



Kansas Health Statistics

Kansas Department of Health and Environment – Center for Health and Environmental Statistics – No. 8 February 2001

Annual Summary Notes Increase

The Kansas infant mortality rate, the ratio of infant deaths to live births, edged up to 7.3 infant deaths per 1,000 births (Table 1) according to the 1999 *Kansas Annual Summary of Vital Statistics* published by the Kansas Department of Health and Environment.

Selected Vital Event Rates And Ratios
Kansas, 1998-1999

Vital Event	1998	1999
Live Births		
Number.....	38,372	38,748
Rate.....	14.6	14.6
Out-of-Wedlock Births		
Number.....	10,657	11,068
Ratio.....	27.8	28.6
Fetal Deaths		
Number.....	199	175
Rate.....	5.2	4.5
Hebdomadal Deaths (Under 7 days)		
Number.....	132	159
Rate.....	3.4	4.1
Perinatal Period III Deaths (Fetal & Hebdomadal)		
Number.....	331	334
Rate.....	8.6	8.6
Neonatal Deaths (Under 28 days)		
Number.....	172	189
Rate.....	4.5	4.9
Infant Deaths		
Number.....	263	281
Rate.....	6.9	7.3
Maternal Deaths		
Number.....	3	4
Rate.....	0.8	1.0
Deaths		
Number.....	23,928	24,380
Rate.....	9.1	9.2
Marriages		
Number.....	20,403	20,905
Rate.....	7.8	7.9
Divorces and Annulments		
Number.....	10,363	9,926
Rate.....	3.9	3.7
Abortions		
Total Reported.....	11,624	12,445
Kansas Residents.....	6,440	6,416
Out of State Residents.....	5,184	6,029

Table 1 - Residence data presented for births and deaths.
Occurrence data presented for marriages, divorces, and annulments.

State Registrar Dr. Lorne A. Phillips reported 281 resident infant deaths were recorded during a year in which 38,748 resident live births occurred. Dr. Lorne Phillips, who heads KDHE's Center for Health and Environmental Statistics, said the rate change (0.4) from 6.9 in 1998 to 7.3 in 1999 represents a 5.8% increase.

Dr. Phillips also noted the 1999 infant mortality rate for black residents of Kansas was 14.8 per 1,000 births, over twice as high

as the white infant mortality rate of 6.7. The 1998 black infant mortality rate was 9.7.

"The return to the historical level of black infant mortality is disappointing. Public health agencies continue to work hard to address this disparity," said Dr. Phillips.

Of all infant deaths in 1999, 43.8 % were attributed to conditions originating in the perinatal period, 22.4% were attributed to congenital anomalies, 15.7% to sudden infant death syndrome and 18.1% to all other causes.

During 1999 24,380 resident deaths occurred, 20,905 marriages were performed, and 9,926 marriages were dissolved (divorce or annulment).

The number of Kansas resident deaths represented a 1.9% increase from the 1998 total of 23,928. The Kansas crude death rate was 9.2 deaths per 1,000 population. The state's age-adjusted mortality rate, which corrects for differences in the age makeup of Kansas residents and is based on the 2000 population standard, was 8.5 deaths per 1,000 population.

The average age at death of Kansas residents in 1999 was 74.3 years. That is 1.9% higher than the average age at death of 72.9 years in 1989. The average age at death for males was 70.4 years, for females 77.9. The average age at death for blacks was 63.3 years compared to 75.0 for whites.

A long downward trend in Kansas marriages reversed in 1999. The number of marriages performed in 1999 was 20,905, a 2.5% increase over the 20,403 marriages performed in 1998.

Marriage dissolutions continued a decline that began in the early 1990s. The 9,926 divorces and annulments represented a 4.4% decrease compared to the 1998 figure of 10,363 dissolutions.

The Center for Health and Environmental Statistics prepares the 155 page *Kansas Annual Summary of Vital Statistics* as part of KDHE's fundamental responsibility for assessing the health of Kansas residents. The data compiled are used by program managers and policy makers at state and local levels to address health concerns.

The 1999 *Annual Summary* is available in an HTML format at the KDHE Web site, <http://www.kdhe.state.ks.us/hci>. Requests for single, printed copies of the Annual Summary of Vital Statistics should be made to the KDHE Office of Health Care Information at 785-296-8627.

New Data on Child Hospitalizations

Recently, the Kansas Hospital Association (KHA) – on behalf of its members – provided the Health Care Data Governing Board with a complete set of record-level hospital discharge data for the years 1995 - 1999. These data are critical to public health assessments. Preliminary analysis of the age distribution for hospitalizations and reasons children enter the hospital by Diagnostic Related Group (DRG)

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are presented below.

Children aged 0 to 4 comprised 6.9% of the population (for the years 1995 – 1999) but only 4% of hospital cases, while older children made up 19.5% of the population but only 4.2% of all

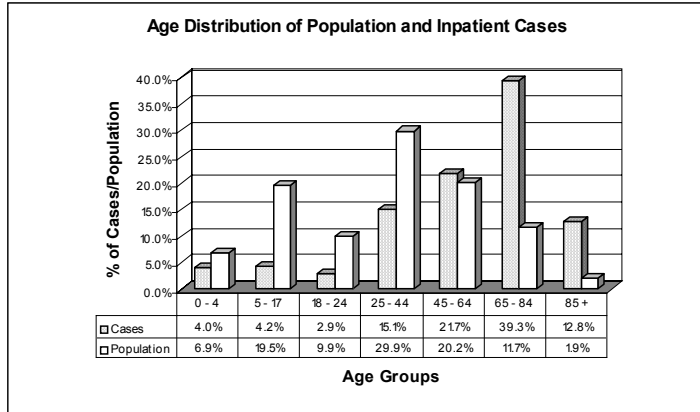


Figure1 hospitalizations (Figure 1).

DRG	DRG Description	Cases	Percent	%Cum
98	Bronchitis & Asthma Age 0-17	8,919	19.2%	19.2%
91	Simple Pneumonia & Pleurisy Age 0-17	8,773	18.9%	38.1%
184	Esophagitis, Gastroent & Misc Digest Disorders Age 0-17	4,035	8.7%	46.8%
298	Nutritional & Misc Metabolic Disorders Age 0-17	3,649	7.9%	54.7%
422	Viral Illness & Fever Of Unknown Origin Age 0-17	2,029	4.4%	59.1%
70	Otitis Media & URI Age 0-17	1,467	3.2%	62.3%
26	Seizure & Headache Age 0-17	1,429	3.1%	65.4%
71	Laryngotracheitis	1,334	2.9%	68.3%
156	Stomach, Esophageal & Duodenal Procedures Age 0-17	812	1.7%	70.0%
322	Kidney & Urinary Tract Infections Age 0-17	730	1.6%	71.6%
417	Septicemia Age 0-17	650	1.4%	73.0%
3	Craniotomy Age 0-17	435	0.9%	73.9%
451	Poisoning & Toxic Effects Of Drugs Age 0-17	390	0.8%	74.7%
108	Other Cardiothoracic Procedures	380	0.8%	75.5%
81	Respiratory Infections & Inflammations Age 0-17	349	0.8%	76.3%
279	Cellulitis Age 0-17	338	0.7%	77.0%
410	Chemotherapy W/O Acute Leukemia As Secondary Diagnosis	304	0.7%	77.7%
100	Respiratory Signs & Symptoms W/O CC	296	0.6%	78.3%
30	Traumatic Stupor & Coma, Coma <1 Hr Age 0-17	244	0.5%	78.8%
475	Respiratory System Diagnosis With Ventilator Support	243	0.5%	79.3%
	[Remaining (Included in Totals) DRGs]	9,614	20.7%	100.0%
TOTALS		46,420	100.0%	

Table 2

For Kansas, the leading reason for hospitalization for children age 0-4 years during 1995-1999 was Bronchitis and Asthma, followed closely by Simple Pneumonia and Pleurisy. Over 38% of children's hospitalizations were due to these conditions.

In children ages 5-17, the DRG labeled Psychoses (includes depressive disorders) was the leading reason for hospitalizations. Additionally, Childhood Mental Disorders and Depressive

Neuroses are reported in the top 20 reasons for hospitalization. Bronchitis and Asthma and Simple Pneumonia and Pleurisy are the second and third reasons for hospitalization in this age-group. Similar statistics are found from Utah <http://hlunix.hl.state.ut.us/hda/databases.htm>). It appears mental health conditions are significant sources for morbidity in youth and further evaluation of these data are warranted.

A note about DRGs: DRGs are codes that are groupings of ICD-9 codes. These codes are grouped to form the DRGs through which hospitals are paid. Further evaluation of the ICD-9 codes presented above will be conducted to further determine the causes for childhood hospitalization.

DRG	DRG Description	Cases	Percent	% Cum
430	Psychoses	3,757	7.8%	7.8%
98	Bronchitis & Asthma Age 0-17	3,620	7.5%	15.3%
91	Simple Pneumonia & Pleurisy Age 0-17	3,407	7.0%	22.3%
184	Esophagitis, Gastroent & Misc Digest Disorders Age 0-17	2,440	5.0%	27.3%
431	Childhood Mental Disorders	1,912	4.0%	31.3%
167	Appendectomy W/O Complicated Principal Diag W/O CC	1,897	3.9%	35.2%
295	Diabetes Age 0-35	1,575	3.3%	38.5%
26	Seizure & Headache Age 0-17	1,469	3.0%	41.5%
298	Nutritional & Misc Metabolic Disorders Age 0-17	1,388	2.9%	44.4%
451	Poisoning & Toxic Effects Of Drugs Age 0-17	1,123	2.3%	46.7%
70	Otitis Media & URI Age 0-17	1,030	2.1%	48.8%
422	Viral Illness & Fever Of Unknown Origin Age 0-17	995	2.1%	50.9%
410	Chemotherapy W/O Acute Leukemia As Secondary Diagnosis	830	1.7%	52.6%
322	Kidney & Urinary Tract Infections Age 0-17	801	1.7%	54.3%
220	Lower Extrem & Humer Proc Except Hip, Foot, Femur Age 0-17	716	1.5%	55.8%
426	Depressive Neuroses	700	1.4%	57.2%
492	Chemotherapy W Acute Leukemia As Secondary Diagnosis	656	1.4%	58.6%
212	Hip & Femur Procedures Except Major Joint Age 0-17	614	1.3%	59.9%
165	Appendectomy W Complicated Principal Diag W/O CC	539	1.1%	61.0%
279	Cellulitis Age 0-17	516	1.1%	62.1%
	Remaining DRGs	18,362	37.9%	100.0%
TOTALS		48,347	100.0%	

Table 3

Further evaluation of these data will involve more analysis using ICD-9 diagnoses.

Don Owen
Health Care Data

Privacy Rules Impact Health Care Providers

Implementation of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) is the subject of much discussion among the health care provider community. HIPAA's first provision restricts denial of health care coverage for pre-existing health conditions. Other provisions in the statute require that electronic bill payment transactions be standardized and that rules for protecting the privacy of patients be adopted.

The Department of Health and Human Services (DHHS) has developed a number of proposed rules to implement HIPAA. Initially, much effort will be needed to implement the transaction standards, but the savings for standardized payment will be realized quickly.

Under the privacy rules, protections for health information are

included and some uses of data require authorization from the patient. Although these provisions allow for the use of health information, it will become more difficult and additional documentation will be necessary to obtain information.

The Health Care Data Governing Board has been following the progress of HIPAA implementation. The Governing Board will sponsor presentations to inform Kansas health care providers, policy makers and program managers about this important national process. For more information about HIPAA, the DHHS website is <http://aspe.os.dhhs.gov/admsimp/>. A summarized version of the privacy regulations can be found at <http://healthprivacy.org> and information on implementing HIPAA is located at <http://www.wedi.org/snip1/>

*Dr Elizabeth W. Saadi
Office of Health Care Information*

Improved Reporting for Abortion Surveillance

The US Centers for Disease Control and Prevention's 1997 Abortion Surveillance summary for the country begins the process of correcting statistical deficiencies of past reports. For years CDC has used occurrence data to calculate state abortion rates and ratios. It used occurrence data instead of the generally accepted residence data because many states, other than Kansas, do not collect abortion data by residence. Because of this occurrence method of tabulation, the resulting rates were artificially higher due to the number of out-of-state residents who obtained abortions in Kansas. Delaware's rates were similarly affected. CDC's Abortion Surveillance – United States, 1997, while reporting occurrence and residence data, began reporting rates and ratios based on the residence data. The CDC report, published in December 2000, is available at <http://www.cdc.gov/>. Work on preparing the preliminary report of abortions performed in Kansas in 2000 will begin in late March. Kansas abortion data for 1999 is available in the 1999 Annual Summary of Kansas Vital Statistics at <http://www.kdhe.state.ks.us/hci/>.

US Centers for Disease Control and Prevention

Protecting Confidential Data

Data confidentiality should be on the mind of every researcher. Keeping subjects' confidentiality protected is important to research results. Breaching confidentiality endangers everyone's research by making data sources unwilling to share data and subjects unwilling to provide accurate information.

The issue has garnered new attention based on the actions of Carnegie Mellon University assistant public policy professor Latanya Sweeney. Professor Sweeney estimated she matched 69 percent of Cambridge, Massachusetts, state employees from health data compiled by an insurance commission and voter registration files based on linking birth dates and zip codes.

While some researchers question whether she could have achieved such a matching rate based on two variables, others – including many who attended the recent National Association of Health Data Organizations annual conference – pointed to the claim as grounds for concern about protecting health data. Regardless, it has focused attention on an issue data sources and data users should be ever mindful of.

The Center for Health and Environmental Statistics (CHES) and the Health Care Data Governing Board (HCDGB) have policies and procedures in place to protect against the misuse of data and prevent the release of identifying information. Data disclosure policies detail the levels of data available and at what level the data can be provided. In general the policies direct that only the variables needed for the research be provided to the data user. Data users are required to enter into data sharing agreements for extended or multiple projects or complete a data request form providing information on the request and whether a peer review board has approved it.

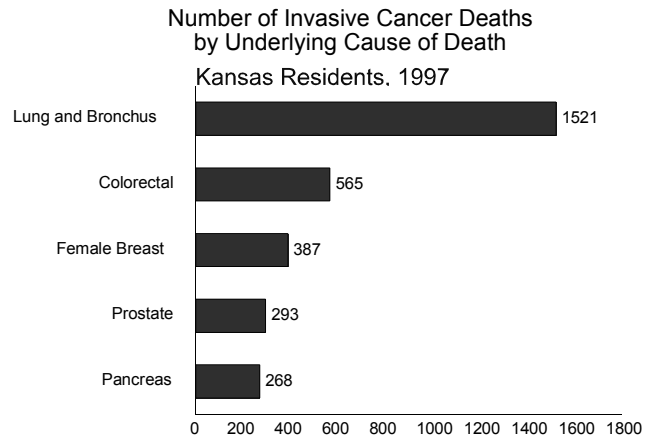
Researchers interested in using Kansas health data

maintained by CHES or HCDGB are encouraged to call the Office of Health Care Information at 785-296-8627.

*Greg Crawford
Vital Statistics Data Analysis*

Lung Cancer: Current Status and Trends

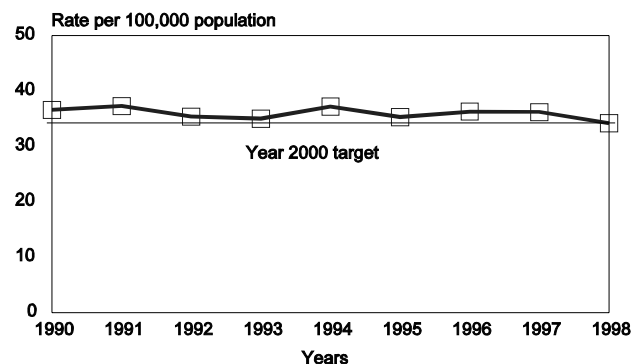
Lung cancer is the leading cause of cancer deaths in Kansas¹ (Figure 2) Although the overall death rates for lung cancer have remained stable (Figure 3), female death rates



Source: Kansas Cancer Registry
Center for Health and Environmental Statistics

Figure 2

Age Adjusted Death Rates for Lung Cancer Kansas 1990-1998



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

Figure 3

Healthy Kansas Objective: Decrease the age-adjusted lung cancer deaths to 34/100,000
Current Status: 34./100,000

have significantly increased during the last decade. Early detection of lung cancer using chest x-ray or examination of sputum for cancer cells has not been shown to decrease mortality². Other approaches to screening, such as computerized tomography (CT) scans and monoclonal antibodies, are being studied. The effectiveness of these approaches have not yet been demonstrated. Only 15% of lung cancers are localized to lung tissue when detected, but even among those with localized disease, fewer than 50% will survive for five years. Survival drops to less than 20% for those with more advanced disease at diagnosis. However, the cause of nearly all lung cancer is known and preventable. Cigarette smoking or passive smoke exposure is believed to cause 90% of all lung cancers.

The risk of developing lung cancer is about 10 times higher for smoking males than for non-smoking males and 5 times

higher for smoking females than for non-smoking females³.

The risk for lung cancer increases markedly if cigarette smoking is combined with other risk factors such as exposure to asbestos³.

Smoking prevention is the most important strategy for reducing the risk of developing lung cancer. The prevalence of smoking among people aged 18 and older in Kansas has

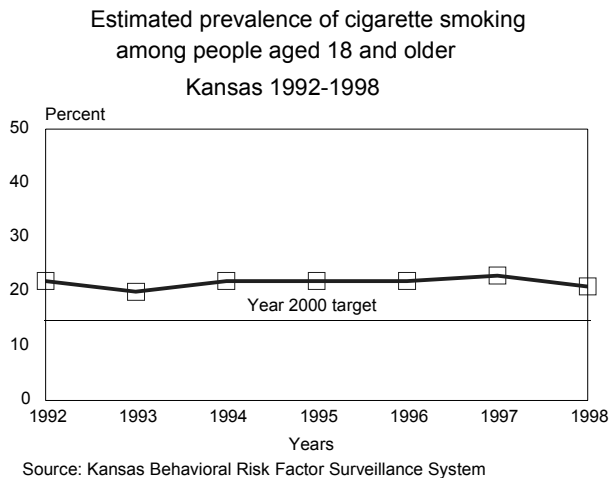


Figure 4
Healthy Kansas Objective: Decrease the prevalence of smoking among people aged 18 and older to 15%
Current Status: 21% (1998)

remained stable for six years (22%)⁴ (Figure.4).

Smoking initiation is a problem of adolescence. Approximately 80% of current and former smokers report beginning to smoke before age 20. National prevalence of smoking among adolescents does not appear to have decreased substantially since the early 1980s⁵ and recent data suggest increasing rates of youth initiation. In Kansas, the proportion of 12th graders who indicated that they have smoked cigarettes in the past 30 days increased from 32% in 1995 to 37% in 1999⁶.

*Steve Pickard, MD and Denise Curtis, MPH
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Lung Cancer and Tobacco Prevention

The Centers for Disease Control and Prevention (CDC) reports 80% of lung and bronchus cancer is caused by cigarette smoking. Former smokers have about half the risk for dying from

lung cancer as do current smokers. CDC also reports that reductions in the smoking rate of a state could reduce lung and bronchus cancer rates within 5 years of the decline in smoking rates.

CDC and the California Department of Health Services studied that state's decline in lung cancer rates compared to the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) program. The results of their analysis indicated that during 1988-1997, age-adjusted lung cancer incidence rates in California declined significantly compared with stable incidence rates for the combined, non-California SEER area of five states and three metropolitan areas.

The study reports California's cancer incidence rate decreased 14.0% during the 10-year period; the rates in non-California SEER regions decreased 2.7%. The decline in incidence rates among men of all ages in the California data was 1.5 times greater than the decline among men in the non-California SEER regions.

CDC notes the difference in the rate of decline in lung and bronchus cancer incidence rates between California and other U.S. regions may be related, in part, to the significant declines in smoking rates as a result of California tobacco control initiatives. California's decline in per capita cigarette consumption has been more rapid than other parts of the country, due primarily to a change in the social acceptability of smoking among California residents. While a direct cause-and-effect relation cannot be determined for the study's findings, CDC says the results suggest that a comprehensive tobacco prevention and education program may also reduce rates of lung and bronchus cancer.

The Kansas Cancer Registry recorded 1,563 new invasive cases of lung and bronchus cancer in 1997, the third highest number of new invasive cases reported that year.

Morbidity and Mortality Weekly Report

Infectious Disease Progress Noted

The Centers for Disease Control and Prevention (CDC) reports Infectious disease deaths declined substantially during the 20th century, sharply reducing infant and child mortality. The decline also contributed to the 29.2-year increase in life expectancy.

The decline in infectious disease deaths has also been seen in Kansas. Deaths to Kansas residents due to infectious diseases, including pneumonia and influenza totaled 1,099 in 1999. This represented 4.5% of all deaths in Kansas. In 1916 the number of deaths that occurred in Kansas due to the same causes totaled 4,388, about 21.9 % of all deaths.

The drop in deaths is due to a number of factors: sewage disposal, water treatment, food safety, organized solid waste disposal, public education about hygiene practices, and antibiotic therapies.

While the number of deaths has been dropping, the infectious disease threat remains. The KDHE Bureau of Epidemiology and Disease Control reported in *Reportable Diseases in Kansas 1999 Summary* that the number of cases of infectious disease reported to the state in 1999 totaled 11,159.

Tuberculosis, once thought to be under control, has become a serious concern in its multi-drug resistant form. Emerging infectious diseases and bioterrorism also concern medical epidemiologists.

CDC and Kansas have responded with electronic reporting systems to enable quicker identification of disease outbreaks, and have prepared for the possibility of bioterrorism.

Morbidity and Mortality Weekly Report

Obesity and C-Section Risk

University of Wisconsin-Milwaukee researchers reviewed 1,900 births at a nurse midwifery practice in Milwaukee, identifying cesarean section as one more obesity-associated complication. Of the births, 100 were cesarean births. Nearly 8% of obese women underwent a cesarean delivery compared with 4% of average-weight women.

The researchers also noted that women who gained excess weight in pregnancy doubled their risk of cesarean section. Of women who were overweight before they got pregnant, 70% gained more than the recommended amount of weight during their pregnancies. Researchers reported other factors also contributed to an increased cesarean section risk: first pregnancy, first delivery, and shortness of height.

Kansas recorded 7, 637 births involving primary and repeat cesarean sections in 1999.

Obstetrics and Gynecology 2001

Health Wave Evaluation

Evaluators reviewing the HealthWave (Kansas Children's Health Insurance Program) report the health status of participating children is improving but still below the state average. The University of Kansas Department of Health Policy and Management and Department of Social and Rehabilitation Services researchers also report children in HealthWave are showing improved access to services.

The evaluators sent a survey to parents/guardians of children enrolled during the first six months of HealthWave.

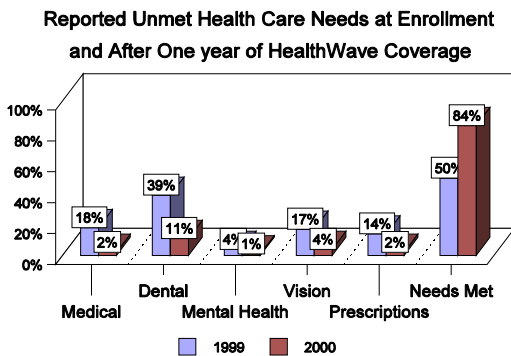


Figure 5

Researchers sent another survey a year later. The sample covers 1,955 children for which both surveys were returned.

The evaluators noted children completing a year in HealthWave appear to have benefitted significantly from the program (Figure 5). In most cases children have been able to obtain needed services. The number reporting any unmet need dropped from 50% to 16% with the highest area of unmet need being dental care.

HealthWave is a state/federal initiative to insure children whose parents can't afford commercial insurance and earn too much to qualify for Medicaid.

*Children's Health News
University of Kansas*

Injury Mortality in Kansas Detailed

Injury Mortality in Kansas, 1995-1998, details the more pressing injury related problems in the state today. Motor vehicle crashes are the leading cause of unintentional injury death (Figure 6). Based on occurrence data, the report reviews the events that cause the most number of deaths to persons 1-44.

Between 1995 and 1998, 57 of every 100,000 Kansans died as a result of injury. The leading causes of injury deaths were motor vehicle crashes, firearms, falls, suffocation, and poisoning.

The report lends insight into the Kansas injury problem. It

Leading Cause of Injury Death by Manner and Intent
Kansas, 1995-1998

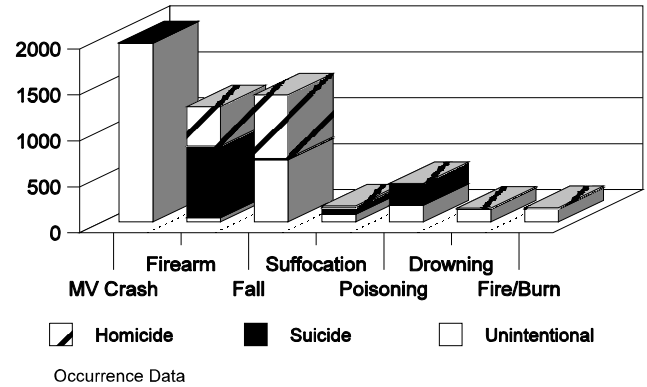


Figure 6

also estimates there are 18 injury-related hospital discharges, 250 injury-related ER visits and 400 episodes of reported injuries for every injury death. The study is based on an analysis of death certificates during the four year period.

Bureau of Health Promotion

Research Notes

Women Use More Health Care Services than Men

Women tend to use more primary care services and to have higher overall medical charges than men. A study supported by the Agency for Healthcare Research and Quality showed women have similar hospitalization rates and costs as men. More details are contained in "Gender Differences in the Utilization of Health Care Services," in the February 2000 Journal of Family Practice.

Agency for Healthcare Research and Quality

Wall Street Evaluates Health Care System

The Center for Studying Health System Change reports purchasers are tolerating double-digit premium increases for health plans and agreeing to employee demands for open-access products and wide choice of doctors largely because of the robust economy and tight labor markets. The assessment was made by a panel of Wall Street analysts convened by the Center. The panelists review of the trends is contained in the September 2000 "Issue Brief Findings from HSC." The Center's web site is <http://www.hschange.org>.

Center for Studying Health System Change

Preventing Obesity Among Children

Obesity is not a benign condition for children, not one that they are likely to outgrow. The National Center for Chronic Disease Prevention and Health Promotion reports in the Winter 2000 issue of *Chronic Disease Notes and Reports* that the percentage of young people who are overweight has more than doubled in the last 30 years. Between 10% and 15% of young people aged 6-17 years are considered overweight. The newsletter discussed key public health strategies to prevent obesity.

National Center for Chronic Disease Prevention and Health Promotion

National Hospital Discharge Survey

The National Center for Health Statistics estimates there were 31.8 million discharges of inpatients, excluding newborn infants, from short-stay non-Federal hospitals in the United States in 1998. The data are summarized in the NCHS report *1998 Summary: National Hospital Discharge Survey*. Researchers calculated a discharge rate of 1,165.3 per 10,000 population, and the average length of stay was 5.1 days. Six diagnostic categories accounted for more than a million discharges: heart disease, delivery, malignant neoplasms, pneumonia, psychoses and cerebrovascular disease. For more information, consult http://www.cdc.gov/nchs/products/pubs/pubd/series/sr13/pre-141/sr13_148.htm.

National Center for Health Statistics

CHES Unveils Kansas Information for Communities Data Query System

Just prior to printing *Kansas Health Statistics* the Center for Health and Environmental Statistics completed work on the Kansas Information for Communities (KIC) interactive data access system.

Access to KIC is via the URL <http://kic.kdhestate.ks.us/kic/>. Births and deaths are the first datasets posted.

Researchers in Kansas will now be able to pose direct queries to a subset of the Vital Statistics Database. Responses will be returned in a few seconds.

The databases on line are Births, 1990-1999 and Deaths 1990 to 1998. Death data for 1999 will be posted when coding structures for the new ICD -10 Cause of Death listing is completed.

The new KIC system – in addition to preparing aggregate summary data by county, race, sex, and age group – calculates age-adjusted mortality rates using the 2000 standard population.

On the natality side, the system produces counts and percentages for birth outcomes such as spacing and adequacy of prenatal care.

Creation of the system was made possible in part by a grant from the Health Resources and Services Administration. CHES collaborated with the Missouri Department of Health to modify that agency's software to suit Kansas' needs.

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