



# Kansas Health Statistics Report

Kansas Department of Health and Environment – Division of Health  
Center for Health and Environmental Statistics – No 35 – November 2007

## Disability Surveillance, Kansas 2007

The Office of Injury and Disability Prevention at the Kansas Department of Health and Environment (KDHE) in collaboration with the Research and Training Center on Independent Living at the University of Kansas proposed disability related questions for the 2006 Kansas Behavioral Risk Factors Surveillance System (BRFSS). This set of questions serves as a supplement to the two core questions asked in the BRFSS. They also depend on respondents reporting an activity limitation due to physical, mental or emotional problems and/or a health problem that requires the use of special equipment such as a cane, wheelchair, special bed, or special telephone. The results below outline some salient findings from the added questions to the Kansas BRFSS. For additional information on the results please see Table 1.

### Body Functions and Structures

On questions relating to body functions, about two-thirds of Kansans living with a disability reported having a problem with either their nerves, muscles or joints [63.0% (95% CI: 59.2%-66.8%)].

One-in-two Kansans living with a disability also reported having health problems relating to their heart, blood pressure or breathing [48.6% (95% CI: 44.7%-52.4%)].

Of those adults living with disability approximately one in three [37.3% (95% CI: 33.6%-41.1%)] reported having a problem with thinking, remembering or controlling emotions. One-in-three [31.5% (95% CI: 27.9%-35.1%)] adult Kansans living with a disability reported having a problem with seeing, hearing, or communicating.

### Activities Relating to Task and Action and Involvement in Life Situations

Data from the 2006 Kansas BRFSS showed that a substantial number of Kansans living with disability have challenges that limit them in participating in physical activities and performance of day-to-day movement. When asked about participation in physical activities, approximately 60 percent (95% CI: 55.7%-63.5%) of adult Kansans living with a disability reported they had an impairment or a health problem that affected their participation.

On the question assessing general movement, 59 percent (95% CI: 55.3%-63.2%) of adult Kansans living with a disability reported they had an impairment or a health problem that affected their ability to move around, which includes walking, using stairs, and lifting or carrying objects. Of this population, more than half [55.4% (95% CI: 51.0%-59.9%)] attributed their mobility limitation to a chronic disease such as diabetes or arthritis.

On the question assessing functional capacity relating to school and work, one-in-three [32.5%

(95% CI: 28.9%-36.0%)] Kansans living with disability reported having an impairment or a health problem that affected their ability to either go to school or work.

### Health Care Access

Data from the 2006 Kansas BRFSS suggest that access to health care remains a challenge for Kansans living with disability, with a substantial barrier attributed to cost of service and lack of transportation.

Table 1: Prevalence of Disability by Various Disability Measures, Kansas BRFSS 2006.

| Disability Indicators  |   | Prevalence (%) | 95% Confidence Interval |
|--|---|----------------|-------------------------|
| Because of an impairment or health problem do you have problems with any of the following: |   |                |                         |
| 1  | thinking, remembering or controlling emotions   | 37.3           | 33.6-41.1               |
| 2  | seeing, hearing or communicating  | 31.5           | 27.9-35.1               |
| 3  | heart, blood pressure or breathing  | 48.6           | 44.7-52.4               |
| 4  | digestive system  | 22.3           | 19.4-25.2               |
| 5  | nerves, muscles or joints   | 63.0           | 59.2-66.8               |
| 6  | other bodily functions affected   | 17.9           | 15.1-20.7               |
| Does your impairment or health problem affect your ability to:                             |   |                |                         |
| 7  | go to school or work  | 32.5           | 28.9-36.0               |
| 8  | perform personal care activities including bathing, dressing, grooming, using the toilet or getting in and out of bed | 13.3           | 10.9-15.7               |
| 9  | perform household activities including paying the bills, shopping, cooking, or cleaning the house                     | 31.9           | 28.5-35.4               |
| 10   | participate in physical activities  | 59.6           | 55.7-63.5               |
| 11   | move around including walking, using stairs, lifting or carrying objects  | 59.3           | 55.3-63.2               |
| Is your ability to move around due to any of the following (based on question 11):         |   |                |                         |
| 12   | paralysis   | 3.4            | 1.6-5.2                 |
| 13   | amputation or missing limb  | 0.8            | 0.2-1.4                 |
| 14   | a chronic disease such as diabetes or arthritis   | 55.4           | 51.0-59.9               |
| 15   | something else  | 54.1           | 49.6-58.5               |
| 16   | Are you restricted in any way to services you need such as doctor, counseling, case management, or financial          | 15.3           | 12.6-18.0               |
| Is this restriction due to any of the following (based on question 16):                    |   |                |                         |
| 17   | lack of transportation  | 17.8           | 11.0-24.7               |
| 18   | cost of services  | 81.2           | 74.3-88.2               |
| 19   | physical access to buildings, offices or tools needed   | 11.5           | 5.6-17.5                |
| 20   | restriction by another person such as a personal attendant or family member   | 5.8            | 2.0-9.5                 |
| 21   | lack of communication aids such as interpreters or alternate formats  | 1.3            | 0.0-2.7                 |

When asked if restricted in any way from needed services such as doctor's appointment, counseling services, case management or financial, about one-in-seven [15.3% (95% CI: 12.6%-18.0%)] adult Kansans living with a disability said "yes." Of this number, 81.2% (95% CI: 74.3%-88.2%) and 17.8% (95% CI:

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11.0%-24.7%) attributed their restriction to “cost of service” and “lack of transportation” respectively.

The aforementioned surveillance on disability is imperative to disability related program development and policy formation. KDHE recently received a CDC grant aimed at implementing projects for preventing secondary conditions and promoting the health of people with disabilities. The surveillance information was helpful in obtaining this grant. The purpose of the state capacity cooperative agreement is to develop, sustain and support activities to improve the health and quality of life for people with disabilities.

As part of this project, program partners will also be implementing the “Living Well with a Disability” curriculum, working with local communities, emergency preparedness and people with disabilities. The group will also continue efforts related to surveillance so as to monitor the health status of people living with disabilities and to evaluate the efforts directed towards improvement of health status in this population subgroup.

*Ismaila Ramon, MPH †*  
*Ghazala Perveen, MBBS, PhD, MPH †*  
*Lori Haskett †*  
*Michael Fox, Sc.D †*  
*Glen White, PhD †*

*† Office of Health Promotion, KDHE*  
*† Research & Training Center on Independent Living*  
*University of Kansas, Lawrence*

## Kansas and U.S. Suicide Rates Compared

A recent Centers for Disease Control and Prevention (CDC) report [1] states that for the United States as a whole, suicide death rates for the 10-24 age group rose by 8.0 percent from 2003 to 2004. The change was due to increases in suicide among three groups: females aged 10-14 and 15-19 years, and males age 15-19.

Kansas suicide rates for the 10-24 age group rose by 29.0 percent from 2003 to 2004. However, Table 2 shows that while Kansas suicide counts and rates for youth and young adults vary widely by year, the general trend in rates has been downward since 2002. The suicide rate for 2004 (9.65 per 100,000 population) was higher than that for 2003 (7.48), but still lower than that for 2002 (10.60). The downward trend resumed in 2005, when the suicide rate for the 10-24 age group declined to 7.79 per 100,000.

Table 2. Suicide Death Counts and Rates\*  
 Kansas Residents Age 10-24, 1999-2005

|      | Count | Rate  | % Change in Rate |
|------|-------|-------|------------------|
| 1999 | 50    | 9.99  | ---              |
| 2000 | 63    | 8.78  | -12.1            |
| 2001 | 64    | 10.51 | +19.7            |
| 2002 | 65    | 10.60 | +0.9             |
| 2003 | 46    | 7.48  | -29.4            |
| 2004 | 59    | 9.65  | +29.0            |
| 2005 | 47    | 7.79  | -19.3            |

\* per 100,000 population

Interestingly, the changes in Kansas youth and young adult suicide rates have not been driven by the same subgroups as the U.S. as a whole. The number of suicides of Kansas females in the 10-14 age-group has been one or zero for each year between 1999 to 2005 period—numbers too small to detect any meaningful statistical trend. Rates for Kansas females in the 15-19 age group declined from 4.89 per 100,000 in 1999 to 1.02 in 2005, with the rate for 2004 (1.01) representing a decline from the rate for 2003 (2.01) (Table 3).

The increase in Kansas youth and young adult suicide rates in 2004 was driven by three groups: females age 20-24; males age 15-19, and males age 20-24. The trend for males in both of these groups is still generally downward, but rates for females age 20-

24 are gradually drifting higher, despite a pattern of alternating years of sharp increases in suicide rates with years of sharp declines. (See tables 3 and 4.)

Table 3. Suicide Rates\* Females, Ages 10-24  
 Kansas Residents, 1999-2005

|      | Ages 10-14 | Ages 15-19 | Ages 20-24 |
|------|------------|------------|------------|
| 1999 | 1.01       | 4.89       | 1.12       |
| 2000 | 1.03       | 1.97       | 5.37       |
| 2001 | 1.02       | 2.97       | 2.08       |
| 2002 | 1.03       | 2.98       | 6.01       |
| 2003 | 0.00       | 2.01       | 2.95       |
| 2004 | 1.07       | 1.01       | 7.72       |
| 2005 | 0.00       | 1.02       | 2.90       |

\* per 100,000 population in group

Table 4. Suicide Rates\* Males, Ages 10-24  
 Kansas Residents, 1999-2005

|      | Ages 10-14 | Ages 15-19 | Ages 20-24 |
|------|------------|------------|------------|
| 1999 | 3.81       | 11.09      | 38.34      |
| 2000 | 1.93       | 18.59      | 22.87      |
| 2001 | 0.97       | 23.42      | 30.70      |
| 2002 | 1.96       | 14.12      | 35.31      |
| 2003 | 2.95       | 11.39      | 23.61      |
| 2004 | 2.02       | 17.18      | 25.99      |
| 2005 | 1.04       | 13.45      | 25.25      |

\* per 100,000 population in group

The sharp increase the Kansas youth and young adult suicide rates seen in 2004 appears to have been a temporary fluctuation from a pattern of declining suicide rates for these age groups. An area of concern could be the gradual increase in rates for young women in the 20-24 age group.

*David Oakley, MA*  
*Office of Health Assessment*

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## Race Reporting for Kansas Vital Events

The collection of race and Hispanic origin for vital events dates back to the 1900s. It has been an important tool in measuring the health disparity among population sub-groups. Over the years, the crude and insensitive terms from old certificates have been replaced with culturally competent categories into which persons could self-identify.

The Kansas Department of Health and Environment (KDHE), as the result of adopting the recommendations of the federal Office of Management and Budget (OMB 15), modified all vital records forms beginning in 2005 to collect 24 fields of information gathered with respect to race (Figure 1). In addition, and asked first in the series of race, ethnicity, and ancestry questions, is the question of Hispanic origin, where eight responses are available. Another change representing a departure from past practice was allowing persons to select more than one race and more than one response on Hispanic origin.

This new, more diverse series of race and Hispanic origin selections presents concerns at the national level in the reporting of statistics. Many states have not yet converted their vital event certificates. Thus, race and Hispanic origin are reported differently.

Figure 1. Race, Hispanic Origin, Ancestry Section of Kansas Death Certificate

|  |   |
|--|---|
| <p>30. ANCESTRY-What is this person's ancestry or ethnic origin? Italian, German, Dominican, Vietnamese, Hmong, French Canadian, etc. (Specify below)</p>  | <p>32. RACE (Check one or more boxes to indicate what race(s) the decedent considered himself or herself to be.)</p>  |
| <p>31. HISPANIC ORIGIN (Check the box or boxes that best describes whether the decedent is Spanish/Hispanic/Latino. Check the "no" box if the decedent is not Spanish/Hispanic/Latino)</p>   | <p><input type="checkbox"/> White</p> <p><input type="checkbox"/> Black or African American</p> <p><input type="checkbox"/> American Indian or Alaska Native (Name of the enrolled or principal tribes)</p> <p>_____</p> <p>_____</p>   |
| <p><input type="checkbox"/> No, not Spanish/Hispanic/Latino</p> <p><input type="checkbox"/> Yes, Mexican/Mexican American/Chicano</p> <p><input type="checkbox"/> Yes, Puerto Rican</p> <p><input type="checkbox"/> Yes, Cuban</p> <p><input type="checkbox"/> Yes, Central American</p> <p><input type="checkbox"/> Yes, South American</p> <p><input type="checkbox"/> Yes, other Spanish/Hispanic/Latino (Specify)</p> <p>_____</p> | <p><input type="checkbox"/> Asian Indian</p> <p><input type="checkbox"/> Chinese</p> <p><input type="checkbox"/> Filipino</p> <p><input type="checkbox"/> Japanese</p> <p><input type="checkbox"/> Korean</p> <p><input type="checkbox"/> Vietnamese</p> <p><input type="checkbox"/> Other Asian (Specify)</p> <p>_____</p> <p>_____</p>                  |
| <p><input type="checkbox"/> Unknown</p>  | <p><input type="checkbox"/> Native Hawaiian</p> <p><input type="checkbox"/> Guamanian or Chamorro</p> <p><input type="checkbox"/> Samoan</p> <p><input type="checkbox"/> Other Pacific Islander (Specify)</p> <p>_____</p> <p>_____</p> <p><input type="checkbox"/> Other (Specify)</p> <p>_____</p> <p>_____</p> <p><input type="checkbox"/> Unknown</p> |

Based on discussions internally and with external groups and organizations, KDHE opted not to reassign race. What the person self-identified as was how the information would be maintained.

This presented a challenge in the reporting of population-based rates, a time-honored approach for evaluating health outcomes and disparity. The challenge was how to report a population-based rate for the race category of "other" when population counts (used as the denominator in the calculation) are not available. Because "other" race is becoming more frequently selected by persons of Hispanic origin, an alternate approach to tabulating rates was needed.

The solution was to devise a series of unique categories combining race and Hispanic origin for reporting purposes only. Because the same categories could be created from the population data, tabulation of population based rates would be possible. The approach also resulted in the development of an aggregation grid (Table 5). The grid details how the new "population group" categories would be collapsed based on the need to protect confidentiality or in order to produce meaningful or reliable rates.

Crude population based rates remove the bias of comparing geographic areas of different population size. Age-adjusted population based rates go a step further, removing the bias of the different age make up of the geographic areas. With regard to mortality a community comprised of more older residents will have more deaths than a community of the same size but with a younger age mix.

The KDHE 2006 Annual Summary of Vital Statistics will be the first publication issued by the department using this methodology. As the Office of Health Assessment redesigns its interactive query

tool, Kansas Information for Communities, the new population group approach will be incorporated.

Greg Crawford  
Office of Health Assessment

In order to facilitate the national reporting of vital statistics data, the National Center for Health Statistics (NCHS) and the U.S. Census Bureau created bridged-race population estimates data. This dataset collapsed race information into four categories: White, Black, American Indian/Alaska Native and Asian (into which Native Hawaiian/Other Pacific Islander was grouped). Hispanic origin was collapsed into Hispanic and Non-Hispanic.

Table 5. Aggregation Grid for Rate Calculations

| Aggregation Level | Population Groups |                    |                    |  |                    |                   |  |                         |                      |
|-------------------|-------------------|--------------------|--------------------|--|--------------------|-------------------|--|-------------------------|----------------------|
|                   | Hispanic any Race | White non-Hispanic | Black non-Hispanic | Asian non-Hispanic                                 | NHOPI non-Hispanic | AIAN non-Hispanic | Multi race non-Hispanic                            | Other race non-Hispanic | Unknown non-Hispanic |
| None              | Hispanic any Race | White non-Hispanic | Black non-Hispanic | Asian non-Hispanic                                 | NHOPI non-Hispanic | AIAN non-Hispanic | Multi race non-Hispanic                            | Other race non-Hispanic | Unknown non-Hispanic |
| Partial           | Hispanic any Race | White non-Hispanic | Black non-Hispanic | Asian/NHOPI non-Hispanic                           |                    | AIAN non-Hispanic | Other specified & unspecified race(s) non-Hispanic |                         | N.A.                 |
| Full              | Hispanic any Race | White non-Hispanic | Black non-Hispanic | Other specified & unspecified race(s) non-Hispanic |                    |                   |  |                         | N.A.                 |

In the bridged-race population dataset, the race categories of other, unknown and multi-race are re-assigned by an algorithm developed by the two federal agencies. NCHS used this same algorithm in the birth and death data to re-assign persons of other, unknown, and multi-race into one of the four specified categories.

At the national level, the largest impact of this approach is the reassignment of race for persons of Hispanic origin, who mark their race as "other." These individuals are typically re-assigned to White by the NCHS algorithm.

## Preventable Hospitalizations in Kansas

Kansans experienced more than 360,000 hospitalizations and discharges in 2005. Hospitalization is the most serious and expensive portion of health care treatment. Avoidance of unnecessary hospitalization is critical to health care cost containment. This article summarizes key issues presented in *Preventable Hospitalization In Kansas* that can be used for effective health condition management and avoiding unnecessary hospitalization. It is based on 2000-2005 hospital discharge data provided by the Kansas Hospital Association and private health insurance data taken from the Kansas Health Insurance Information System (KHIS)[1] provided by the Kansas Insurance Department. These data were used to prepare estimates of the financial burden of preventable hospitalizations for individuals with private health insurance. The report may be accessed at <http://www.kdheks.gov/ches/>.

The Agency for Healthcare Research and Quality (AHRQ) indicates that there are "health conditions for which good outpatient care can potentially prevent the need for hospitalization, or for which early intervention can prevent complications or more severe disease." [2] The Healthcare Cost and Utilization Project (HCUP) was developed by AHRQ to guide evaluations of hospital discharge data for selected health conditions. These conditions represent hospitalizations that might have been prevented if proper primary care and patient compliance had been achieved.

## Preventable Hospitalization

The most common reasons in 2005 that Kansans were hospitalized were for diseases of the circulatory system, childbirth, and diseases of the respiratory system. "Physician visits and early treatment can prevent otherwise avoidable hospitalizations and serious illness and injuries to patients." [3] Measurement of preventable hospitalizations evaluates Ambulatory Care Sensitive Conditions (ACSCs) found in hospital discharge data. High ACSC hospitalization rates may indicate limited access to outpatient health care. Timely and routine outpatient management dramatically reduces the risk of hospitalization. [4]

Quality indicators help to identify unmet community health care needs and are used to monitor how well complications from a number of common conditions are being avoided in the outpatient settings, to compare the performance of local health care systems across communities, and to provide insight into the quality of the health care system outside the hospital setting (<http://www.ahrq.gov/>). Prevention Quality Indicators (PQIs) are analytic tools used to evaluate ACSCs. They consist of 14 ACSCs, i.e., admission rates for diabetes short-term complications, perforated appendix, diabetes long-term complication, and chronic obstructive pulmonary disease, among others.

## Kansas Findings

Although between 2000 - 2003 most Kansas preventable condition rates fell below national averages, some require consideration.

### Diabetes

Admission rates for short-term complications in Kansas diabetics increased 16.8 percent during 2000 - 2005. Uncontrolled diabetes without complications decreased 13.9 percent between 2000 - 2005, but this indicator for Kansas was still above the national average.

### Pediatric conditions

Kansas admission rates for low birth weight hospitalizations between 2000 - 2005 increased 1.7 percent. Pediatric asthma hospitalizations increased by as much as 7.4 percent. Pediatric gastroenteritis admissions have fluctuated but increased slightly by 0.9 percent. National averages are not unavailable.

### Heart-related conditions

Between 2000 - 2005, admission rates for congestive heart failure and hypertension increased in Kansas 2.0 and 12.9 percent, respectively. Hospitalizations for angina without procedure declined dramatically for Kansas (51.2%). Both Kansas rates fall below the national average.

### Infectious conditions and perforated appendix

Kansas admission rates for bacterial pneumonia and perforated appendix were higher than the national average between 2000 - 2003; however, rates of perforated appendix in Kansas appear to be declining. Bacterial pneumonia admission rates increased 12.8 percent in Kansas from 2000 - 2005. Dehydration admission rates are similar to the national average for 2000 - 2003 and appear to be declining. While more information is needed, admission rates on urinary tract infections have increased in Kansas almost 36 percent from 2000 - 2005.

### Respiratory conditions

Kansans experienced a decrease in admission rates for chronic obstructive pulmonary disease during 2000 - 2005, while hospitalizations for adult asthma increased 38.9 percent. Both rates were below the national average.

## Financial Burden of Preventable Hospitalization

The costs of disease and treatment are complex. Health insurance claims data are used for cost evaluation of care provision. Table 6 summarizes private health insurance financial liability for preventable hospitalizations. Average charge amounts represent the retail cost to the uninsured. The allowed cost is the

insurance company contract price. The average allowed amount multiplied by the number of hospitalizations represents the total amount of health claims covered by private insurance contracts [5].

Minimizing the occurrence of preventable inpatient hospitalizations is critical. Cost estimates like those listed above are important in determining resource needs as Kansas seeks ways to assure equitable distribution and availability of adequate health insurance to its citizens.

Table 6. Average Charged and Allowed Amounts, Number of Hospitalizations and Total Costs for Private Pay Hospitalizations for Prevention Quality Indicators (PQIs), Kansas Residents, 2005

| Description                                   | Average Charged Amounts | Average Allowed Amounts | Number of Hospitalizations * | Total Amount |
|---|-------------------------|-------------------------|------------------------------|--------------|
| Diabetes, Short Term Complications            | \$14,563                | \$5,427                 | 371                          | \$2,013,417  |
| Perforated Appendix                           | \$24,490                | \$9,583                 | 307                          | \$2,941,981  |
| Diabetes, Long Term Complications             | \$13,598                | \$3,653                 | 530                          | \$1,936,090  |
| Chronic Obstructive Pulmonary Disease         | \$11,012                | \$1,854                 | 117                          | \$216,918    |
| Hypertension                                  | \$5,546                 | \$1,457                 | 305                          | \$444,385    |
| Congestive Heart Failure                      | \$13,267                | \$1,931                 | 989                          | \$1,909,759  |
| Low Birth Weight                              | \$70,901                | \$37,576                | 1107                         | \$41,596,632 |
| Dehydration                                   | \$7,375                 | \$2,109                 | 765                          | \$1,613,385  |
| Bacterial Pneumonia                           | \$11,430                | \$2,043                 | 1821                         | \$3,720,303  |
| Urinary Tract Infection                       | \$8,251                 | \$1,802                 | 765                          | \$1,378,530  |
| Angina Without Procedure                      | \$5,917                 | \$1,992                 | 194                          | \$386,448    |
| Uncontrolled Diabetes, Without Complications  | \$5,620                 | \$2,440                 | 173                          | \$422,120    |
| Adult Asthma                                  | \$10,180                | \$3,134                 | 721                          | \$2,259,614  |
| Lower Extremity Amputation/ Diabetes Patients | \$40,758                | \$15,770                | 141                          | \$2,223,570  |
| Estimated Total                               |                         |                         |                              | \$63,063,152 |

Hospital inpatient claims only, Outliers removed

\*Hospital discharge data, Kansas Hospital Association

Data Source: Kansas Health Insurance Information System, Kansas Insurance Department

## Recommendations

Because hospitalizations are the most expensive portion of health care treatment, a goal of health care cost containment is avoidance of preventable hospitalizations. Based on findings for Preventable Hospitalizations, key strategies should address:

- Low birth weight infant care;
- Infectious conditions such as bacterial pneumonia, urinary tract infections, and perforated appendix;
- Short term complications with diabetes and uncontrolled diabetes without complications;
- Hypertension, and
- Adult asthma.

In an aging rural state like Kansas where health care needs are increasing, preventable hospitalization trends hold significant implications for policy development. Private pay preventable hospitalization costs totaled \$63 million in 2005. Avoidance of hospitalization is critical to health care cost containment. In the near future, the KDHE Division of Health will bring together disparate health care services for Kansas to better support effective health decision-making. The Office of Health Assessment will provide information for assessing and improving Kansans' health.

*Rachel Lindbloom, MA, LSCSW  
Office of Health Assessment*

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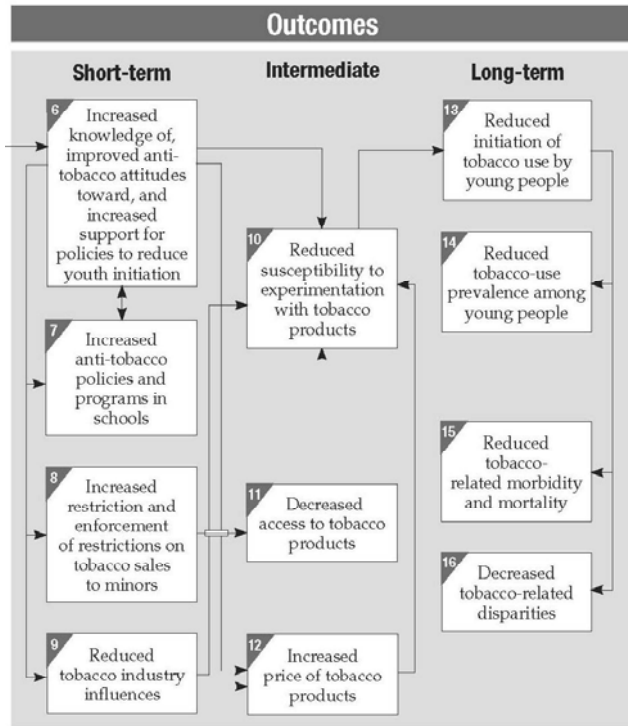
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## Tobacco Prevention Evaluation Plan Started

Tobacco use is considered the leading underlying cause of death in Kansas, costing an estimated \$1.8 billion in health care and lost productivity. Multiple state and local organizations regularly collect, track, and communicate tobacco-related information, yet Kansas does not have a coordinated, comprehensive plan for evaluating tobacco indicators.

During August through October 2007, the Kansas Tobacco Use Prevention Program (TUPP) convened a workgroup representing approximately 35 state and local organizations to develop a coordinated, comprehensive Tobacco Prevention Evaluation Plan for Kansas. The Centers for Disease Control and Prevention (CDC) *Framework for Program Evaluation in Public Health Practice*<sup>1</sup> was the guiding model for the evaluation process, and CDC's *Key Outcome Indicators*<sup>2</sup> provided a comprehensive list of accepted indicators, their definitions, and quality ratings for those indicators.

Figure 2. Portion of Goal Area 1 Logic Model: Preventing initiation of tobacco use among young people



Workgroup planning was organized around the four goals of a comprehensive tobacco prevention program:

- Goal Area 1: Preventing initiation of tobacco use among young people

- Goal Area 2: Eliminating nonsmokers' exposure to second-hand smoke
- Goal Area 3: Promoting quitting among adults and young people
- Goal Area 4: Eliminating tobacco-related disparities

The workgroup identified tobacco-related data resources in Kansas, selected and prioritized outcomes and indicators for each goal area, and identified a schedule for regular dissemination. CDC's logic model for each goal area provided the baseline schema for outcome and indicator discussions. (A portion of the Goal Area 1 logic model is shown in Figure 2 as an example.)

These efforts will result in an annual report of those tobacco-related indicators that are most valuable to multiple stakeholders. These state and local partners will be able to communicate Kansas' progress in comprehensive tobacco prevention consistently to their constituencies.

Workgroup materials are available now online at <http://www.healthykansans2010.com/TUPP/> Final results of the workgroup planning process will be posted on this Web site soon. For more information, please contact Clarence Cryer, Program Director, Tobacco Use Prevention Program at (785) 296-6801 or [ccryer@kdhe.state.ks.us](mailto:ccryer@kdhe.state.ks.us).

Connie Satzler, MS<sup>‡</sup>  
 Harlen Hays, MPH<sup>†</sup>  
 Carol Cramer<sup>†</sup>  
 Clarence Cryer, MPH<sup>†</sup>  
 Ghazala Perveen, MBBS, PhD, MPH<sup>†</sup>  
<sup>†</sup>Office of Health Promotion  
<sup>‡</sup>Envisage Consulting

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## Immunization Rates Decline

Kansas' immunization rates declined in 2006 according to a Centers for Disease Control and Prevention (CDC) national report. The annual National Immunization Survey (NIS) provides state-level estimates of preschool immunization coverage among 19 - 35-month-old children. While its the first year Kansas' rates have declined since 2002, the overall trend remains upward.

Despite this year's decline, Kansas children have been immunized at increasing rates during the last five years. The rate for the 4:3:1:3:3 series has increased 12.4 percent since 2002. The rate for the 4:3:1:3:3:1 series increased 15 percent for the same time period.

## Other highlights

- Immunization rates for the 4:3:1 series (four doses of DTaP, three doses of polio vaccine, and one dose of measles-mumps-rubella vaccine) dropped 3.9 percent to 83.6 percent in 2006.
- Immunization rates for the 4:3:1:3 series (four doses of DTaP, three doses of polio vaccine, one dose of measles-mumps-rubella vaccine, and three doses of haemophilus influenzae type b) dropped to 81 percent in 2006, a decrease of 5.2 percent from the 2005 data.
- Rates for the 4:3:1:3:3 series (four doses of DTaP, three doses of polio vaccine, one dose of measles-mumps-rubella vaccine, three doses of hepatitis B, and three doses of haemophilus influenzae type b) decreased to 79.2 percent. This marks a 4.7 percent decrease from 2005.

- Rates for the 4:3:1:3:3:1 series (four doses of DTaP, three doses of polio vaccine, one dose of measles-mumps-rubella vaccine, three doses of haemophilus influenzae type b, three doses of Hepatitis B, and one dose of varicella) dropped 1.9 percent to 70.1 percent for 2006.
- Rates for several individual immunizations increased according to the survey. Pneumococcal rates increased 15.4 percent and 10.5 percent for the series of four and three doses respectively in 2006. The rate for the hepatitis B series increased 3.1 percent, while the varicella rate rose by 1.2 percent.

The comparison between 2005 and 2006 must be used with caution. The wide confidence intervals overlap, indicating the difference is not statistically significant. The reason behind the change in immunization rates, if present, remains uncertain. Additional study – including a survey of unimmunized population – is warranted to determine the degree of impact of the factors that affect immunization.

Noting the survey results confirm that the health system is broken, Kansas Department of Health and Environment Secretary Roderick L. Bremby said the department is drafting regulations to require immunization verification for daycare enrollment. “By requiring immunizations for children enrolling in daycare, we expect to have similar results that school entry requirements have produced.”

A recent CDC study shows that Kansas’ school entry rates exceed the 95 percent Healthy People 2010 goals for all required immunizations except varicella.

*Office of Communications  
Kansas Department of Health and Environment*

## 2006 Kansas Vital Statistics Counts Released

The Center for Health and Environmental Statistics has published preliminary counts of births, deaths, marriages, and marriage dissolutions by county for 2006. The data are contained in table 7 on page 7. Population-based rates, trend data, and other analyses will be in the *Annual Summary of Vital Statistics*, published. The data will also be made available in the Division of Health query site, Kansas Information for Communities, at <http://kic.kdhe.state.ks.us/kic/>.

## Information a Focus of Kansas Minority Health Advocacy Network

Communication of information and data about health disparities among Kansans was one of several major goals outlined by individuals attending a meeting to reconstitute the Kansas Minority Health Advocacy Network (KMHAN) in October. The meeting, coordinated by the KDHE Center for Health Disparities, served to recognize the efforts of persons who were initially involved in creating the network as well as identifying new challenges and approaches to address health disparities.

Over 17 percent of the population in Kansas is comprised of racial and ethnic minorities. The composition of the minority population varies among regions of the state. Overall, according to Census estimates, the largest minority group in Kansas is Hispanic, followed by Black non-Hispanic.

Data on health disparities is limited. While data is available on a statewide basis, community information is limited. Addition-



ally, more information is needed at the community level on the social determinants of health.

Membership in the network is still being solicited. KMHAN hopes to use the information on health disparities to empower local groups to identify ways to promote health and wellness.

More information can be obtained by calling 785-296-5577 or at <http://www.minorityhealthks.org/>.

*Sharon Goolsby  
Center for Health Disparities*

## KIC System Updated

The Kansas Information for Communities (KIC) Web site has been updated with new functionality and data.

Both hospital discharge by diagnosis and by procedure modules have been redesigned to include Hispanic origin. Users can search using Hispanic origin for years 2003-05, which represents the most current data available. The Kansas Hospital Association, which provides the data to the state, began reporting Hispanic origin in 2003. For those needing more history, separate hospital discharge modules covering 1995-2005 exist. Hispanic origin is not available in this module.

The ability to query KIC using bioterrorism or geographic areas has been included in the birth, cancer, hospital discharge, and population modules. Regions will be added to the death and pregnancy modules when the most current year’s data is released. Users can still query KIC using the whole state or by selecting one or multiple counties. Queries can only be performed on one region at a time.

New data is available for the cancer and population modules. Cancer is now available for 1997-2004. Population is available for 1990-2006. KIC will provide 2006 data for birth, pregnancy and death modules when the 2006 Annual Summary of Vital Statistics is released.

Updates have also been made to the KIC Fast Stats module. This module displays various health, environmental, and social determinants data by county. Fast Stats displays the most current available information via a clickable county map, <http://www.dhe.state.ks.us/kic/profile/countyprofile.asp>

*Brian Sevy  
Office of Health Assessment*

## Aging Site Offers New Analyses

The National Center for Health Statistics has announced a new release of updated statistical tests on the Trends in Health and Aging web-site, <http://www.cdc.gov/nchs/about/otheract/aging/stu.htm>. The updated tests can perform comparisons of two values, the Bonferroni test, test for trends, and comparisons of the slopes for two trends.

The tests are available on-line and as a tool in the downloadable tables. To use statistical tests in the downloadable tables go to <http://209.217.72.34/aging/download.htm>.

The site also maintains Power Point presentations on:

- Major trends and patterns in health and aging,
- Major trends and patterns in diabetes for older Americans, and
- Major trends in medication spending by older Americans,

For more information: <http://www.cdc.gov/nchs/agingact.htm>.

*National Center for Health Statistics*

## National Effort to Measure and Report on Quality and Cost-Effectiveness of Health Care Unveiled

A broad-based group of health care organizations and health quality experts has kicked off a national effort to help improve the

**(Continued on Page 8)**

2006 Kansas Vital Statistics – County Summary\*

| County of Residence | Live Births | Deaths | Marriages | Marriage Dissolutions | County of Residence | Live Births | Deaths | Marriages | Marriage Dissolutions |
|---------------------|-------------|--------|-----------|-----------------------|---------------------|-------------|--------|-----------|-----------------------|
| Kansas              | 40,896      | 24,489 | 18,836    | 9,145                 |                     |             |        |           |                       |
| Allen               | 193         | 180    | 81        | 25                    | Lyon                | 538         | 289    | 261       | 64                    |
| Anderson            | 97          | 100    | 52        | 43                    | Marion              | 118         | 162    | 64        | 24                    |
| Atchison            | 226         | 191    | 150       | 63                    | Marshall            | 119         | 141    | 76        | 36                    |
| Barber              | 63          | 65     | 39        | 17                    | McPherson           | 369         | 374    | 227       | 85                    |
| Barton              | 384         | 313    | 216       | 54                    | Meade               | 50          | 44     | 24        | 6                     |
| Bourbon             | 227         | 206    | 100       | 68                    | Miami               | 398         | 228    | 186       | 41                    |
| Brown               | 141         | 175    | 74        | 31                    | Mitchell            | 61          | 99     | 46        | 30                    |
| Butler              | 766         | 538    | 368       | 178                   | Montgomery          | 487         | 488    | 249       | 165                   |
| Chase               | 33          | 48     | 27        | 9                     | Morris              | 48          | 70     | 37        | 25                    |
| Chautauqua          | 40          | 64     | 23        | 15                    | Morton              | 52          | 33     | 22        | 16                    |
| Cherokee            | 270         | 266    | 120       | 74                    | Nemaha              | 126         | 147    | 73        | 26                    |
| Cheyenne            | 17          | 46     | 10        | 9                     | Neosho              | 228         | 208    | 107       | 54                    |
| Clark               | 21          | 30     | 13        | 5                     | Ness                | 31          | 51     | 16        | 7                     |
| Clay                | 130         | 110    | 62        | 26                    | Norton              | 50          | 72     | 30        | 30                    |
| Cloud               | 123         | 148    | 65        | 40                    | Osage               | 189         | 173    | 86        | 84                    |
| Coffey              | 90          | 112    | 81        | 140                   | Osborne             | 31          | 61     | 27        | 9                     |
| Comanche            | 13          | 39     | 5         | 6                     | Ottawa              | 68          | 81     | 40        | 5                     |
| Cowley              | 456         | 396    | 253       | 124                   | Pawnee              | 59          | 85     | 38        | 37                    |
| Crawford            | 517         | 437    | 229       | 144                   | Phillips            | 56          | 75     | 32        | 24                    |
| Decatur             | 19          | 60     | 21        | 5                     | Pottawatomie        | 334         | 176    | 110       | 46                    |
| Dickinson           | 225         | 207    | 135       | 97                    | Pratt               | 130         | 94     | 82        | 46                    |
| Doniphan            | 90          | 67     | 47        | 28                    | Rawlins             | 24          | 49     | 12        | 6                     |
| Douglas             | 1,257       | 596    | 711       | 248                   | Reno                | 876         | 699    | 504       | 303                   |
| Edwards             | 51          | 36     | 24        | 10                    | Republic            | 51          | 71     | 39        | 10                    |
| Elk                 | 35          | 49     | 22        | 10                    | Rice                | 117         | 135    | 41        | 34                    |
| Ellis               | 345         | 218    | 205       | 77                    | Riley               | 1,066       | 281    | 588       | 213                   |
| Ellsworth           | 54          | 76     | 42        | 37                    | Rooks               | 62          | 73     | 37        | 17                    |
| Finney              | 761         | 196    | 252       | 82                    | Rush                | 29          | 51     | 19        | 14                    |
| Ford                | 651         | 211    | 251       | 134                   | Russell             | 66          | 90     | 38        | 20                    |
| Franklin            | 383         | 245    | 200       | 126                   | Saline              | 796         | 525    | 435       | 237                   |
| Geary               | 629         | 193    | 575       | 202                   | Scott               | 73          | 58     | 39        | 12                    |
| Gove                | 27          | 40     | 16        | 5                     | Sedgwick            | 7,927       | 3,751  | 3,498     | 2,599                 |
| Graham              | 21          | 34     | 13        | 9                     | Seward              | 514         | 134    | 176       | 82                    |
| Grant               | 151         | 60     | 57        | 20                    | Shawnee             | 2,565       | 1,644  | 1,231     | 556                   |
| Gray                | 101         | 52     | 30        | 23                    | Sheridan            | 35          | 31     | 13        | 4                     |
| Greeley             | 11          | 10     | 5         | 0                     | Sherman             | 79          | 75     | 39        | 26                    |
| Greenwood           | 75          | 117    | 44        | 19                    | Smith               | 29          | 45     | 28        | 8                     |
| Hamilton            | 43          | 28     | 18        | 8                     | Stafford            | 45          | 63     | 12        | 8                     |
| Harper              | 84          | 112    | 33        | 23                    | Stanton             | 27          | 24     | 24        | 5                     |
| Harvey              | 451         | 375    | 260       | 87                    | Stevens             | 87          | 43     | 33        | 29                    |
| Haskell             | 68          | 33     | 22        | 8                     | Sumner              | 298         | 296    | 188       | 73                    |
| Hodgeman            | 14          | 26     | 10        | 2                     | Thomas              | 108         | 68     | 55        | 21                    |
| Jackson             | 182         | 146    | 96        | 26                    | Trego               | 27          | 56     | 19        | 12                    |
| Jefferson           | 219         | 183    | 137       | 43                    | Wabaunsee           | 79          | 79     | 37        | 18                    |
| Jewell              | 26          | 52     | 15        | 7                     | Wallace             | 16          | 17     | 8         | 5                     |
| Johnson             | 7,722       | 3,156  | 2,665     | 871                   | Washington          | 52          | 95     | 34        | 19                    |
| Kearny              | 67          | 39     | 17        | 10                    | Wichita             | 44          | 28     | 17        | 4                     |
| Kingman             | 83          | 95     | 44        | 38                    | Wilson              | 143         | 131    | 64        | 43                    |
| Kiowa               | 32          | 33     | 16        | 16                    | Woodson             | 40          | 58     | 26        | 10                    |
| Labette             | 302         | 285    | 127       | 82                    | Wyandotte           | 2,921       | 1,431  | 1,108     | 212                   |
| Lane                | 22          | 26     | 11        | 7                     |                     |             |        |           |                       |
| Leavenworth         | 974         | 523    | 456       | 220                   |                     |             |        |           |                       |
| Lincoln             | 41          | 39     | 23        | 13                    |                     |             |        |           |                       |
| Linn                | 103         | 115    | 56        | 13                    |                     |             |        |           |                       |
| Logan               | 32          | 40     | 17        | 8                     |                     |             |        |           |                       |

\*Residence data are presented for births and deaths  
 Occurrence data are presented for marriages and marriage dissolutions  
 Source: Kansas Department of Health & Environment

**National Effort . . . (Continued from Page 6)**

quality of U.S. health care. The Robert Wood Johnson Foundation (RWJF) will provide nearly \$16 million in grants to develop and test a single national approach to bring consistency to efforts to measure and report information on the quality and cost of care that patients receive.

The project will combine data from many different national health plans to provide a broader picture of physicians' care across their entire practices. It will work with Medicare to aggregate data across the public sector and the private sector. The project will use quality measures endorsed by the National Quality Forum (NQF), and it will collaborate to develop and implement new measures for comparing the cost of care.

This work will support the vision of the Quality Alliance Steering Committee (QASC) to advance high-quality, cost-effective, patient-centered health care by providing a national framework for implementing quality and cost measures to improve care around the country. QASC participants reflect a very broad range of health care stakeholders including provider groups, consumer groups, business alliances, payer groups, regional collaborations to improve quality and government agencies. QASC was established in 2006 by two established quality alliances—the AQA alliance and the Hospital Quality Alliance—along with other stakeholders, to help develop an overall framework for the effective use of standard quality and cost measures nationwide.

Organizers say this quality and cost information is needed to help:

- providers improve;
- consumers make decisions; and
- guide effective policies, payment policies and consumer incentives that reward or foster better provider performance.

Many different private- and public-sector groups have designed models for assessing performance and reporting data. This effort builds on existing approaches to measuring health care quality that have advanced the enterprise, but have not achieved the level of coordination and consistency in implementing measures of quality that can be achieved by the broad group of stakeholders represented by QASC. The goal of this project is to provide a potential solution by bringing everyone together and helping the public get a more complete and accurate picture of the quality of health care.

Throughout the project, resulting information on quality and cost of care will also be used to help identify and address racial and ethnic disparities in health care.

Project participants expect work related to the data aggregation activities to begin this year. They expect all aspects of the project to be completed by 2010—including the implementation of ongoing quality reporting. The timetable allows for ample review by individual physicians of the reports that will be generated after aggregating data on their practices.

*Robert Wood Johnson Foundation*

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As the state's environmental protection and public health agency, KDHE promotes responsible choices to protect the health and environment for all Kansans. Through education, direct services, and the assessment of data and trends, coupled with policy development and enforcement, KDHE will improve health and quality of life. We prevent illness, injuries and foster a safe and sustainable environment for the people of Kansas.

Send comments, questions, address changes and articles on health data intended for publication to: OHA, 1000 SW Jackson, Suite 130 Topeka, KS, 66612-1354, Kansas.Health.Statistics@kdhe.state.ks.us, or 785-296-8627. Roderick L. Bremby, Secretary KDHE; Howard Rodenberg, MD, MPH, State Health Officer and Director, Division of Health; Lorne A. Phillips, PhD, State Registrar and Director CHES; Elizabeth W. Saadi, PhD, Director, OHA; Greg Crawford, Editor.

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Office of Health Assessment  
Center for Health and Environmental Statistics  
Kansas Dept. of Health & Environment  
1000 SW Jackson, Suite 130  
Topeka, KS 66612-1354

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