Kansas Health Statistics Report
Kansas Department of Health and Environment – Center for Health and Environmental Statistics – No 15 – February 2003

Kansas Teen Pregnancy Rates Decreasing

Teen pregnancy rates are decreasing for Kansas residents according to the 2001 Kansas Annual Summary of Vital Statistics, published by the Kansas Department of Health and Environment (KDHE). Pregnancies are defined as the sum of live births, fetal deaths and abortions. There were 5,818 pregnancies to Kansas teen residents in 2001. The pregnancy rate for females aged 10-19 decreased 13.5% from 33.3 pregnancies per 1,000 female age-group population in 1991 to 28.8 in 2001. Teen pregnancy rates for females aged 10-17 decreased 17.4% during the same time period.

During 2001, 38,832 live births occurred to Kansas residents, representing a birth rate of 14.4 per 1,000 population (Table 1). This was a 2.0% decrease from the 2000 rate of 14.7. The out-of-wedlock birth ratio has continued an upward trend over the years in both Kansas and the U.S. Out-of-wedlock births comprised 29.9% of all live births that occurred to Kansas residents in 2001. The overall infant death rate for 2001 was 7.3 infant deaths per 1,000 live births, an increase of 9.0% from the rate of 6.7 in 2000.

The number of Kansas resident deaths (24,590) represented a 121.4% increase from 1990. Births to Hispanic women accounted for most of the national increase. Overall, women born outside the 50 states and DC had better birth outcomes than their state-born racial/ethnic counterparts. The Centers for Disease Control and Prevention's Morbidity and Mortality Weekly Report said that although better birth outcomes among immigrants might reflect a “healthy immigrant effect”, immigrant status also might serve as a proxy for various protective behavioral, cultural, and psychosocial factors that influence pregnancy outcome positively. The healthy immigrant effect embodies the idea that healthier persons might be more likely to immigrate.

Table 2. Number and Percentage of all births to women born outside the 50 states and DC by race/ethnicity, Kansas, 1990 and 2000 *

<table>
<thead>
<tr>
<th>1990</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Births</td>
<td>2,207</td>
</tr>
<tr>
<td>% White Non-Hispanic</td>
<td>1.8</td>
</tr>
<tr>
<td>% Black Non-Hispanic</td>
<td>0.2</td>
</tr>
<tr>
<td>% Asian Pacific Islander</td>
<td>1.5</td>
</tr>
<tr>
<td>% Hispanic</td>
<td>2.1</td>
</tr>
<tr>
<td>Total (% of all state births)</td>
<td>5.7</td>
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</tbody>
</table>

* Totals might be greater than the sum of all racial/ethnic categories displayed because data for some populations are not presented.
Source: MMWR, Occurrence Data

The MMWR report further notes, however, that the process of acculturation, which includes the adoption of new values, attitudes, and behaviors that affect health, such as tobacco use and pregnancies at an earlier age, might reduce these protective benefits and result in poorer pregnancy outcomes among immigrants over time. The findings are subject to at least two limitations. First, how race/ethnicity and

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Hip Replacement Surgeries in Kansas

In 1999, approximately 290,000 hip replacement surgeries were performed in the United States (1). This procedure is commonly performed on elderly patients with osteoarthritis and other severe hip related problems such as arthritis, injury due to falls, tumors, etc. In 1999, the average age of patients undergoing hip replacement was 66, with an average length of stay (LOS) of 5 days and a mean charge per procedure of $23,385 (1).

A report published by the American Association for Orthopedic Surgeons (AAOS) based on the National Center for Health Statistics (NCHS) survey data indicates that the number of hip replacement surgeries has increased significantly in the last ten years. Since the baby boomers are aging and the average life expectancy of the US population has increased substantially, it is important to monitor how this expensive surgical procedure, most often used by the elderly, may impact the health care system in the future. This article examines trends of hip replacement surgeries in Kansas in association with various demographic factors.

Trends

Hip replacement hospitalization rates between 1995 and 1999 among all age groups showed an overall increase in Kansas (Figure 1). Although the total number of hospitalizations for hip replacement surgeries was lower in 1995 than in 1999, there has not been a linear trend during this time period (p>0.05).

Figure 5. Number of live births for spina bifida and anencephaly, Kansas 1991 - 2001

Hip fractures due to falls among the elderly accounted for 30-43% of hip replacement surgeries during this period. Nearly half of the hip replacements were classified as total hip replacements. Revision cases contributed to nearly 10% of all hip surgeries. The increase in the number of revision cases between 1995 and 1999 was statistically significant (p<0.01). Since revision cases are related to re-surgery due to wearing out of artificial hips, an increase in revision cases over time may not be unusual.

Length of Stay

Length of stay for inpatient hospitalization greatly impacts the cost of health care. For hip related surgeries, the national average length of stay in 1999 was 4.9 days. In the same year the LOS for hip replacement in Kansas was 5.3 days. During the period 1995-1999, the average LOS in Kansas was higher than the national average (Figure 2).

An article published by AAOS (1) indicated a higher LOS for women (6.8 days) than men (5.5 days) in the US. However, no significant difference in LOS between men and women was observed in Kansas (Figure 2). An overall decrease in LOS for hip surgeries between 1995 and 1999 in Kansas mirrors the national trend (Figure 2).

Figure 2. LOS by Gender, Kansas and U.S.

A correlation between increased age and LOS was also observed (Table 3). This suggests a relatively slower recovery or more complications among the older population following hip related surgeries.

Table 3. LOS by Age Group, Kansas

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<td>15-24</td>
<td>6.0</td>
<td>3.0</td>
<td>5.5</td>
<td>6.0</td>
<td>4.8</td>
<td>5.1</td>
</tr>
<tr>
<td>25-34</td>
<td>5.5</td>
<td>4.8</td>
<td>6.1</td>
<td>5.2</td>
<td>4.6</td>
<td>5.2</td>
</tr>
<tr>
<td>35-44</td>
<td>6.3</td>
<td>5.5</td>
<td>5.3</td>
<td>4.6</td>
<td>4.9</td>
<td>5.3</td>
</tr>
<tr>
<td>45-54</td>
<td>5.9</td>
<td>5.6</td>
<td>5.8</td>
<td>5.2</td>
<td>4.9</td>
<td>5.5</td>
</tr>
<tr>
<td>55-64</td>
<td>6.6</td>
<td>6.1</td>
<td>5.6</td>
<td>5.4</td>
<td>5.4</td>
<td>5.8</td>
</tr>
<tr>
<td>65-74</td>
<td>6.3</td>
<td>6.1</td>
<td>5.4</td>
<td>5.5</td>
<td>5.4</td>
<td>5.7</td>
</tr>
<tr>
<td>75-84</td>
<td>7.0</td>
<td>6.2</td>
<td>6.1</td>
<td>5.7</td>
<td>6.1</td>
<td>6.2</td>
</tr>
<tr>
<td>85+</td>
<td>7.2</td>
<td>6.7</td>
<td>6.6</td>
<td>6.4</td>
<td>6.5</td>
<td>6.7</td>
</tr>
<tr>
<td>Average</td>
<td>6.4</td>
<td>5.5</td>
<td>5.8</td>
<td>5.5</td>
<td>5.3</td>
<td></td>
</tr>
</tbody>
</table>

Gender

In Kansas, women accounted for more than twice the number of hip surgeries when compared to their male counterparts (Figure 3). This trend remained fairly stable between 1995 and 1999. Among the 65 and older age group in Kansas, the ratio of women to men hospitalized for hip related surgeries was 7:3.

Figure 3. Hip Replacement by Gender, Kansas

A survey of the literature indicated a higher prevalence of hip surgeries among women, 1.5 times more than in men (1, 4). This may be because women are much more susceptible to osteoporosis due to loss of estrogen at menopause (5, 6). Longer life expectancy among women coupled with osteoporosis perhaps leads to a greater number of hip replacement surgeries among...
women. However, the ratio in Kansas is above the national average and warrants further study.

**Age**

As mentioned earlier, hip replacement surgeries are most prevalent among senior citizens (1). Age-adjusted data for hip replacement indicates that people 65 and older accounted for approximately 81% of the total number of hip replacement surgeries in Kansas. Among senior citizens, the average ages reported nationally for males and females undergoing hip surgeries in 1999 were 62 and 69, respectively. In Kansas, the average ages of males and females undergoing hip surgeries were 72 and 74, respectively, in the same year. Though hip surgeries are common among seniors, persons under the age of 45 account for about 5% of hip surgeries. This may be due to hip-related injuries or severe arthritis.

**Race**

Analysis of the Kansas hospital discharge data showed that in 1999, the relative frequencies for hip replacement surgeries for people age 65 and over were 653 per 100,000 for Whites and 438 per 100,000 for Blacks, with a White to Black ratio of 1.49:1. However, if all age groups are considered, the numbers are 111 per 100,000 for Whites and 38 per 100,000 for Blacks, and the White to Black ratio is 2.92:1 (Figure 4). This suggests that Black senior citizens may have better access to health care than Black adults and young adults.

Access to health care among minorities is a nationwide problem (7). It appears in this case, a relatively improved access to medical care among Black senior citizens may be due to a better access to healthcare through Medicare.

**Discharge Status**

Among the total number of hip replacement surgeries performed in Kansas during 1995-1999, approximately 28% of the discharges were routine and 70% of those were transfers to other hospitals or other departments. During this period, a maximum of 1.76% of the surgeries resulted in death of patients. During the same period, the nationwide mortality percentage due to hip surgeries was 0.97%.

**Conclusion**

The above results show that hip related surgeries in Kansas increased somewhat between 1995 and 1999. A higher mortality rate associated with hip related surgeries in Kansas is noteworthy. Though the primary cause of admission in those cases was hip arthroplasty, exact cause of death was unclear.

To assess the mortality rate due to hip related surgeries, a critical in depth evaluation of cause of death is necessary. A low rate of hip surgeries among Blacks compared to Whites may suggest inadequate access to health care among Blacks. However, further study is needed. Continuous monitoring is required to assess the effect of hip surgeries on health care costs in the coming years.

Swapan Saha, PhD
Health Care Data Analysis

**References**

3. [http://www.arhg.gov/researchmar02/0302r6a.htm](http://www.arhg.gov/researchmar02/0302r6a.htm)

**New Vital Certificates in Development**

The KDHE Center for Health and Environmental Statistics is preparing to revise birth and death certificates. Kansas, along with other vital record jurisdictions, worked with the National Center for Health Statistics to produce new standard certificates. The standard certificate serves as a minimum data set all states will collect.

One significant change for all certificates will be multiple race reporting. In keeping with the trend initiated with the 2000 Census, birth and death certificates will allow for the selection of more than one race. The standard certificates also differ from Kansas’ present certificates for ethnicity reporting. Kansas certificates presently ask for ancestry, of which several Hispanic categories exist. The new standard certificate asks whether an individual is Hispanic. This change should improve the counting of births and deaths to persons of Hispanic descent.

Most of the changes affect the birth certificate. Questions about access to WIC food for the mother and source of payment for the delivery are new. The confidential medical information portion of birth certificate will undergo changes reflecting new health concerns and advances in medical knowledge.

Some of the new items to be collected include:

- if mother unmarried, was paternity acknowledgement signed at the hospital,
- mother transferred for maternal medical or fetal indications,
- mother’s medical record number,
- pregnancy resulted from infertility treatment,
- steroids (glucocorticoids) for fetal lung development received by the mother during labor,
- antibiotics received by the mother during labor,
- epidural or spinal anesthesia during labor,
- maternal morbidity,
- NCIU admission,
- infant transferred within 24 hours of delivery,
- infant living at the time of this report, and
- infant being breastfed.

Kansas has a number of items on the birth certificate that are not part of the US Standard certificate. These are collected on behalf of state programs:

- serological screening,
- infant neonatal screening,
• vaccines administered,
• occupation and industry, and
• two informed consent questions for immunization registry participation and enumeration at birth.

During 2003 the Center will conduct fact-finding meetings with groups to assess whether additional items need to be included on birth and death certificates.

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2001 Reportable Diseases Summarized

Reportable Diseases in Kansas: 2001 Summary presents findings on 42 reportable diseases or conditions of public health importance in Kansas. The report issued by the KDHE Bureau of Epidemiology and Disease Prevention includes brief overviews of the disease or condition, laboratory tests commonly used for diagnosis, and the surveillance case definition. The report covers cases for the year 2001 reported as of February 28, 2002. Where possible, Kansas trends are compared with trends for the United States.

Highlights for 2001 include:
• In 2001, Kansas had three outbreaks of hepatitis A: Harvey County, south-central Kansas, and Shawnee County.
• The first confirmed case of rubella since 1998 occurred in 2001. It was probably acquired outside the state. Reported confirmed pertussis cases declined from 17 in 2000 to 11 in 2001; however, pertussis remains the vaccine-preventable disease with the highest number of reported cases.
• Kansas reported 80 cases of active tuberculosis (TB) disease in 2001, up from 77 in 2000. In Kansas during 2001, the state’s major metropolitan areas again reported the majority of cases of TB. Sedgwick County once again reported the highest number of new cases of active TB disease with 32.
• The number of reported Kansas AIDS cases decreased from 2000 to 2001, as occurred in a number of other states. All of the reported AIDS cases in 2001 were diagnosed less than one year after their initial HIV diagnosis. This means many people are being tested late in the course of their infection and may indicate missed opportunities for prevention and control.
• Forty-four cases of early syphilis were reported from January 1, 2001 to December 31, 2001. This is a three-fold increase over the 15 cases reported over the same period in 2000. The increase of early syphilis cases can be attributed to two outbreaks within Topeka and Wichita.
• For the year, 2,761 cases of gonorrhea were reported to the state. This represented a one percent (34 cases) decrease compared to last year. This was the first decrease in gonorrhea since 1996.
• Chlamydia continued to be the most commonly reported disease in Kansas. For the year, 6,172 cases of chlamydia were reported statewide, representing a two percent (115 cases) increase from the previous year. Reported chlamydia disproportionately affected females in their childbearing years.
• At least one case of chlamydia occurred in 90 of the 105 counties in Kansas. This distribution also reflects national trends.
• The HIV/STD Program screened 3,740 persons who visited STD clinics in the state and were infected with or exposed to HIV and had associated risk factors that included: IV drug use, needle sharing, multiple sex partners, men who have sex with men, current or previous STD diagnosis. A total of 4,474 of the STD patients received HIV pretest counseling in 2001.
• Enteric infections (salmonellosis, shigellosis and giardiasis) continued to be reported in large numbers. The protracted, year-long shigellosis outbreak in several Northeast Kansas daycare centers was finally brought under control in 2001.
• Ten foodborne outbreaks of gastrointestinal illness were reported and formally investigated during 2001.

Racial and ethnic minorities are disproportionately represented among cases of the three major reportable bacterial STDs, mirroring national trends. This may reflect reporting bias (e.g., African-Americans may use public STD clinics more often for health care and be more likely to be screened or reported if positive).

There were ethnic disparities in some specific reported morbidities during 2001 in the state. Enteric infections were disproportionately higher among Hispanics than non-Hispanics for shigellosis (9.0 versus 1.4); salmonellosis (10.6 versus 6.9) and campylobacteriosis (12.2 versus 6.8); however the ethnic-specific rate of parasitic giardiasis was higher among non-Hispanics than Hispanics (4.7 versus 2.7).

Similarly, there were ethnic disparities in reported hepatitis morbidity. Hispanics experienced a higher infection rate than non-Hispanics (8.0 versus 5.9). However, the non-Hispanic population had more than twice the reported infection rate of chronic hepatitis B (8.8) and hepatitis C (21.0) as Hispanics, (3.7 and 14.9, respectively). Kansas law requires reporting of selected diseases by health care providers, laboratories and hospitals. Reports are usually first sent to local health departments, which are responsible for investigation and for providing basic public health interventions. Reports are then sent to the KDHE Bureau of Epidemiology and Disease Prevention and eventually to the Centers for Disease Control and Prevention.

It’s important to note that disease reporting is incomplete and often varies by disease. Reporting of AIDS cases is estimated to be 90% complete, whereas reporting of salmonellosis is estimated to be 3-5% complete. Absolute numbers are less meaningful than trends when interpreting the data. However, trends can be influenced by changes in case definitions, in reporting patterns, or by random fluctuations. In many Kansas counties where the population is less than 10,000, it’s possible to have high population-based disease rates even if only very few cases are reported.

The 2001 and prior year reports are available at the Bureau web page, http://www.kdhe.state.ks.us/epi/evaluation.html.

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KDHE Bureau of Epidemiology and Disease Prevention

Health Risk Behaviors of Kansans Assessed

The KDHE Bureau of Health Promotion has released the results of its 1999 Behavioral Risk Factor Survey (BRFSS), which measures the prevalence of lifestyle-related health risk behaviors of Kansans. Percentage estimates are provided for such risk factors as: health status, activity limitation and quality of life, health care access, hypertension and cholesterol awareness, overweight, diabetes, oral health, tobacco and alcohol use, breast, cervical, and colorectal cancer screening, adult immunization, injury control, folic acid, STD’s and HIV/AIDS, and parenting.

Highlights of the 1999 survey findings include:
• 13% of Kansans consider themselves to be in either fair or poor health,
• 21% of Kansans reported experiencing pain at least one day in the past 30 days that limited their ability to do usual activities,
• 22% of Kansans reported getting less than the needed amount of sleep or rest for 14 or more of the past 30 days,
• 10% of Kansans have no health insurance or other health care coverage,
• 21% of Kansans currently smoke cigarettes,
• 20% of Kansas women 50 years of age and older had not had a mammogram within the past two years,
• 33% of Kansans 65 years of age and older had not had an influenza vaccine within the last 12 months, and 45% had never had a pneumonia vaccine,
• 13% of Kansans reported the failure of an oldest child (ages 0-15) to always use a safety seat (0-4 yrs) or seat-belt (5-15 yrs) and 38% of adult respondents reported their own failure to always use a safety belt,
• 60% of Kansas women between the ages of 18 and 44 did not know that taking folic acid prevents birth defects,
• 7% of Kansans between the ages of 18 and 64 considered their risk of contracting HIV to be medium or high,

The most important data and information challenges are:
• consistent collection and effective use of data,
• development of incidence and prevalence data,
• improve racial and ethnic population sampling,
• continue medical interpreter training and services,
• improve or initiate cultural competency training for health professionals, and
• outreach and information to communities.

Key statewide findings were summarized into seven categories in the report.
• The infant mortality rate is twice as high among African Americans as the rest of Kansas’ population,
• African American male adults have the highest rates for some types of cancer as compared to the general population, and lung cancer is high among Native Americans.
• The self-reported rate of diabetes is 8% for both African Americans and Native Americans compared to 5% in the total population,
• African Americans constitute 18% of the diagnosed cases of AIDS in Kansas while comprising less than 6% of the population,
• Racial and ethnic minority populations over 65 years of age are less likely to have had a flu shot. Childhood immunization rates are not readily available by race and ethnicity in Kansas,
• Even when taking age into account, Native Americans and African Americans die from coronary heart disease at a higher rate than the general population, and
• Many of the state’s racial and ethnic minorities report higher rates of health risk behaviors.

The next phase of the report will include the release of comprehensive data accessible through the KHI website, http://www.khi.org

Neural Tube Defects in Kansas and the U.S.

While CDC researchers have determined that the overall birth prevalence for spina bifida and anencephaly has declined 19% after mandatory folic acid fortification, the numbers for Kansas resident live births are less conclusive. Between 1991 and 2001, the period reviewed by CDC, Kansas recorded 244 resident live births in which these two neural tube defects were reported. The numbers, which range from a 1993 low of 14 to a 1996 high of 30 are too small to establish a valid trend (Figure 5).

Figure 5. Number of live births for spina bifida and anencephaly, Kansas 1991 - 2001

Nationally, a 23% decline occurred in neural tube defects in 2001, compared with 1996; births in 1996 were conceived before the Food and Drug Administration authorized folic acid fortification of cereal grain products.

Although prevalence for birth defects as reported from birth certificate data has been underreported, the collection over time is considered to be stable. Data from 24 birth defect surveillance systems further support the findings of national birth certificate data. Declines in spina bifida and anencephaly were seen when comparing the post folic acid fortification years (October 1998-December 1999) with the pre-fortification years (January 1995-December 1996).

Centers for Disease Control and Prevention
KDHE Center for Health and Environmental Statistics

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**KIDS COUNT** Indicators rank Kansas 18th

According to the KIDS COUNT Data Book, released by the Annie E. Casey Foundation, Kansas ranks 18th in the nation in performance on indicators that contribute to the well-being of America’s children. The report related a range of data encompassing demographics, education, economic conditions, and health care use.

Each state received its rank based upon its performance on ten key indicators. Five out of ten of these indicators were provided by vital statistics data, including: low birth weight, infant mortality rate, child death rate, rate of teen deaths by accident, homicide, and suicide, and teen birth rate. In addition to comparing states with each other, the report also assesses changes over time within a state.

From 1990 to 1999, Kansas improved its performance on six of the ten indicators: infant mortality rate by 13%, child death rate by 7%, rate of teen deaths by accident, homicide, and suicide by 22%, teen birth rate by 20%, rate of teens not attending school and not working by 14%, and percentage of children in poverty by 13%.

The data also indicated a decrease in performance on three indicators, including: percent low birthweight babies by 15%, percent of teens who are high school dropouts by 50%, and percent of families with children headed by a single parent by 29%.

There was no change in performance on percent of children living in families where no parent has full-time, year-round employment. Overall, Kansas ranked 20% higher than the state median on eight out of ten indicators. A complete version of the report may be obtained at [http://www.kidscount.org](http://www.kidscount.org).

**Board Releases Physician FTE Report**

The Health Care Data Governing Board, working with the KDHE Office of Health Care Information (OHCI) and Office of Local and Rural Health, has released the “Kansas Primary Care Physician FTE Report by County 2001.” OHCI prepared the annual inventory of primary care physician practice information following guidelines set forth in the Code of Federal Regulations posted at [http://bhpr.hrsa.gov/shortage/hpsaguidepc.htm](http://bhpr.hrsa.gov/shortage/hpsaguidepc.htm).

The Kansas Board of Healing Arts provided the 4th quarter licensure data for this report; OHCI collected practice information with surveys and follow-up phone contact with Kansas physicians.

The publication’s success is due in large part to health care professionals who shared their information and agencies and offices that contributed funding and expertise to the endeavor.

Contact OHCI at 785-368-7394 with questions.