

Trauma is damage of the body resulting from exposure to thermal, mechanical, electrical, or chemical injury. The trauma registry will house applicable data regarding these types of injuries, and through review, analysis, and monitoring will have the ability to report outcome information to assist in improving treatment for those affected by traumatic injury.

Collection of injury information will begin in 2001, and starting with hospitals that already have hospital trauma registries in place, will be entered into the state trauma registry. It is the intent of the Advisory Committee on Trauma that all Kansas hospitals will be reporting trauma data in the future. The outcomes from the data will eventually be reported to the National Trauma Data Bank, for assistance at the national level in trauma care, and to state regional committees, which will be developed through work being done by the Advisory Committee on Trauma. The regional committees will be responsible for using the information to improve their local trauma delivery systems, and for educating their residents on preventable injury.

*Sherry Davis
Health Care Data*

References: Kansas EMS/Trauma Systems Plan, Jan 1998, pg1

Most Frequently Treated Conditions

The Health Care Data Governing Board has released "Most Frequent Conditions Treated in Community Hospitals: The State of Kansas and the Counties, 1994 - 1998." This report, which updates an earlier, similar report for 1993-1994, presents information on Inpatient Conditions grouped by Diagnostic-Related Groups (DRGs) collected by the Kansas Hospital Association.

The purpose of this report is to provide health analysts and policy makers with quick access to the most common reasons for hospitalization, excluding maternity, for the entire state and for each of the counties. The tables contain five-year DRG average frequencies and rates per 100,000 population for each Kansas county and the state. Also, state five-year summary rates per 100,000 for Major Diagnostic Categories (MDCs) are provided. For each county there is a chart summarizing payment source information for the five-year period. Figure 6 summarizes payment sources for hospitalizations in Kansas.

Data for all DRGs that relate to normal newborn deliveries were excluded due to their frequent occurrence in all counties; also, this data is readily available from other sources.

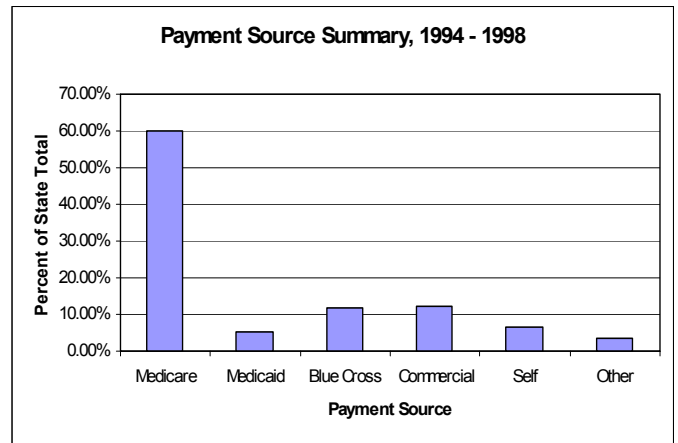


Figure 6

For further information about this report and other data resources, contact The Office of Health Care Information at (785) 296-8627, or visit the Health Care Data Governing Board Web site at <http://www.ink.org/public/hcdgb/khcdpubs.html> for information about this and other publications.

*Don Owen
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