



# Kansas Health Statistics Report

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## Current Status of Arthritis in Kansas

Arthritis comprises over 100 different diseases and conditions. It is the nation's leading cause of disability [1]. Arthritis affects the quality of day-to-day life including work, doing household chores and engaging in social or recreational activities. Arthritis affects a variety of physical and psychological health domains [2]. An estimated 46 million U.S. adults (about one in five) reported doctor-diagnosed arthritis, and nearly 19 million U.S. adults reported activity limitations due to arthritis according to annual estimates from combined 2003–2005 data [1].

Table 1. Prevalence of doctor-diagnosed arthritis in adults age 18 years and older by selected demographic characteristics in Kansas, 2007

Population Subgroups	Weighted Percentage	95% Confidence Interval	
		Lower Limit	Upper Limit
Overall Prevalence of Arthritis	27.5	26.4	28.6
Age			
18-24 years	7.6	4.1	11.2
25-34 years	9.6	7.6	11.6
35-44 years	17.2	14.8	19.5
45-54 years	29.4	27.1	31.7
55-64 years	46.5	43.9	49.1
65+ years	55.2	53.1	57.4
Sex			
Male	23.5	21.8	25.2
Female	31.3	29.8	32.8
Ethnicity			
Hispanic	12.7	8.9	16.4
Non-Hispanic	28.5	27.3	29.6
Race			
White Only	28.7	27.5	29.9
African American Only	29.2	23.0	35.5
Other Race Only*	14.6	10.8	18.3
More than One Race	20.6	11.5	29.7
Education			
Less than High School	30.8	25.9	35.7
High School Graduate or G.E.D.	32.5	30.2	34.8
Some College	28.5	26.4	30.7
College Graduate	22.2	20.5	23.8
Annual Household Income			
Less than \$15,000	39.2	33.5	44.9
\$15,000-\$24,999	33.6	30.1	37.0
\$25,000-\$34,999	32.2	28.5	36.0
\$35,000-\$49,999	27.7	24.9	30.4
\$50,000+	22.2	20.6	23.8
Employment Status			
Employed for Wages / Self-Employed	20.5	19.2	21.8
Out of Work	21.1	14.0	28.3
Homemaker/ Student	19.9	16.4	23.5
Retired	54.5	52.2	56.7
Unable to Work	59.9	53.3	66.4

\*Other race includes Asian, American Indian/Alaska Native, Native Hawaiian or Pacific Islander, or other race.

With the aging of the U.S. population, the prevalence of doctor-diagnosed arthritis is expected to increase. In the U.S., by year 2030, an estimated 67 million adults age 18 years and older will have doctor-diagnosed arthritis, compared with 46 million adults in 2003–2005 [3]. Arthritis is a major public health issue in Kansas. In 2003, total medical expenditures and lost wages in Kansas were \$1.1 billion, \$700 million in direct costs and \$405 million in indirect costs.

### Method

This article focuses on exploring the current status of arthritis in Kansas using 2007 Kansas Behavioral Risk Factor Surveillance System's (BRFSS) survey data. BRFSS is the annual population-based survey of non-institutionalized adults age 18 years and older, residing in private residences with landline telephones. The BRFSS has tracked health conditions and risk behaviors in Kansas since 1992. It plays a crucial role in providing prevalence data and monitoring the trends of various diseases and risk factors/behaviors. In 2007, Kansas BRFSS collected data from 8,495 respondents. The respondents were asked whether a doctor or health professional had ever told them they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia. The data were statistically weighted and analyzed using SAS software.

The variables included in the analysis were doctor-diagnosed arthritis, age, sex, ethnicity, race, education, annual household income, employment status, disability status, and co-morbid conditions like diabetes, hypertension and asthma. The data were also explored for body weight, leisure time physical activity, and activity limitations due to arthritis. Respondent's age was categorized into six age groups starting from 18-24 years to 65 years and older. Data were classified for ethnicity as Hispanic or Non-Hispanic and race as White, African-American, Other (combining Asian, Native American, Hawaiian or Pacific Islander) and More than One Race. Other variables were also categorized as shown in the following tables.

### Results

Out of 8,495 respondents, 3,038 reported having arthritis. The weighted survey data estimated that about one in four adults in Kansas (27.5%) have doctor-diagnosed arthritis (Table 1). This is about 575,000 adult Kansans.

A higher prevalence of arthritis was observed among the older age groups, especially 65 years and older, as compared to younger age groups. It also showed that females had a higher prevalence of doctor-diagnosed arthritis (31.3%) than males (23.5%). Ethnic disparity was observed in terms of arthritis. Non-Hispanics showed higher prevalence (28.5%) than Hispanics (12.7%). Arthritis prevalence did not vary significantly with race or education status.

Annual household income had an impact, as an increase in annual income corresponded to a decrease in arthritis prevalence, which was significant for categories less than \$15,000 and more

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than \$50,000. About 60 percent of the people who reported being unable to work had arthritis as compared to 20.5 percent of those who were either employed for wages or self-employed.

Table 2. Prevalence of doctor-diagnosed arthritis among adults age 18 years and older by other chronic conditions and risk factors in Kansas, 2007

Population Subgroups	Weighted Percentage	95% Confidence Interval	
		Lower Limit	Upper Limit
<b>Diabetes Status</b>			
Has Diabetes	51.6	47.4	55.7
No Diabetes	25.6	24.4	26.8
<b>Hypertension Status</b>			
Has Hypertension	47.5	45.3	49.8
No Hypertension	20.1	18.9	21.3
<b>Asthma Status</b>			
Current Asthma	40.9	35.8	46.0
No Current Asthma	26.3	25.2	27.4
<b>Disability Status</b>			
Living with a Disability	57.4	54.7	60.1
Living without a Disability	19.9	18.8	21.1
<b>Body Weight</b>			
Normal or Underweight (BMI<25)	22.0	20.2	23.8
Overweight (25<=BMI<30)	27.2	25.3	29.1
Obese (BMI>=30)	35.4	33.0	37.7
<b>Leisure Time Physical Activity</b>			
Participates	24.5	23.3	25.8
Does Not Participate	37.5	35.0	40.0

The results also showed that arthritis was highly prevalent among adults who also had other chronic conditions such as diabetes, hypertension and asthma. About half (52%) of adults with diabetes and hypertension (48%) and more than one third (41%) of the adults with asthma reported arthritis (Table 2). More than half (57.4%) of the individuals living with a disability have doctor-diagnosed arthritis. Doctor-diagnosed arthritis was also highly related to body weight and physical activity status. More than one third (35.4%) of the obese and more than one fourth (27.2%) of overweight individuals had doctor-diagnosed arthritis as compared to 22 percent of the normal or underweight adults. Results showed that 37.5 percent of the adults who did not participate in leisure time physical activity had arthritis as compared to 24.5 percent of the people who did participate.

Table 3. Prevalence of activity limitation among adults who have doctor-diagnosed arthritis in Kansas by disability status, 2007

Population Subgroups	Weighted Percentage	95% Confidence Interval	
		Lower Limit	Upper Limit
<b>Activity Limitation</b>			
Living with a Disability	66.7	63.7	69.8
Living without a Disability	14.8	12.7	16.9

Arthritis is associated with substantial activity limitations [4]. The above study result showed that more than two thirds (66.7%) of the individuals living with disability and having arthritis reported facing limitations in their usual activities due to arthritis.

### Conclusion

Thus, arthritis is a major public health issue in Kansas. Arthritis prevalence is high among Kansans with other chronic diseases and certain risk factors. Health disparities do exist in different population subgroups with respect to arthritis. Statewide arthritis prevention efforts are needed for the prevention of arthritis and to address associated disparities. A collaborative approach with

other chronic disease programs will also be needed to address issues related to arthritis and comorbidities among Kansans.

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### Reference

1. [http://www.cdc.gov/arthritis/pdf/arthritis\\_aag\\_2007.pdf](http://www.cdc.gov/arthritis/pdf/arthritis_aag_2007.pdf)
2. Dominick, K.L., Ahern, F.M., Gold, C.H. & Debra, A.H. (2004). "Health-related quality of life among older adults with arthritis". *Health and Quality of Life Outcomes*, 2:5.
3. [http://www.cdc.gov/arthritis/data\\_statistics/national\\_data\\_nhis.htm#figure1](http://www.cdc.gov/arthritis/data_statistics/national_data_nhis.htm#figure1)
4. Hootman J, Bolen J, Helmick C, Langmaid G. Prevalence of doctor-diagnosed arthritis and arthritis-attributable activity limitation—United States, 2003-2005. *MMWR* 2006; 55(40): 1089–1092.

### Adequacy of Prenatal Care Reported

Prenatal care is defined as pregnancy-related health care services provided to a woman between conception and delivery. It is important to track because there is a strong association between prenatal care and pregnancy outcome. Pregnant women who receive inadequate care are at increased risk of bearing infants who have low birth weight, are stillborn, or die within the first year of life [1]. This data can be analyzed to suggest population groups and geographic areas in need of intervention, therefore protecting the health of these future Kansans.

The report *Adequacy of Prenatal Care Utilization Index, Kansas, 2007*, issued by the Office of Health Assessment, reviews the most recent available data to assess prenatal care.

Of the 39,055 Kansas resident live births reporting prenatal care in 2007, 77.3 percent received adequate or better prenatal care, including 31.9 percent with adequate-plus care; 22.7 percent received less than adequate prenatal care, including 16.3 percent with inadequate care.

Other findings:

- Among mothers whose prenatal care utilization was classified as inadequate (6,351), the vast majority (6,094) were due to late initiation of care. In other words, only a minority of women (257) who initiated their care within the first four months of care received inadequate care.
- Among mothers of low birth weight infants, nearly 78 (77.7) percent received adequate or better care, while 18.9 percent received inadequate care.
- The proportion of mothers who received adequate or better prenatal care was highest among White Non-Hispanic mothers (82.5%), followed by Asian/Pacific Islander Non-Hispanic mothers (79.4%) and Other Non-Hispanic mothers (69.2%). The population group with the lowest percent was Hispanic (61.1).
- The proportion of mothers with inadequate care among Black Non-Hispanic mothers (27.8%), Native American Non-Hispanic mothers (26.2%) and Hispanic mothers (30.3%) were more than twice that of White Non-Hispanic (11.9%) population.

Accurate measurement of prenatal care depends on the accuracy of the index used. Beginning with 1998 data, the Kansas Department of Health and Environment (KDHE) transitioned from a modified Kessner Index to the Adequacy of Prenatal Care Utilization (APNCU) Index, (often referred to as the Kotelchuck Index) [2]. This index attempts to characterize prenatal care (PNC) utilization on two independent and distinctive dimensions: adequacy of initiation of PNC and adequacy of received services (once PNC has begun).

Because of changes in the method of calculating the month prenatal care began – a key component in creating a PNC value – the new data is not comparable with that prior to 2005. The report is at <http://www.kdheks.gov/hci/kacui.html>.

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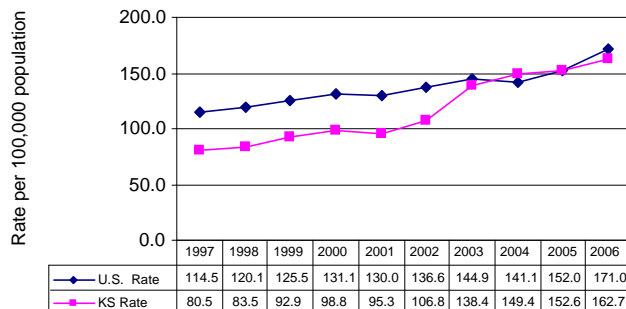
## References

1. C. Arden Mills, Amy Fine, and Sharon Adams-Taylor. *Monitoring Children's Health: Key Indicators* (2nd edition), American Public Health Association, 1989.
2. Kotelchuck M. An Evaluation of the Kessner Adequacy of Prenatal Care Index and a proposed Adequacy of Prenatal Care Utilization Index. *American Journal of Public Health*, 1994; 84:1414-1420.

## Pulmonary Hypertension Hospitalizations Continue to Increase

Pulmonary hypertension is a devastating disease with a poor long-term prognosis. It varies depending on diagnosis caused by diseases of the heart and lung such as COPD, emphysema, pulmonary embolism, left ventricle heart issues, among others. Early symptoms of pulmonary hypertension (PH) appear as shortness of breath and fatigue. Symptoms that often appear in later stages of the disease are reduced exercise tolerance, fainting, swelling of the ankles or legs, and chest pain. Results from a national registry of patients with primary pulmonary hypertension indicated that the duration from onset of symptoms to death was 2.8 years [1]. An estimated 500 to 1,000 new cases are diagnosed annually in the U.S. [2]. Between 1997 and 2006, the estimated number of patients hospitalized with pulmonary hypertension (PH) increased by 73 percent in the U.S. (303,366 to 525,567) (HCUPnet), while in Kansas for a comparable time period, the number doubled (2,238 to 4,856) [3]. The age-adjusted hospitalization rate rose 49 percent in the U.S. and increased 102 percent in Kansas between 1997 and 2006. Kansas rates were lower than national rates until 2003, when a sharp rate increase is evident (Figure 1).

Figure 1. Age-Adjusted Hospitalization Rates for Pulmonary Hypertension as Any Listed Diagnosis by Year, U.S.\* and Kansas\*\*, 1997-2006



\* Nationwide Inpatient Sample, AHRQ

\*\* Kansas Hospital Discharge Data

Rate - Age-Adjusted to U.S. 2000 Standard population

## Categories

The World Health Organization (WHO) divides PH into five groups based on the cause of the disease. Group 1 is called pulmonary arterial hypertension (PAH) and groups two through five are called PH. However, together all groups are termed PH.

- Group 1 PAH includes cases with no known cause, those that are inherited, and those caused by conditions such as congenital heart disease, HIV infection, certain diet medicines, street drugs, and thyroid diseases.

- Group 2 includes PH with left heart disease. Conditions such as mitral valve disease or long-standing high blood pressure can cause left heart disease and PH.
- Group 3 includes PH linked to lung conditions such as COPD (chronic obstructive pulmonary disease) and interstitial lung disease. Group 3 also includes PH linked to disorders such as sleep apnea.
- Group 4 includes PH due to blood clots in the lungs. This group also includes PH due to sickle cell anemia.
- Group 5 includes PH due to various other diseases or conditions like sarcoidosis, Langerhans cell histiocytosis, and lymphangioleiomyomatosis (LAM). This type of PH also may be due to an object, such as a tumor, pressing on the pulmonary blood vessels.

Sometimes other terms are used to describe the different types of PH. Group 1 PAH that has no known cause may be called primary or idiopathic PAH. When PH occurs with or is caused by another disease or condition, it may be called secondary PH [4].

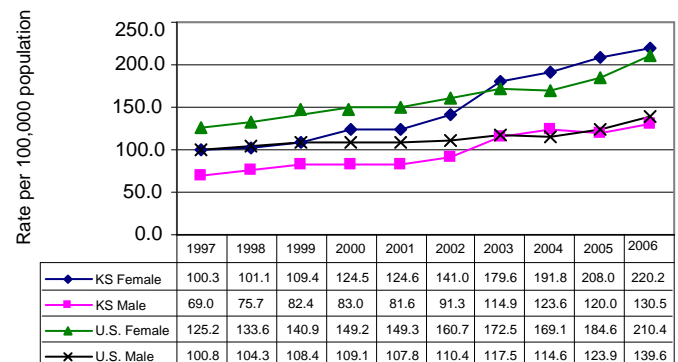
## Risk Factors

Anyone can develop PH. People who are at increased risk for PH include:

- People between the ages of 20 and 60.
- Those of female gender.
- Those who have a family history of the condition.
- Those who have certain diseases or conditions, such as heart and lung diseases, liver disease, HIV infection, or blood clots in the pulmonary arteries.
- Those who use certain diet medicines or street drugs [4].
- Those of African-American descent [5].

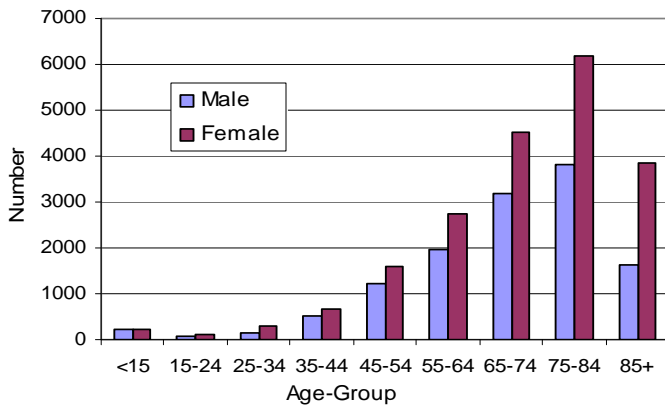
Characteristics like gender, age and race are important risk factors in the development of PH [5]. According to the National Heart, Lung and Blood Institute; there are twice as many cases of primary PH reported for women as men [4]. Both nationally and in Kansas, PH rates increased for both males and females; however, hospitalization rates among women were higher than those in men only after 1995 [6]. In Kansas during 1997 - 2006, 33,623 persons were hospitalized with PH as one of their diagnoses. Among those, 61 percent were women (Figure 2).

Figure 2. Hospitalization Rates for Pulmonary Hypertension as Any Listed Diagnosis by Year by Gender, U.S. and Kansas, 1997-2006



Nationally, although hospitalization rates increased for all age groups, the greatest increase was among adults 75 years and older [1]. In Kansas, the number of men and women hospitalized for PH increased concomitantly with age between 1997 and 2006 (Figure 3).

Figure 3. Hospitalization for Pulmonary Hypertension as Any listed Diagnosis by Age Distribution by Gender, Kansas, 1997-2006



In Kansas, during 2003 - 2006 White non-Hispanics accounted for the largest number of PH hospitalizations (79.2%); however the hospitalization rate for the Black non-Hispanic population was almost 38 percent higher than Whites (Table 4). Black non-Hispanics are 1.4 times as likely to be hospitalized with PH as White non-Hispanics.

Table 4. Hospitalization for Pulmonary Hypertension as Any Listed Diagnosis by Race, Kansas 2003-2006

Race	Number	Percent of Total	Rate*	Relative Rate
White non-Hispanic	14,077	79.2	155.7	1.0
Black non-Hispanic	1,449	8.2	214.7	1.4
American Indian/Alaska Native non-Hispanic	23	0.1	21.9	0.1
Asian/Pacific Islander non-Hispanic	54	0.3	21.8	0.1
Hispanic of Any Race	296	1.7	32.9	0.2
Other/Unknown	1,873	10.5	+	+
All	17,772	100.0	162.0	NA

Source: KHA

\*Rate per 100,000 population

+Not included due to statistical unreliability.

NA – not applicable

## Diagnosis

Because PH can be of five major types, a series of tests may be conducted to determine pulmonary artery pressure, how well the heart and lungs are working, and to rule out other conditions that might be causing hypertension.

A new study from Baylor College of Medicine, finds that although there is increased awareness among doctors of PH, patients are being diagnosed an average of 10 months later than previously [7].

## Treatment

A variety of medications are available to lower blood pressure in the lungs and improve heart function. It may be necessary to try a number of these in order to formulate the most beneficial long-term treatment plan. Currently, about one-quarter of patients can be treated with oral calcium channel-blocking drugs. Intravenous prostacyclin delivered by a portable infusion pump is prescribed for patients who fail to respond adequately to treatment with oral calcium channel blockers [2]. Clinical trials are under way to evaluate a new generation of oral and inhalant drugs that may soon be available for use [8].

Heart-lung or lung transplantation is reserved as a last resort for patients who are non-responsive to other types of treatment [2].

## Data Limitations

Review of community hospital discharge data indicates that there are significant differences in the likelihood of the occurrence of PH hospitalizations between White non-Hispanics and minorities in Kansas. Contributors to this difference may be:

- Rates for American Indian/Alaskan Native non-Hispanics may be affected by the absence of data from the Indian Health Service, which provides services to this population group.
- Hospital discharge rates may be lower for Hispanics because they are healthier or younger than the general population and thus less likely to be ill or hospitalized, data coding issues or a combination of reasons.
- Patients admitted multiple times in a single year are counted as unique patients due to the lack of patient identifiers producing duplicate patient counts.
- The lack of patient identifiers limits data matching capacity and the ability to conduct statistical analysis related to the impact of socioeconomic status (SES), education, income, and other demographic factors that could improve the value of relative rate comparisons [9].

## Conclusion

PH, as any listed diagnosis, is being more frequently reported in hospitalizations. The number of hospitalizations and deaths also increased, particularly among women, blacks, and older adults. PH hospitalizations that occurred among adults age 65 and older suggest that as the proportion of older adults increases, PH will continue as an increasingly frequent diagnosis. This may place a heavier burden of chronic disability and morbidity on families and the healthcare system. Clinical research continues to seek a better understanding of risk factors as well as prevention and treatment strategies to address PH. However, the Centers for Disease Control and Prevention suggests efforts should be considered to prompt physician recognition of the early symptoms, inform them about the treatment-based classification of disease entities, and provide education about multiple evaluations necessary for accurate diagnosis and appropriate treatment [6].

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## References

1. Pal, S. (2006). "Trends in Pulmonary Hypertension Diagnosis and Hospitalization", U.S. Pharmacist Vol. 31:071-4. [http://www.uspharmacist.com/index.asp?show=article&page=8\\_1784.htm](http://www.uspharmacist.com/index.asp?show=article&page=8_1784.htm), Accessed October 16, 2008.
2. American Heart Association (n.d.). "Primary or Unexplained Pulmonary Hypertension", <http://www.americanheart.org/presenter.jhtml?identifier=4752>, Accessed January 5, 2009.
3. Kansas Hospital Discharge Dataset, Kansas Hospital Association.
4. National Heart Lung and Blood Institute (2006). "Pulmonary Arterial Hypertension", [http://www.nhlbi.nih.gov/health/dci/Diseases/pah/pah\\_what.html](http://www.nhlbi.nih.gov/health/dci/Diseases/pah/pah_what.html), Accessed April 30, 2008.
5. "Pulmonary Hypertension Discriminates by Race, Gender", Newswise Medical News (2006). <http://www.newswise.com/articles/view/524202/>, Accessed January 6, 2009.
6. Centers for Disease Control and Prevention. Hyduk, A., Croft, J., Ayala, C., Zheng, Z., Mensah, G. (2005). Pulmonary Hypertension Surveillance—United States, 1980–2002. In: "Surveillance Summaries", MMWR 54(No. SS–5). <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5405a1.htm>, Accessed August 7, 2008.
7. Mundell, E. (2008). "Women at Higher Risk for Pulmonary Hypertension", HealthDay News. <http://www.healthday.com/Article.asp?AID=620745>, Accessed January 6, 2009.

8. Pulmonary Hypertension Association, "Understanding Pulmonary Hypertension" (2007). [http://www.phassociation.org/Learn/Understanding\\_PH\\_broc.pdf](http://www.phassociation.org/Learn/Understanding_PH_broc.pdf), Accessed August 7, 2008.
9. Lindbloom, R., Crevoiserat, J., and Bukovatz, R. "Disparities in Preventable Kansas Hospitalizations Reviewed". In: Kansas Health Statistics Report (2008), No. 37 pp 1-2.

## Trends in Kansas Alzheimer's Age-Adjusted Death Rates, 2000-2007

A recent article in the *Pennsylvania Department of Health Statistical News* (PDHSN) [1] notes that annual age-adjusted death rates for Pennsylvania residents due to Alzheimer's disease have increased in all but one year since the introduction of ICD-10 cause-of-death codes in 1999. The Pennsylvania age-adjusted death rate due to Alzheimer's disease rose from 13.1 deaths per 100,000 population in 1999 to 22.1 deaths per 100,000 population in 2006.

Kansas age-adjusted death rates due to Alzheimer's disease have also risen significantly over the last few years, from 19.9 deaths per 100,000 population in 2000 to 25.2 deaths per 100,000 population in 2007 (Table 5). A look at 95% confidence intervals shows that the increases have usually not been statistically significant from one year to the next, but over time cumulative increases have been significant.

National Alzheimer's mortality rates rose from 18.0 per 100,000 population in 2000 to 22.9 per 100,000 population in 2005 (the last year for which final mortality statistics are available) [2 - 7]. Kansas Alzheimer's mortality rates were higher, rising from 19.9 per 100,000 population in 2000 to 27.9 per 100,000 population in 2005.

The principal disparities in Alzheimer's mortality among population subgroups in Kansas were those between men and women (women were more likely to die of Alzheimer's disease than men), and those between age-groups (Alzheimer's mortality rates increase steeply with increasing age). Racial disparities in Alzheimer's mortality were small and statistically insignificant.

Table 5. Kansas age-adjusted death rates Per 100,000 population for Alzheimer's disease, 2000-2007, with 95% confidence intervals.

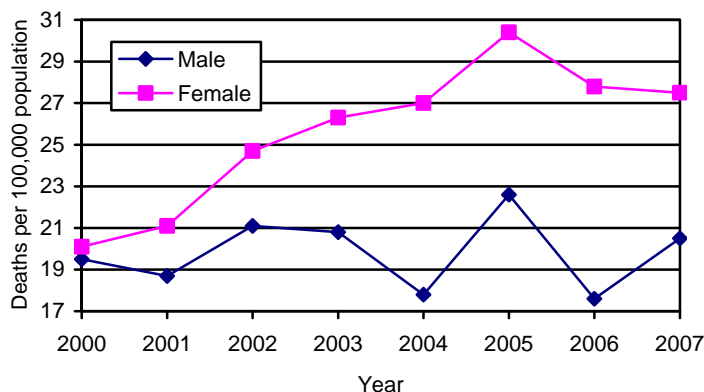
Year	Rate	95% Confidence Interval	
		Lower Limit	Upper Limit
2000	19.9	18.4	21.6
2001	20.3	18.7	21.9
2002	23.7	22.0	25.5
2003	24.4	22.7	26.2
2004	23.7	22.1	25.5
2005	27.9	26.1	29.8
2006	24.3	22.6	26.0
2007	25.2	23.5	27.0

### Disparity by Gender

Kansas Alzheimer's death rates, like those in Pennsylvania, show a marked disparity between men and women, even after age-adjusting. For the entire 2000-2007 period, the Kansas age-adjusted death rate due to Alzheimer's was 19.8 per 100,000 population for men and 25.6 per 100,000 population for women. Ninety-five percent confidence intervals for the two groups overlapped 2000-2002, but did not do so from 2003-2007, indicating that the disparity is now statistically significant.

Furthermore, the increase in Alzheimer's mortality in women from 2000 to 2007 has been much more noticeable than that in men: from 20.1 to 27.5 per 100,000 population for women, but only 19.5 to 20.5 for men. (Figure 4)

Figure 4. Alzheimer's Age-Adjusted Death Rates by Gender



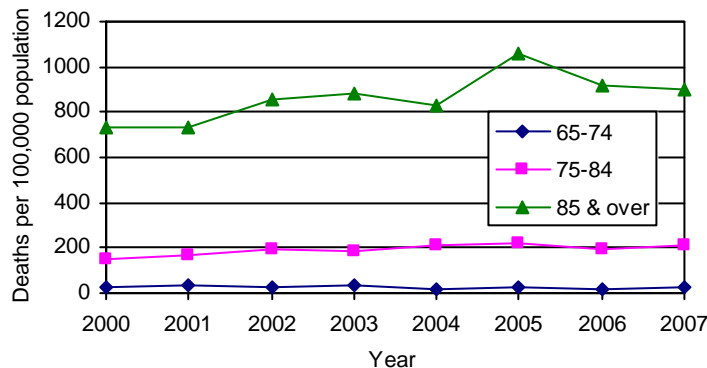
### Disparity by Race

Kansas Alzheimer's death rates have not shown marked disparity between Whites and African-Americans since 2000. Age-adjusted rates for African-Americans were slightly higher than those for Whites in most years, but the 95% confidence intervals overlapped to such an extent that the differences cannot be considered statistically significant. For the entire 2000-2007 period, the age-adjusted death rate due to Alzheimer's disease was 23.7 for Whites and 24.0 for African-Americans. Other population groups were omitted from this analysis, even in combination, since in most years there were not enough Alzheimer's deaths to compute a statistically significant rate.

### Disparity by Age-Group

Alzheimer's mortality rose steeply with age. Over the entire 2000-2007 period there were 55 deaths for the 45-64 age-group (a rate of 1.1 per 100,000 population), 307 deaths for the 65-74 age-group (a rate of 22.3 per 100,000 population), 1,955 deaths for the 75-84 age-group (a rate of 190.3 per 100,000 population), and 3,846 deaths for the 85-and-over age-group (a rate of 867.8 per 100,000 population). Alzheimer's mortality appeared to be increasing most rapidly for the 85-and-over age group. (Figure 5)

Figure 5. Alzheimer's Age-Adjusted Death Rates for 3 Age Groups



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### Reference

1. "Alzheimer's Disease Death Rates on the Rise," Pennsylvania Department of Health Statistical News, Vol. 31, No. 5 (September/October 2008), pp. 1, 5-6, 8.
2. Deaths: Final Data for 2000. National Vital Statistics Report. Hyattsville, MD: National Center for Health Statistics. Available online at: <http://www.cdc.gov/nchs/products/pubs/pubd/nvsr/nvsr.htm>.
3. Deaths: Final Data for 2001. National Vital Statistics Report. Hyattsville, MD: National Center for Health Statistics. Available online at: <http://www.cdc.gov/nchs/products/pubs/pubd/nvsr/nvsr.htm>.

4. Deaths: Final Data for 2002. National Vital Statistics Report. Hyattsville, MD: National Center for Health Statistics. Available online at: <http://www.cdc.gov/nchs/products/pubs/pubd/nvsr/nvsr.htm>.
5. Deaths: Final Data for 2003. National Vital Statistics Report. Hyattsville, MD: National Center for Health Statistics. Available online at: <http://www.cdc.gov/nchs/products/pubs/pubd/nvsr/nvsr.htm>.
6. Deaths: Final Data for 2004. National Vital Statistics Report. Hyattsville, MD: National Center for Health Statistics. Available online at: <http://www.cdc.gov/nchs/products/pubs/pubd/nvsr/nvsr.htm>.
7. Deaths: Final Data for 2005. National Vital Statistics Report. Hyattsville, MD: National Center for Health Statistics. Available online at: <http://www.cdc.gov/nchs/products/pubs/pubd/nvsr/nvsr.htm>.

## Teen Pregnancy Report Issued

The Office of Health Assessment has issued the 2007 Adolescent and Teenage Pregnancy Report. The report contains a series of summary tables detailing pregnancy outcomes for women ages 10-19.

Teenage females (10-19) accounted for eleven percent (11.0) of the pregnancies (47,816) in 2007. Eighty-two percent (81.8) of the teenage pregnancies resulted in a live birth (4,310), eighteen percent (17.7) in abortion (930) and the rest in stillbirths (28).

Other findings include:

- The pregnancy rate for females ages 10-19 was 27.8 per 1,000 women in 2007, up 2.6 percent from 2006 (27.1).
- The rates for teenage subgroups 10-17 (10.9) and 15-19 (53.2) rose 4.8 and 1.9 percent respectively between 2006 and 2007. The rate for teenagers 10-14 years (0.8) declined 11.1 percent during this time period.
- Despite an increase in the number and rate of teenage pregnancies in 2005, 2006 and 2007, the longer term trend is still downward. Teenage pregnancy rates (10-19) dropped 17.5 percent overall during the past two decades 1988-2007 (Table 6).

The report is at <http://www.kdhsks.gov/hci/teenpreg.html>.

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Table 6. Teenage Pregnancies by Number and Rate For Mothers Under 20, Kansas Residents, 1988-2007

Year	# (10-19)	Age-Group				Rate (10-19)	Pregnancy Rate		
		10-14	15-17	18-19	15-19		10-14	10-17	15-19
1988	5,903	90	2,004	3,809	5,813	33.7	1.0	15.9	67.7
1989	5,873	117	1,871	3,885	5,756	33.4	1.3	14.9	68.6
1990	5,993	93	1,930	3,970	5,900	35.1	1.1	15.0	70.5
1991	5,743	98	1,904	3,741	5,645	33.3	1.1	14.4	69.0
1992	6,165	111	2,110	3,944	6,054	34.8	1.2	15.4	72.6
1993	6,405	133	2,219	4,053	6,272	35.2	1.4	15.9	73.3
1994	6,500	124	2,302	4,074	6,376	34.8	1.3	15.9	71.9
1995	6,552	153	2,332	4,067	6,399	34.5	1.6	16.1	69.5
1996	6,498	133	2,276	4,089	6,365	33.9	1.4	15.6	67.0
1997	6,469	123	2,260	4,086	6,346	33.3	1.3	15.3	64.7
1998	6,444	108	2,087	4,249	6,336	32.4	1.1	13.8	62.0
1999	6,402	103	1,979	4,320	6,299	31.9	1.1	13.1	60.7
2000	6,090	94	1,819	4,177	5,996	30.3	0.9	12.0	58.7
2001	5,818	79	1,819	3,920	5,739	28.8	0.8	11.9	56.0
2002	5,586	86	1,684	3,816	5,500	28.3	0.9	11.3	54.7
2003	5,174	73	1,559	3,542	5,101	26.4	0.8	10.5	51.3
2004	5,026	71	1,492	3,463	4,955	26.1	0.8	10.3	50.3
2005	5,044	69	1,483	3,492	4,975	26.7	0.8	10.4	50.8
2006	5,192	85	1,507	3,600	5,107	27.1	0.9	10.4	52.2
2007	5,268	70	1,573	3,625	5,198	27.8	0.8	10.9	53.2

\*Rate per 1,000 female age-group population

Teenage pregnancies are the sum of live births, stillbirths and abortions.

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