



*Kentucky Women's
Health 2002*

*Data,
Developments
and Decisions*

Contact

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“...promoting and safeguarding the health and wellness of all Kentuckians.”

Kentucky Women's Health 2002

Data, Developments and Decisions

**PREPARED BY
THE OFFICE OF WOMEN'S PHYSICAL & MENTAL HEALTH
COMMONWEALTH OF KENTUCKY**

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Foreword

A Broader Definition of Women's Health

Historically, the concept of “women’s health” was limited to reproductive health and focused nearly exclusively on the reproductive and maternal health needs of women. It was assumed that, except for the differences in reproductive functions, men and women were biologically the same. Over time, this assumption severely limited the knowledge of the distinct health care needs of women. Important biological differences between women and men were left undiscovered. For example, heart disease has traditionally been viewed as a “man’s disease”, yet more women die each year of heart disease than men.

During the last century, women’s health was significantly influenced by two major trends. First, women’s health greatly improved with an increase in planned pregnancies and fewer births. Complications due to childbirth were once a leading cause of death for

women. (Fig. 1) In 1900, the average woman had eight children compared to today’s woman who has an average of two. Infant mortality rates were also ten times greater than the current rate. Great strides have been made in reducing both infant and maternal mortality rates in the last century.

Second, the average woman’s life expectancy increased 30 years. With this increase in longevity, the average woman will live approximately one-third of her life post-menopausal. With the onset of estrogen loss, women experience a wide range of physical and mental symptoms that can occur over a ten-year time frame. Conditions such as a decline in mental acuity, an increase in bone weakness, and a heightened risk of heart disease are but a few of the consequences of menopause. Whereas women’s health was generally associated with reproductive and maternal health, equal importance must now be given to a woman’s midlife and elder years.

Figure 1.
U.S. Women

	<u>1900's</u>	<u>1990's</u>
Primary Cause of Death	TB and child birth	Heart Disease
Age at Death	48.3	79
Average Number of Children	8	2
Infant Mortality Rates	124 to 158 per 1,000	7 to 14 per 1,000
Number in Work Force	Not Counted	43%
Eligible Voters	0%	52% of U.S. Population

SOURCE: U.S. Office of Women's Health and the FDA History Office

Aging itself, has become a woman's health issue.

Today's definition of women's health includes health concerns not only unique to women, but also conditions more prevalent among women or those of a more serious nature to women. (Fig. 2) As such, the definition of women's health is increasingly discussed in a larger context of social, economic and political influences. Women make 75 percent of the household spending decisions, including when family members go to the doctor or respond to emergency situations. Much is being learned about how women access the healthcare system, what influences their treatment choices and how healthcare is delivered differently for men and women. Research published in the last decade has also shown that patterns of care are often quite different for men and women with apparently similar problems. For example, women get more prescriptions, whereas men get more tests and referrals to specialists.

The Changing Face of Kentucky's Women

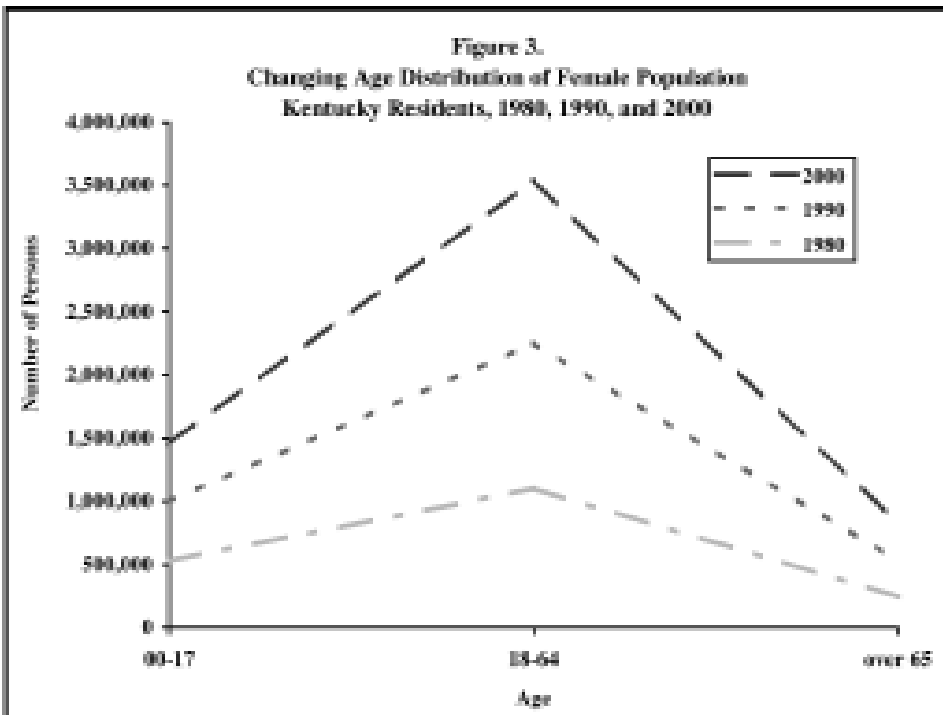
Demographics of women in Kentucky are changing along with the rest of the nation. Most noticeably, our female population is growing older and comprising a larger portion of those over 45. According to the 2000 Census, Kentucky's adult population (men and women) between ages 45 and 54 grew 46 percent from 1990 to 2000, compared to only a 7.5 percent increase the previous decade.

The sharp incline in citizens in the 18-64 year old age group (Fig. 3) includes the "baby boom" generation and includes many women who will enter retirement age within the next ten years. Issues affecting quality of life for this age group will continue to be a prominent public policy issue. Access to healthcare, prescription benefits, Medicare and long-term care services will all factor significantly into the quality of life realized by elderly women in Kentucky (see *Chapter 11*:

Figure 2.

"Women's health care refers to the prevention, screening, diagnosis, and management of conditions that are unique to women, more prevalent to women, more serious among women, have different risk factors for women, and/or require different interventions in women... this broad definition serves to distinguish women's health care from the narrower concept of reproductive health care."

-- American College of Physicians



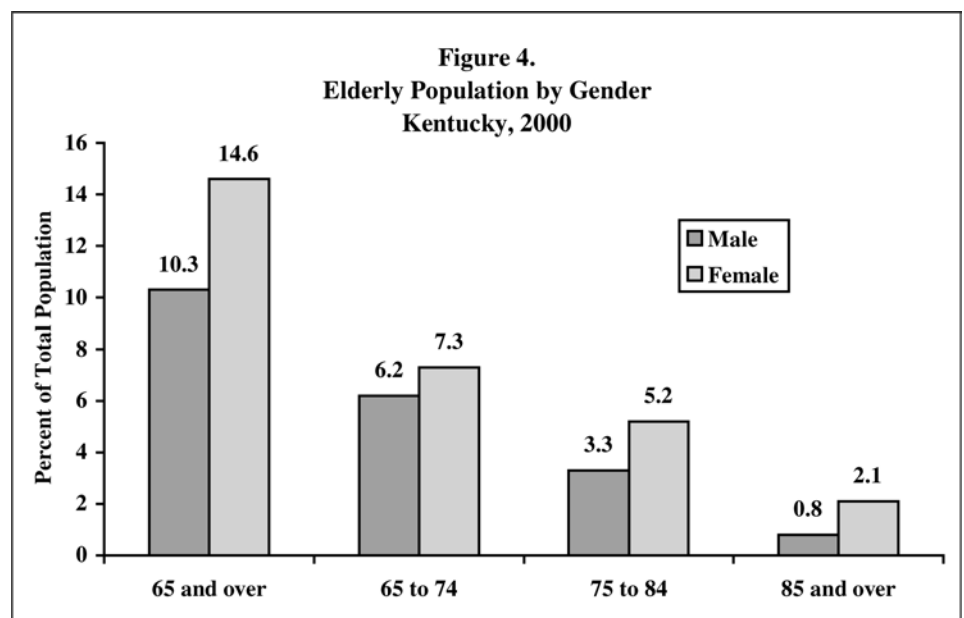
SOURCE: U.S. Census Bureau, 2000

aging women due to its traditional emphasis on maternal and childbirth issues. Once women reach middle age, their healthcare needs shift from primarily reproductive in nature to those more chronic in nature, such as arthritis and diabetes. Lifestyle factors begin to play a more significant role in a woman's health as years of poor diet, smoking and sedentary lifestyle increase the risk of chronic conditions. As the population continues to age, it will be increasingly important to focus on *preventive* healthcare measures that will benefit a woman not only during her childbearing years, but for her entire life span.

Health Issues Facing the Aging Woman).

Women live longer than men by an average of seven years. They also comprise a greater percentage of the population for every age group over the age of 65. (Fig. 4) It is estimated that by the year 2030, approximately one in four women in this country will be over the age of 65. It will be challenging for the public health system to serve

In addition to an aging population, Kentucky has a changing racial and ethnic profile, however, not to the degree seen nationally. Caucasians continue to represent 90 percent of the population of Kentucky compared to 75 percent nationally. (Fig. 5) But increases in minority populations in Kentucky are significant and will continue. During the last decade, the growth rate of Kentucky's non-white citizens, in all racial



SOURCE: U.S. Census Bureau, 2000

**Figure 5.
Population Quick Facts, Kentucky, 2000**

<u>Characteristic</u>	<u>Kentucky</u>	<u>US</u>
Population 2000	4,041,769	281,421,906
Population, percent change, 1990 – 2000	9.6	13.1
Female population, percent 2000	51.1	50.9
Females, 65 years and over, percent 2000	7.4	7.3
African-American persons, percent 2000	7.3	12.3
Caucasian persons, percent 2000	90.0	75.1
Persons of Latino or Hispanic Origin, percent 2000	1.5	12.5

SOURCE: U.S. Census Bureau, 2000

**Figure 6.
Profile of General Demographic Characteristics for Kentucky
1990, 2000 and Change 1990-2000**

<u>Race</u>	<u>1990</u>	<u>2000</u>	<u>Change</u>	
			<u>Number</u>	<u>Percent</u>
White	3,391,832	3,640,889	249,057	7.3
African American	262,907	295,994	33,087	12.6
American Indian & Alaskan Native	5,769	8,616	2,847	49.3
Asian	16,983	29,744	12,761	75.1
Hispanic or Latino	21,984	59,939	37,955	172.6
Native Hawaiian & Other Pacific Islander	829	1,460	631	76.1

SOURCE: U.S. Census Bureau, 2000

and ethnic groups, exceeded that of whites although the actual numbers are small in comparison to the growth in whites. The African American population increased 12.6 percent and the Hispanic (or Latino) population increased 172.6, compared to a 7.3 percent increase in the state's white population. (Fig. 6)

Kentucky's Office of Women's Health

The federal government opened an Office of Women's Health in 1991 to bring awareness to the unique health care needs of women across their life span. Today, nearly all U. S. Public Health Service agencies have an office to coordinate research, education and services geared specifically to women.

In Kentucky, the Office of Women's Physical and Mental Health opened in October, 2000

as the result of 1998 legislation that addressed a range of women's issues. Our mission is to improve the health and well-being of all Kentucky women. The office has two main functions. First, the office is to serve as a repository of data on women's health and to make recommendations for improving the collection, analysis and reporting of women's health data. Data will be published and available to the public, hopefully on a biennial basis. This report, *Kentucky Women's Health 2002: Data, Developments and Decisions*, is the first such report to be issued. It is intended not only to educate professionals and the public about Kentucky women's health, but also to establish the office as the principal clearinghouse for data on women's health.

Second, the office is to administer a Women's Health

Resource Center to educate women about the importance of preventive healthcare. We do this through our web site at <http://chs.state.ky.us/womenshealth>, educational offerings, exhibits, editorials, fact sheets and speaking engagements. Our theme is consistent in all our outreach efforts: – *good health is a habit that requires daily awareness.* Important lifestyle choices made every day determine to a great degree a woman's chance of living a healthy life.

About this Report

Kentucky Women's Health 2002: Data, Developments and Decisions is a compilation of national and Kentucky-specific health statistics and important developments in the areas of highest importance to women's health. It reflects the collaborative input from many within both the public and private healthcare delivery system. In creating the report we acknowledged that it would be easier to obtain public health data than data from private sources and easier to obtain data on physical health than mental health. We have tried to use the most recent sources available and where appropriate, compare Kentucky's statistics with national or regional ones. Most data is not available by county, but much of it is available by Area Development Districts (ADDs). We relied heavily upon data available through the Kentucky Department for Public Health, and dug deep into the Behavioral Risk Factor Surveillance Survey (BRFSS) to determine trends in women's screening rates and general health.

Aiding us along the way was a diverse and experienced Task Group comprised of individuals both within and outside state government. Their insights and suggestions were very helpful in our efforts to "re-set the standard of public health reporting." We acknowledge them publicly in this report, but hope that our "thank you's" linger with them for a much longer time. As with any large-scale project, there is one person who does the lion-share of work. Melissa Adkisson, MHA, Executive Staff Advisor, aptly filled that role for the better part of a year for the development of this report. She single handedly wrote much of what you will read and diligently researched topics looking for comparisons between Kentucky and the Nation, other states, and regions within Kentucky.

Kentucky Women's Health 2002: Data, Developments and Decisions represents the most comprehensive assessment of Kentucky women's health to date. We encourage you to learn from it, make use of it in your professional and personal lives, and find ways to join us in improving the health and well-being of one of Kentucky's greatest assets – our women.



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Executive Summary

Despite improvements in healthcare delivery and a slight decline in the rate of uninsured women, the health of Kentucky women remains mixed. In recent years we have seen improvements in many areas of maternal and reproductive health with the lowest infant mortality rate in history and a continued decline in teenage births. More women have access to prenatal care and are knowledgeable of the benefits of taking folic acid. We are also pleased with the decline in mortality rates of breast and gynecological (ovarian, cervical and uterine) cancers, due in large part to the highest rates of breast and cervical cancer screenings in history.

However, the health of Kentucky women is steadily declining due to poor dietary habits, high rates of smoking, and a lack of physical exercise. Combined together, these behavioral risk factors have led to an increase in obesity, hypertension and diabetes for women in the past decade. Heart disease is the leading cause of death for women in the state; the mortality rate of heart disease among Kentucky women exceeds the national rate 441 deaths/100,000 women versus 401 deaths/100,000 women.

Kentucky's population is aging and the women are no exception. In the next few decades women over the age of 65 will represent 25 percent of the population and with an increased longevity comes unique health concerns. As such, aging itself has become a women's health issue. Post-menopausal health will be equally as important as traditional reproductive health. And not to be forgotten, women in their middle years (from ages 44 to 65) are especially susceptible to chronic diseases such as diabetes, arthritis, and thyroid disease. These women are often "sandwiched" between caring for their own children and caring for ailing, older parents. Coupled with their own career and personal demands, middle aged women often find themselves too busy to make healthy lifestyle choices or overwhelmed with conflicting priorities.

To better understand the status of women's health in Kentucky, this report describes the issues of importance to women's physical and mental health at various life points. Where appropriate, Kentucky statistics have been compared with national norms or trends in surrounding states.

YOUNG WOMEN'S HEALTH ISSUES

Adolescence is a very special time in a young woman's maturation. Bodily changes, reproductive development, and exposure to lifestyle choices pose new and challenging situations that can influence a young woman's health. Some, such as substance abuse and risky sexual behavior, can have lifelong consequences. This is a time when establishing a healthy view of one's maturing body is an important first step to maintaining a positive body image.

- Kentucky saw a decline in infant, child and teen mortality rates from 1990 to 1998, as well as a decline in teen dropouts and teens not attending school.
- During the 1990's Kentucky's teen birth rate dropped from 68 births per 1000 females aged 15-19, to 56. This rate, however, is still above the national norm of 50 births per 1,000 adolescent females.
- Kentucky's teen pregnancy rate declined 12.5 percent from 1995 to 1997.
- Teens are at high behavioral risk for acquiring most sexually-transmitted diseases (STDs).
- Young women in Kentucky have one of the highest

smoking rates of youth in the nation. Two-thirds of the girls who smoke frequently said they do so to eliminate stress.

- In Kentucky, the five leading causes of death for female youths ages 15 to 24 were unintentional injuries, suicide, homicide, malignant neoplasms and heart disease.

MATERNAL AND REPRODUCTIVE HEALTH

Maternal and reproductive health remain a cornerstone of public health services. Programs aimed at prenatal health through post-delivery care have resulted in more women having healthier babies. In 2001, Kentucky reported the lowest infant mortality rate since statistics were first recorded.

- Infant mortality rates declined 25 percent between 1991 and 1999 and now are the same as the national rate. However, racial disparities exist. In 1998, there were 6.9 deaths per 1,000 live births for white women, in comparison to 14.7 deaths per 1,000 live births for black women.
- Low birth weight, (a baby weighing less than 2500 grams or 5 pounds/2 ounces at birth), is a contributing factor to infant mortality. The rate of low birth weight due to short gestation decreased slightly in 2000, however, the low birth weight rate for full-term

babies slightly increased.

Factors contributing to low birth weight full-term babies include but are not limited to: smoking, alcohol, illegal drug use, and multiple births.

- Pre-term delivery rates are increasing for Kentucky's white women and decreasing for black women.
- "Presumptive eligibility" for Medicaid services to pregnant women was implemented in 2001 to give women 90 days of prenatal care while full Medicaid eligibility is being determined.
- It is believed that babies born with fetal alcohol syndrome are seriously underreported in the state.
- Nearly 40,000 women in Kentucky received folic acid supplements in 2001.
- The birth rate for women ages 30-34 rose 5 percent between 1999 and 2000 and is the highest in 30 years.
- In 2000, Kentucky local health departments served nearly 119,000 clients in their family planning clinics. Of these, the majority used oral contraceptives as their choice of birth control.
- Three fertility clinics in Kentucky serve clients with fertility complications ranging from tubal disorders to endometriosis.
- Kentucky is one of 25 states that provides "direct access" to ob/gyn care. This enables a woman to schedule ob/gyn services without a referral from her managed care primary physician.

CHRONIC CONDITIONS

Chronic conditions are considered to be medical ailments that are not easily cured and require continued monitoring, intervention and therapy. Kentucky women exhibit many of the lifestyle risk factors – smoking, poor diet, sedentary lifestyle – that are known contributors to chronic conditions. The most well known and frequently discussed chronic conditions are hypertension, heart disease, diabetes, cancer and stroke.

- In 2000, 23 percent of the women in Kentucky reported their health as being "fair to poor" in contrast to 15 percent of women nationwide.
- According to surveillance data collected by the Kentucky Department for Public Health, Kentucky women have the highest rate of sedentary lifestyle of women in the nation.
- Similarly, obesity rates for women in Kentucky have risen dramatically over the past ten years, from 12.7 percent in 1990, to 22 percent in 2000.
- Smoking contributes to serious chronic conditions such as heart disease, chronic obstructive lung disease, emphysema, cancer and stroke.
- Women utilized ambulatory services 33 percent more often than men, even if you excluded pregnancy-related visits.

- The burden of cardiovascular disease in Kentucky is among the highest in the nation, ranking 5th in age adjusted mortality rates.
- Heart disease should no longer be considered a “man’s disease.” Women exhibit unique signs and symptoms when having a heart attack that differ from men.
- Admissions to hospitals due to cardiovascular disease represents the largest proportion of non-pregnancy related hospitalizations for women in Kentucky.
- In Kentucky, 41.6 percent of black women have hypertension, compared to 28.5 percent of white women.
- Women and the elderly account for more of the population with diabetes; about 54 percent of the diabetic population.
- In 1999, chronic obstructive lung disease was the 5th leading cause of death among Kentucky women.
- Since 1980, female asthma rates have nearly doubled.
- Arthritis, more common in women than men, is considered by the Centers for Disease Control and Prevention to be the leading cause of disability in the U.S.
- Women are at particular risk for osteoporosis because, even at their peak, bone mass for women is naturally lower than for men. Post-menopausal women are at highest risk due to a loss of estrogen’s bone protective nature.

CANCERS

Cancer is the second leading cause of death among women nationally and in Kentucky. For nearly a century, breast, colon and reproductive cancer mortality rates among women were high and held fairly constant. With improvements in screening, early detection and treatment, these high rates have been declining. In their place has come a surge in lung cancer mortality. In 1987, lung cancer surpassed breast cancer as the leading cause of cancer-related death in women.

- Breast cancer is the most common form of cancer among women and the second leading cause of cancer-related death (behind lung).
- Female breast cancer incidence rates increased from 140 per 100,000 women in 1996 to 160 per 100,000 in 1999; however, mortality rates have declined. An increase in incidence rate is to be expected with an increase in screenings.
- Nearly 75 percent of women age 50 and over have had a screening mammogram in the past year. The number of breast cancer screenings at local health departments increased 17-fold during the 1990s.
- Kentucky has a rather high, unexplainable rate of colorectal cancer both among men and women. Incidence rates among women are 48 per 100,000 women versus the national

average of 37 per 100,000.

- Mortality rates from colorectal cancer in African American women have increased since 1994 while rates for white women have declined.

TOBACCO USE AND SMOKING-RELATED ILLNESSES

Efforts to minimize tobacco use and smoking-related illnesses are challenged by the traditional economic, employment and political strength of the tobacco industry. Kentuckians (men & women) overall had the highest smoking rate in the nation in 2000; nearly one in three adults smoked cigarettes. The U.S. Surgeon General’s Report on Women and Smoking was released in early 2001 and drew considerable attention to the tobacco epidemic among women and the unique health care consequences of smoking on women’s health.

- Kentucky women had the second highest smoking rate in the nation in 2000 (behind Nevada).
- Kentuckians who smoke generally have 12 years of education or less, live in poverty and are under the age of 44.
- National data indicate that women, adolescents and whites are particularly vulnerable to developing nicotine-dependency symptoms and that at similar levels of smoking, women are more likely to become addicted than men.
- Women who smoke experience more wheezing,

breathlessness, persistent cough and asthma than men who smoke.

- Cigarette smoking during pregnancy can result in low-birth weight babies and is associated with long-term learning disabilities.
- Kentucky women have the second highest smoking rate during pregnancy in the nation and in some Eastern Kentucky counties nearly 50 percent of the pregnant women smoke.
- Both male and female middle school and high school student smoking rates greatly surpass national rates. A higher percentage of high school girls than high school boys report smoking in the prior month.
- 58 percent of all hospital discharges in the state for chronic obstructive lung disease are women.
- The percentage of women under age 50 with lung cancer is increasing in Kentucky.
- In 1999, the lung cancer incidence rate for females was 56.8 per 100,000 individuals, the third highest in the nation, and the age-adjusted female death rate from lung cancer was 51.9 per 100,000, the second highest in the nation.

MENTAL HEALTH AND MENTAL ILLNESS

At least one in four Kentuckians will experience some type of mental health problem in their lifetime. Women are twice as

likely as men to suffer from clinical depression and most anxiety disorders afflict women more often than men.

- According to public health data, nearly 30 percent of Kentucky women reported three or more poor mental health days in the previous month. Nearly 13 percent reported having a poor mental health day 30 days in the prior month.
- Self-reported mental health rates vary by race; generally white women report more poor mental health than black women.
- Kentucky women who reported high rates of mental distress are likely to have less than a high school education, be unemployed, and never married, or widowed/divorced/separated.
- In 2000, 22 percent of women and 43 percent of men receiving services at Kentucky community mental health centers were diagnosed with schizophrenia. Women were most often diagnosed with affective disorders (39 percent).
- Of the hospitalized women diagnosed with depression, 58 percent resided in a rural country versus 42 percent in urban areas.

SUBSTANCE ABUSE

Women fight a difficult battle when confronting substance abuse. Society views women with substance abuse

problems differently than men, usually with more shame and condemnation. Additionally, women are fearful of being separated from their children if their problem becomes public.

- According to estimates from the University of Kentucky in 1999, only approximately 22 percent of Kentucky's women who abused alcohol and/or other substances received treatment.
- Studies show that women develop substance abuse problems faster than men after the initiation of abuse and generally suffer more physical problems, such as vitamin deficiency, liver disease and diseases of the pancreas.
- Of the 1,062 female prisoners in the state in 2001, 42 percent had at least one drug-related offense.
- In 1999, the Center for UK Drug and Alcohol Research estimated that approximately seven percent of women of childbearing age (15-44 years) were in need of substance abuse treatment services. Prior studies indicated that approximately 10 percent of women who presented in local health departments for pregnancy testing were in need of substance abuse treatment.
- As part of the KIDS NOW initiative, pregnant women can receive counseling and treatment services for substance abuse.
- In 1999, approximately one half of all high school students reported drinking

in the prior month.

- Use of Oxycontin, a prescription narcotic, has been a particularly troublesome problem in Eastern Kentucky. Between 1998 and 2000, the number of clients being treated for an addiction to the drug within the state's community mental health system increased 163 percent.

VIOLENCE AGAINST KENTUCKY WOMEN

Historically, sexual assault and domestic violence were viewed as issues of importance to the justice system. Increasingly, however, public health advocates are recognizing and discussing the significance of a victim's short and long-term health consequences. Acts of violence are directly linked to a number of negative physical and mental consequences for women.

- Studies show that women are more likely to be killed by their male intimate partners than by any other type of perpetrator.
- The Governor and First Lady of Kentucky implemented a Executive Branch Policy on Domestic Violence and Sexual Assault in the Workplace aimed at eliminating domestic violence and sexual assault in any form.
- During 2001, over 2,000 women sought shelter from domestic abuse at one of the

state's battered women's shelters. An additional 20,500 women were served through the outreach or nonresidential services of these programs.

- During 2001, 4,300 women were served through the Rape Crisis Centers. An additional 2,648 family members and friends of victims were also served.
- Considerable advancements have been made in protecting victims of domestic violence and sexual assault.

RURAL WOMEN'S HEALTH

Over fifty percent of Kentucky's women live in a rural environment. As such, they are confronted with high rates of poverty, isolation and a lack of access to health care. In some areas, one in four individuals lacks health care insurance.

- The majority of women with household incomes less than \$15,000 annually report having fair to poor health.
- Twenty-six percent of the population living in the Kentucky River district (Southeastern Kentucky) lacks health care insurance.
- Access to health insurance is a significant factor in determining a woman's decision to seek regular and preventive health care.
- Behavioral risk factors such as smoking and lack of exercise are especially prominent in rural communities.
- In some Eastern Kentucky

counties, nearly fifty percent of all pregnant women smoke during pregnancy.

- Heart disease and shock accounted for 11 percent of rural women's hospitalizations compared to 8.7 percent of urban women's.
- Most female cancer incidence rates are higher in rural counties than urban. Breast cancer is the exception.
- The elderly in rural Kentucky suffer more from cerebrovascular disease and pneumonia/flu than urban counterparts.

COMMUNICABLE DISEASES

Advances in therapies and treatments for opportunistic infections have reduced the AIDS incidence and mortality among Kentuckians. However, the greatest increase in new AIDS cases in Kentucky is among women.

- The number of new AIDS cases among women remained constant between 1995 and 1999, but decreased 42 percent in men.
- Estimated AIDS deaths among males decreased 71 percent from 1995 to 1999 but only declined 33 percent among females during the same time.
- African American women are disproportionately affected by the AIDS epidemic, representing 42 percent of new AIDS cases among women in the state.

- Initiatives to target HIV testing among pregnant women and women at risk should be continued.

Women bear the greatest burden of sexually-transmitted diseases (STDs) in the nation and in Kentucky. Teens are especially vulnerable for acquiring STDs and more than 80 percent of all STDs occur among individuals less than 29 years of age.

- The overall incidence of chlamydia (among men and women) nearly doubled during the 1990s. Kentucky's youth aged 15 to 19 had the highest reported incidence of any age group. Left undetected, chlamydia can lead to pelvic inflammatory disease and infertility in women.
- The overall incidence of gonorrhea and syphilis dropped during the 1990s.

AGING ISSUES

Census data for 2000 indicate that 12.5 percent of the state's population is 65 years of age or older. Women comprise the majority of this age group. With an increase in life span to 80 years, women can expect to live one-third of their lives post-menopausal. This presents unique health concerns for the aging woman.

- Menopause signals a woman's loss of estrogen and is associated with a myriad of symptoms and an

increased risk of osteoporosis, heart disease, dementia and certain cancers.

- The majority of Kentucky women over the age of 35 that have had a hysterectomy or are menopausal or post-menopausal, are taking hormone replacement therapy.
- One in 10 people over the age of 65 has Alzheimer's disease.
- In 2000, 49 percent of the women in Kentucky were being treated for arthritis compared to 36 percent of the state's men.
- In 1999, 16 percent of the total population was enrolled in Medicare; 54 percent were female.
- Overall, more than half (52%) of retirees in Kentucky report not being able to afford all of their medical expenses.
- Women, because of their longer life span, are more likely than men to live with functional impairments necessitating a need for long-term care.
- Aging, is the most commonly cited reason a person needs assistance with care. The typical caregiver in this country is a married woman in her mid-40s who works full-time, is a high-school graduate, and has an annual household income of \$35,000.

Women's health in Kentucky is a complex mix of social, demographic, cultural and

political forces. Traditional views of women as primary caregivers, often placing their own health at risk while caring for others, has left a legacy of mixed views as to what women's health actually encompasses. From a public health perspective, great strides have been made in maternal and child health in the past decade and Kentucky women are delivering healthier babies each year. The challenge will be to extend healthy behaviors into middle age when women are most vulnerable to chronic diseases such as cancer, heart disease and diabetes. It will require a clear understanding of the unique health needs of women across their life span and a commitment to viewing women's health in a broader social, economic and cultural context.

Young Women's Health Issues

Adolescence represents a dynamic, developmental period when young women make important choices about lifestyle behaviors, including diets, physical activity, sexual activity, and use of tobacco, alcohol, and other drugs that can influence their health and well-being throughout adulthood.¹ Many health behaviors are learned during this important time in women's lives and often carry into adulthood. These behaviors can have a profound impact on the quality of life for women, both physically and mentally. Reaching this vulnerable population with positive health messages can improve the lives of adult women in the years to come.

In 1998, Kentucky's youth ranked 36th nationally for overall well-being, according to the 2001 KIDS COUNT Data Book published by the Annie E. Casey Foundation. This ranking, up from 40th for the

previous year, is based on a composite index of key child well-being indicators and reflects improvements in several key areas for Kentucky's youth. (Fig. 1) Kentucky saw a decline in infant, child and teen mortality rates from 1990 to 1998 as well as declines in teen dropouts and teens not attending school. Kentucky's teen birth rate also dropped significantly during the same period from 41 to 31 births per 1,000 teens.

In 1999, 25.7 percent of United States residents were under 18 years of age, the same rate as in 1990. In Kentucky in 1999, children under 18 comprised 24.6 percent of the population, down 4.9 percent from 1990.² In 1990, Kentucky ranked 26th in the number of youth under 18 and in 1999, ranked 41st.³

The decline in the youth population in Kentucky, while markedly steep during the

Figure 1.
Profile of Selected Child Well-Being Indicators for Kentucky, 1990-1998

Selected Indicators of Child Well-Being	1990	1998
Child Death Rate (deaths per 100,000 children ages 1-14)	29	26
Rate of teen deaths by accident, homicide, and suicide (rate per 100,000 teens ages 15-19)	75	62
Teen Birth Rate (births per 1,000 females ages 15-17)	41	31
Percent of teens who are high school dropouts (ages 16-19)	12%	11%
Percent of teens not attending school and not working (ages 16-19)	14%	10%
Percent of children in poverty (data reflect poverty in the previous year)	25%	23%

SOURCE: 2001 KIDS COUNT Data Book Online, Profile for Kentucky at www.aecf.org

1980s, stabilized during the 1990s. However, for youth aged 15 – 19, the percent increase during the 90s was very small, at less than one percent.⁴ (Fig. 2)

Unlike children nationally, Kentucky’s youth live in a predominately homogenous environment. For children under 18 years of age, 86 percent are white, with only 9 percent black and two percent Hispanic. Nationally, 61 percent of children under 18 are white, 15 percent are black, and 17 percent are Hispanic.⁵ In Kentucky, the total population grew 9.7 percent from 1990 to 2000, while the Hispanic/Latino proportion of the population grew 172.6 percent, with youth and young adults making up the majority of growth.⁶

While the diversity of Kentucky is increasing, it is happening at a slower pace than nationally. It is projected that by the year 2050, Hispanic, African American, American Indian, and Asian adolescents will constitute 56 percent of the adolescent population nationally.⁷

Education

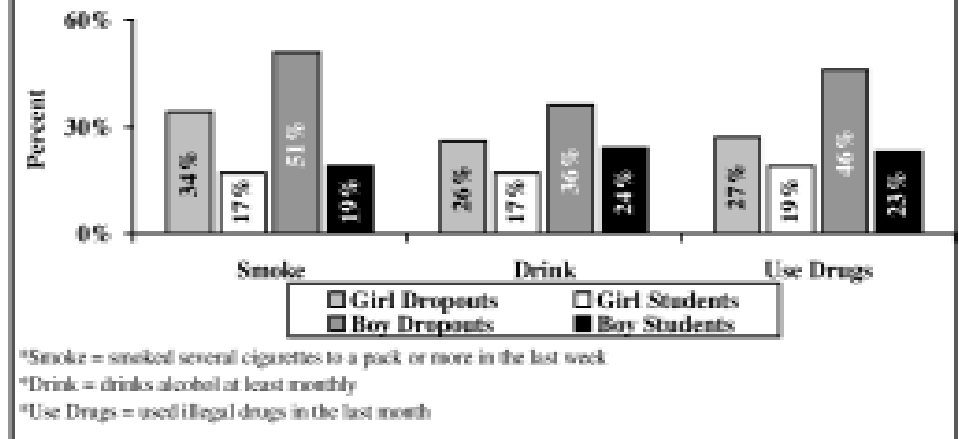
Education levels are strong predictors of one’s health throughout the lifespan. Girls who have academic problems or who drop out of high school are more likely than other girls to engage in risky behaviors. The Commonwealth Fund reported that high school dropouts smoke, drink, and use drugs more often than their peers in high school. In contrast, adolescents, whose parents make their expectations of school achievement clear, are less likely to engage in risky behaviors. Strong, positive

Figure 2.
Youth and Young Adult Population of Kentucky by Age
1980, 1990, & 2000

Age	1980	%	1990	%	2000	%	% Change 1980-1990	% Change 1990-2000
< 5	282,731	7.7	254,640	6.9	265,901	6.6	-9.9	4.4
5-9	289,411	7.9	265,412	7.2	279,258	6.9	-8.3	5.2
10-14	301,745	8.2	274,838	7.5	279,481	6.9	-8.9	1.7
15-19	354,439	9.7	286,438	7.8	289,004	7.2	-19.2	0.9
20-24	346,119	9.5	278,821	7.6	283,032	7.0	-19.4	1.5

SOURCE: U.S. Census Data, 2000

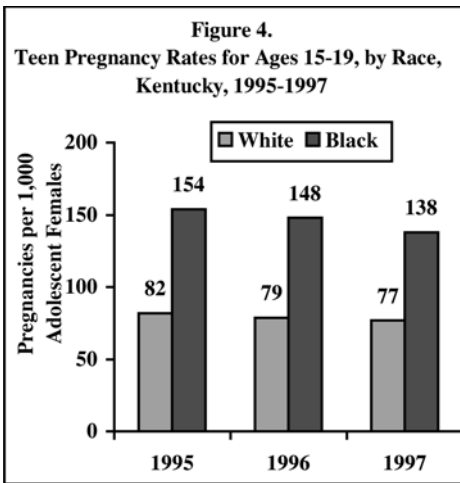
Figure 3.
National High School Dropout Rates
for Grades 11 & 12 and Risky Behaviors,
Females and Males, 1997



SOURCE: The Commonwealth Fund Survey & E.A. Cooner, A. Duffett, A. Schulz, and S. Amorosi, Survey of the Health of Adolescent Girls (New York: Louis Harris & Associates, Inc., 1997)

family and school bonds are associated with good health habits, good school performance, and low rates of smoking and other health-compromising behaviors. (Fig. 3) A similar association has been shown between parental disapproval of early sexual activity and the postponement of adolescent sexual relationships.⁸

Dropout rates for high school females in Kentucky, range from three to five percent. Male dropout rates are higher than females, ranging from five to seven percent through the high school years.⁹



SOURCE: CDC/Morbidity and Mortality Weekly Report – National and State-Specific Pregnancy Rates Among Adolescents – United States, 1995-1997, July 14, 2000/Vol. 49, No. 27, Table 3

Teen Pregnancy

Teen pregnancy (calculated as the sum of births, miscarriages, stillbirths and abortions) and teen births are on a downward trend both nationally and in Kentucky. Each year in the U.S., between 800,000 to 900,000 adolescent females under age 19 become pregnant. Adolescent pregnancy and childbearing have been associated with adverse health and social consequences for young women and their children.¹⁰

Nationally, among racial and ethnic groups, declines in pregnancy rates vary considerably. Rates among black women aged 15-19 fell 20 percent between 1990 and 1996 and fell 16 percent among white teenagers for the same period. Hispanic women of any race, realized an increase in pregnancy rates from 1990 to 1992, but then fell 6 percent by 1996. Hispanic women had the highest rate of teen births nationally in 1998, with 93.6 births per 1,000 adolescent females. African-American adolescents and American Indians had the second and third highest rates with 88.2 and

72.1 respectively. White adolescents had a rate of 35.2 with Asian adolescents having the lowest rate at 23.1.¹¹

Kentucky teen pregnancy rates are higher among black adolescents than white, though dropping for both races. From 1995 to 1997, pregnancy rates for white teens dropped from 82 pregnancies per 1,000 adolescents to 77. Rates for black adolescents dropped from 154 pregnancies per 1,000 adolescents to 138 for the same period. (Fig. 4)

From 1995 to 1997, among females aged 15-19 years, the national number of pregnancies declined by 3.1 percent and the national pregnancy rate declined by 7.8 percent.¹² (Fig. 5)

Nationally and in Kentucky, teen pregnancy rates are higher among 18-19 year olds than 15-17 year olds. However, rates for both age groups are declining. Kentucky's teen pregnancy rate for 15-17 year olds declined from 56 pregnancies per 1,000 adolescents in 1995 to 49 in 1997, representing a 12.5 percent decline. For 18-19 year olds in Kentucky, the pregnancy rate dropped from 138 to 131 during

Figure 5.
Estimated Number of Pregnancies* and Rates+ Among Adolescents, by Age, United States, 1995 - 1997

Year	Estimated No. of Pregnancies				Pregnancy Rate			
	<15	15-17	18-19	15-19	<15	15-17	18-19	15-19
1995	26,600	342,100	525,000	867,100	7.2	63.9	151.4	98.3
1996	25,400	332,500	526,700	859,200	6.8	60.5	147.8	94.8
1997	23,700	321,500	518,800	840,000	6.4	57.1	142.7	90.7
% Change								
1995-1997	-11.1%	-6.1%	-1.2%	-3.1%	-11.3%	-10.7%	-5.8%	-7.8%

*Rounded to the nearest 100.

+Per 1,000 adolescent females in the appropriate age group.

SOURCE: CDC/Morbidity and Mortality Weekly Report – National and State-Specific Pregnancy Rates Among Adolescents – United States, 1995-1997, July 14, 2000/Vol. 49, No. 27, Table 1

the same period, representing a five percent decline.¹³ (Fig. 6)

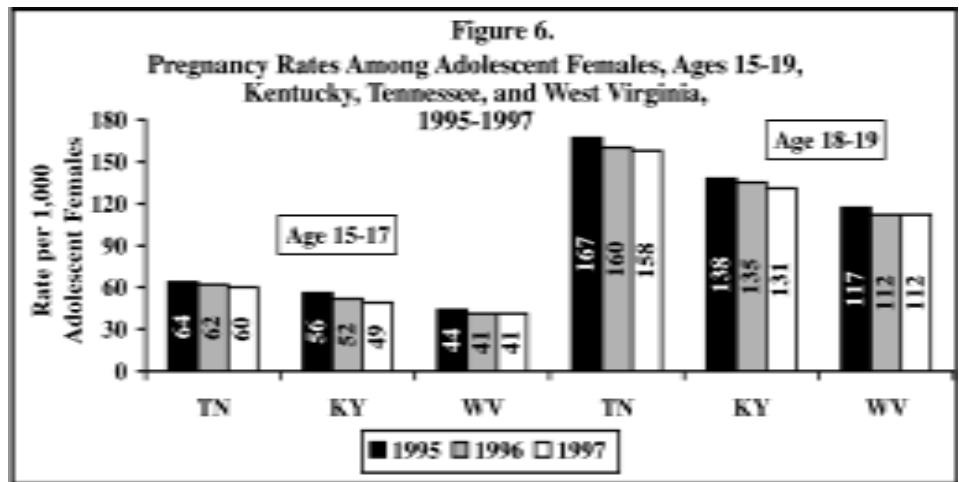
Teen Births

Nationally, the teen birth rate in 1999 was 50 births per 1,000 adolescent girls aged 15 to 19, compared to 56 births per 1,000 to Kentucky adolescents of the same ages. Though Kentucky's teen birth rate is higher than the national rate, our state has experienced a greater decline since 1990, dropping from 68 births per 1,000 adolescent females to 56 in 1999, representing an 18 percent decline, versus a 17 percent decline nationally (from 60 births per 1,000 to 50).¹⁴ (Fig. 7)

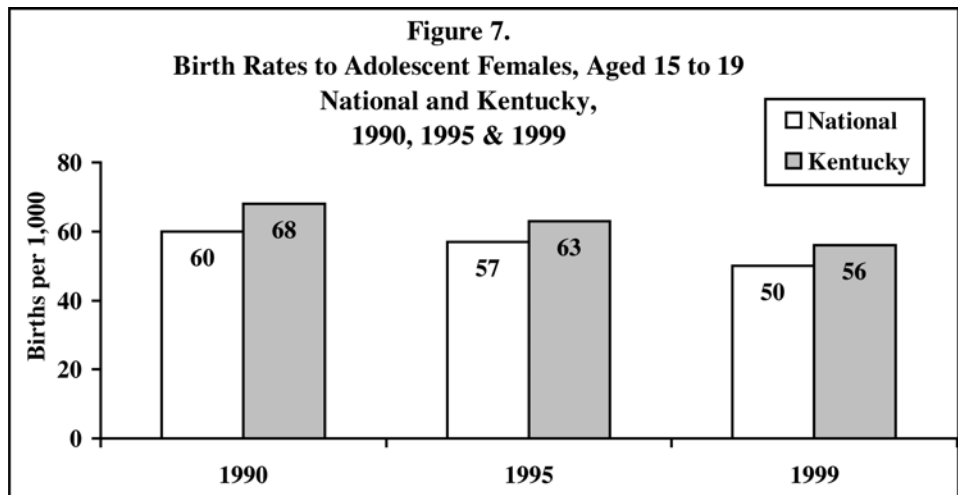
On an average day in Kentucky, there are 22 births to teens. The youngest female to give birth in 1999 was 13 years old.¹⁵

Like pregnancies, Kentucky's birth rate for ages 15 – 19 is higher among black adolescents than whites, 88.3 births per 1,000 adolescents for black adolescents versus 54 for white (1998). (Fig. 8)

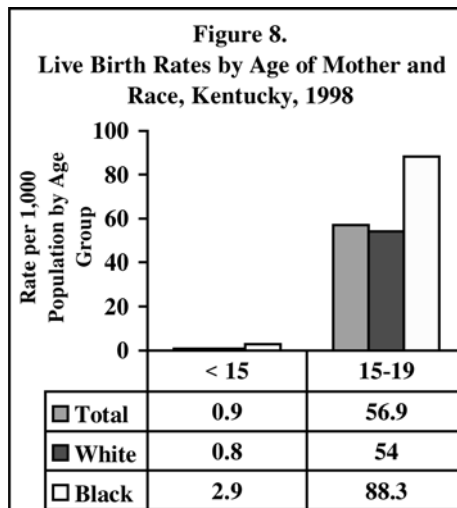
Awareness about teen pregnancy and births has been growing since the early 1990s and many Kentucky communities have initiated efforts through their local schools, health departments, and community organizations to reduce teen pregnancy. Two Kentucky programs have partnered with health department health educators and nurses, in local schools to work together on the "Postponing Sexual Involvement" (PSI) curriculum in middle schools and the "Reducing the Risk" curriculum in high schools. These two



SOURCE: CDC/Morbidity and Mortality Weekly Report – National and State-Specific Pregnancy Rates Among Adolescents – United States, 1995-1997, July 14, 2000/Vol. 49, No. 27

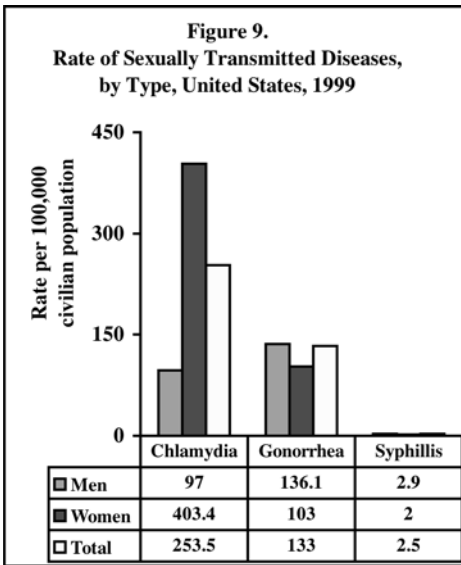


SOURCE: Cabinet for Health Services – Adult & Child Health, 1999 State Teen Pregnancy Prevention Policies and Programs by State



SOURCE: Cabinet for Health Services – Adult & Child Health, 1999 State Teen Pregnancy Prevention Policies and Programs by State

programs are now being taught in 87 Kentucky counties in more than 300 schools. It is estimated that more than 70 percent of Kentucky's middle school students now receive the PSI program.



SOURCE: Centers for Disease Control and Prevention, Sexually Transmitted Diseases Surveillance, 1999

During the year 2000, 26 Kentucky counties were awarded federal abstinence education grants. In addition, 47 counties have been awarded federal funding to conduct the pre-teen PSIP in the 6th grade.¹⁶

Sexually Transmitted Diseases (STDs)

Women, by far, bear the greatest burden of STDs in the U.S. (Fig. 9) The most serious STDs among women are chlamydia, gonorrhea, and Human Papillomavirus (HPV). Left untreated in women, both chlamydia and gonorrhea can lead to infertility, potentially fatal tubal pregnancies, and chronic pelvic pain. Likewise, if not diagnosed and treated in time, during pregnancy, gonorrhea and chlamydia can result in serious health problems for infants. Women infected with chlamydia or gonorrhea are much more likely to be infected with Human Immunodeficiency Virus (HIV), if exposed.¹⁷ Also, women who

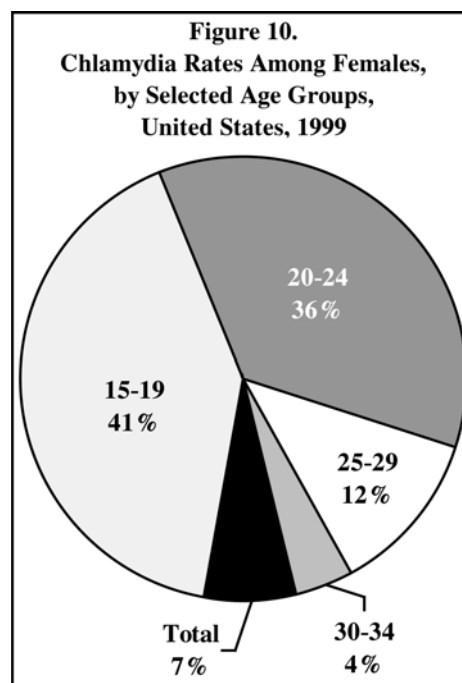
smoke and have HPV are at high risk for cervical cancer.¹⁸

Teens are at high behavioral risk for acquiring most STDs. One in eight teenagers contracts an STD each year, and more than 80 percent of all STD cases occur among individuals under 29 years of age.¹⁹ Teenagers and young adults are more likely than other age groups to have multiple sex partners, to engage in unprotected sex, and for young women, to choose sexual partners older than themselves. Moreover, young women are biologically more susceptible to chlamydia, gonorrhea, and HIV.²⁰

Chlamydia and Gonorrhea

Chlamydia is the most frequently reported infectious disease in the United States. Though a total of 582,207 cases were reported nationally in 1999, an estimated 3 million cases occur annually. Severe under-reporting is largely a result of infections not identified because screening is not available.²¹ From 1986 through 1999, among men and women nationally, reported rates of chlamydia increased from 35.2 cases per 100,000 population to 254.1 cases per 100,000 population.

Chlamydia rates among women far exceed those of men. In 1999, the reported rate of chlamydia for women was 403.4 per 100,000 females, substantially exceeding the rate for men which was 97 per 100,000 males. Much of this disparity is due to increased detection of asymptomatic infection in women through screening. As many as 1 in 10 adolescent girls tested for chlamydia is infected.²²

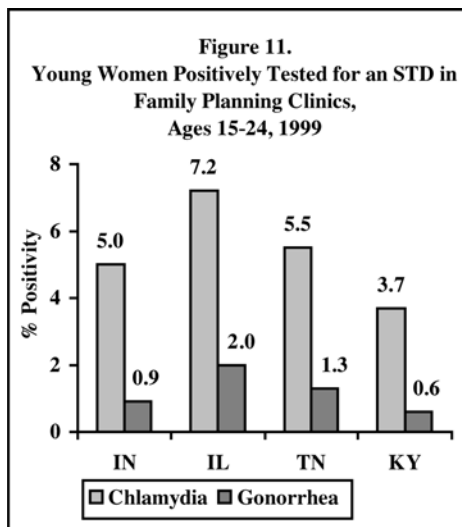


SOURCE: Centers for Disease Control and Prevention, Sexually Transmitted Diseases Surveillance, 1999

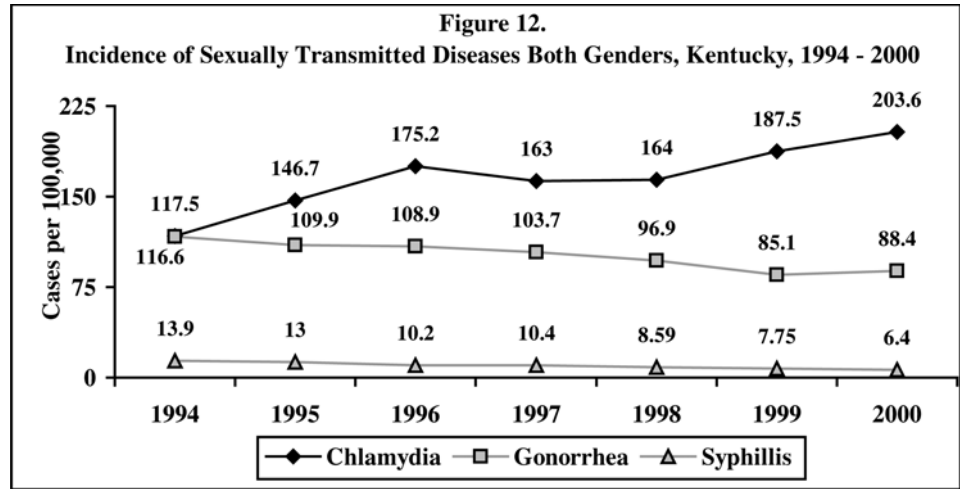
Girls aged 15 – 19 have the highest rates of chlamydial infection. For all states reporting chlamydia infections to the CDC, 15- to 19-year-old girls represent 41 percent of infections and 20- to 24-year-old women represent another 36 percent.²³ (Fig. 10)

In Kentucky, fewer women tested positive for STDs in family planning clinics than women in surrounding states. (Fig. 11) For 1999, 3.7 percent of Kentucky women tested at family planning clinics tested positive for chlamydia. Though increased screening can partially explain the increased incidence of chlamydia, screening rates in Kentucky have held fairly constant since 1998. Annually, for years 1998 – 2000, approximately 80,000 female chlamydia screenings occurred at local health departments, with the majority of those screened aged 15 to 24.

The overall incidence of chlamydia in Kentucky has grown from a rate of 117.5 per 100,000 population in 1991 to 203.6 in 2000.²⁴ In contrast, the incidence of gonorrhea in Kentucky has dropped from a



SOURCE: Regional Infertility Prevention Programs; Office of Population Affairs, Local and State STD Control Programs; Centers for Disease Control and Prevention, 1999



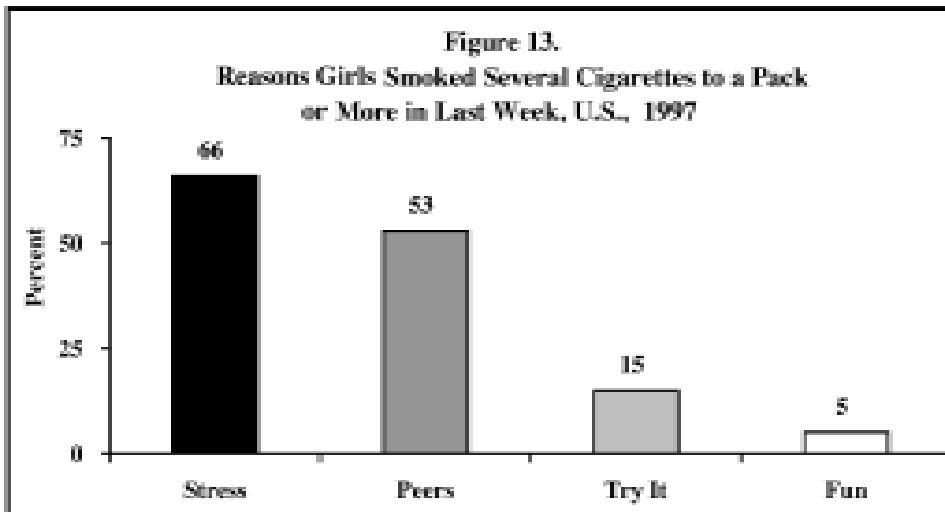
SOURCE: Kentucky Sexually Transmitted Disease Project, 2000

rate of 116.6 per 100,000 population in 1994 to 88.4 per 100,000 population in 2000 (cases include both males and females of all ages).²⁵ (Fig. 12)

Smoking

Young women in Kentucky have one of the highest rates of smoking in the country. According to the 2000 Kentucky Youth Tobacco Survey, both male and female middle school and high school students smoking rates greatly surpassed national totals (see Chapter 5 *Tobacco Use and Smoking Related Illnesses*). In Kentucky, 39 percent of high school females reported smoking cigarettes in the prior month; 36 percent of high school boys reported smoking in the prior month. More middle school boys than girls reported smoking in the prior month, 22 percent versus 21 percent respectively. Nationally, 29 percent of boys and girls in high school and only 9 percent in middle school smoked in the prior month.

In a national survey sponsored by The Commonwealth Fund in 1997, girls who smoked were asked why they smoked. The majority, 47 percent said it



SOURCE: The Commonwealth Fund Survey of the Health of Adolescent Girls, 1997

was to help relieve stress.²⁶ Other reasons frequently given included, they were around people who smoke all of the time (46 percent); because they wanted to experiment (35 percent); and because their friends encouraged them to smoke (20 percent). Wanting to be cool was not such an important motivation factor for girls (6 percent), but more so for boys (12 percent). More girls than boys smoke to curb their appetites (8 percent versus 1 percent). Among girls who reported frequent smoking (smoked several cigarettes or a pack or more in the past week), two-thirds said they smoked to relieve stress, and over half said because they are around people who smoke.²⁷ (Fig. 13)

Eating Disorders

Eating disorders are disabling illnesses that affect between one to three percent of young women in the United States.²⁸ The two most common eating disorders among young women are anorexia nervosa, with a prevalence rate of about one percent, and bulimia nervosa, affecting approximately four to 20 percent of all females.²⁹ Eating disorders often are chronic in nature and, as a result, may

require long-term treatment or hospitalization. The medical consequences of anorexia, which include death in about 10 percent of the cases, usually are more severe than bulimia. The earlier these disorders are diagnosed and treated, the better the prospects are for full recovery.

Statistics show 95 percent of those who have eating disorders are women between the ages of 12 and 25. Studies have found that women who have bulimia nervosa are often impulsive and are at high risk for other disorders such as substance abuse. Likewise, many people with eating disorders also appear to have co-occurring depression.³⁰

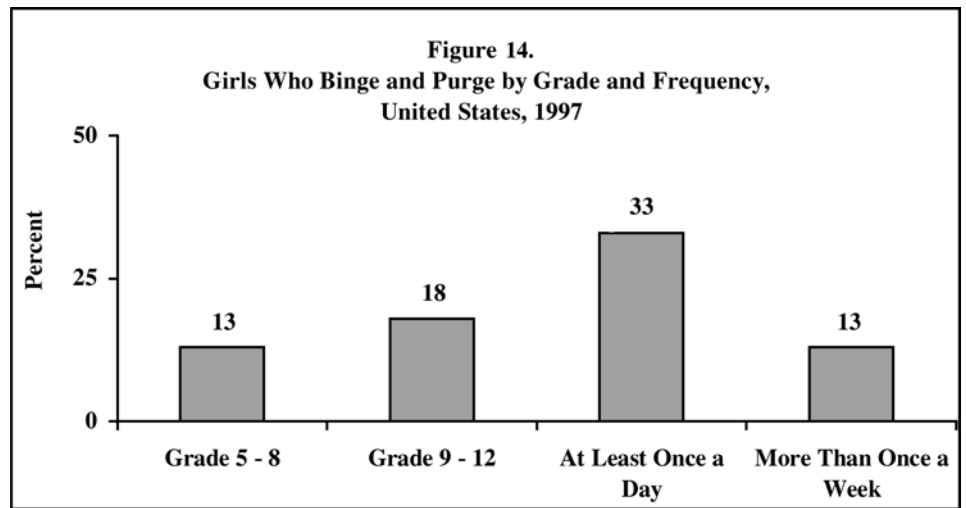
Other eating disorders, though less life-threatening, pose serious health risks for adolescent girls. Dangerous eating patterns such as self-starvation, bingeing and purging, and overeating followed by voluntary vomiting, are not uncommon. These signs of eating disorders were linked to a general preoccupation among girls with their weight and looks.³¹ Thirteen percent of young girls (grades five through eight) and 18 percent of older girls (grades nine through twelve) reported having binged and purged. Girls who reported bingeing and purging said they do so frequently; one-third binge and purge at least once a day, and another 13 percent binge and purge more than once a week.³² (Fig. 14)

Domestic Abuse

Health professionals, especially primary care doctors who have regular contacts with parents and adolescents, have unique

opportunities to uncover violence and abuse that today are often unrealized. Girls indicate a desire to talk with doctors and other health professionals about sensitive topics such as sexual abuse and domestic violence, but these discussions are not taking place. The Commonwealth Fund survey found that while 48 percent of all girls wanted doctors to talk with them about physical or sexual abuse, only 13 percent reported any doctor or health professional had done so. Among abused girls, the rate was higher with 60 percent wanting their doctor to talk to them about abuse, yet only 11 percent reporting their doctor doing so.

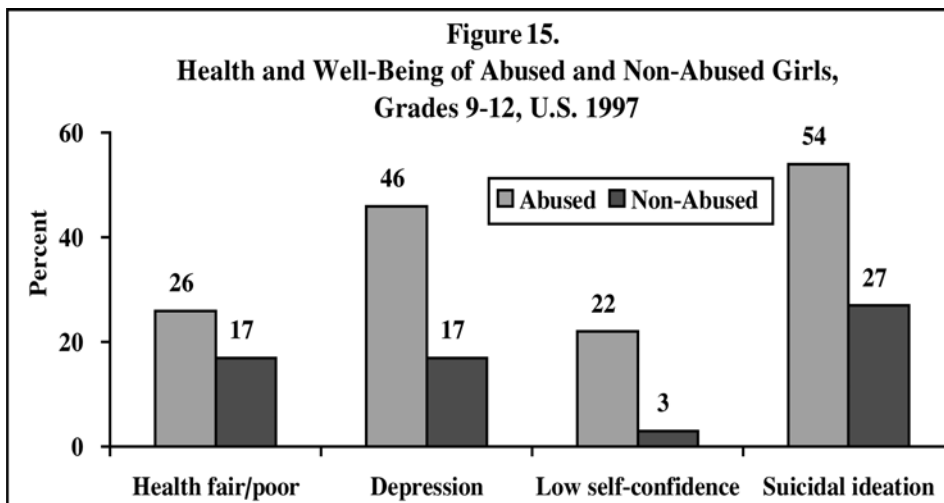
Abused girls are more likely than other girls to engage in health-compromising behaviors, including smoking and other substance use, school failure, teen pregnancy, suicide attempts, and unhealthy weight loss. Girls are more likely to run away from home or try to commit suicide rather than react to abuse at home. Abused girls also suffer disproportionately from poor health, depression and low self-confidence than non-abused girls.³⁷ (Fig. 15)



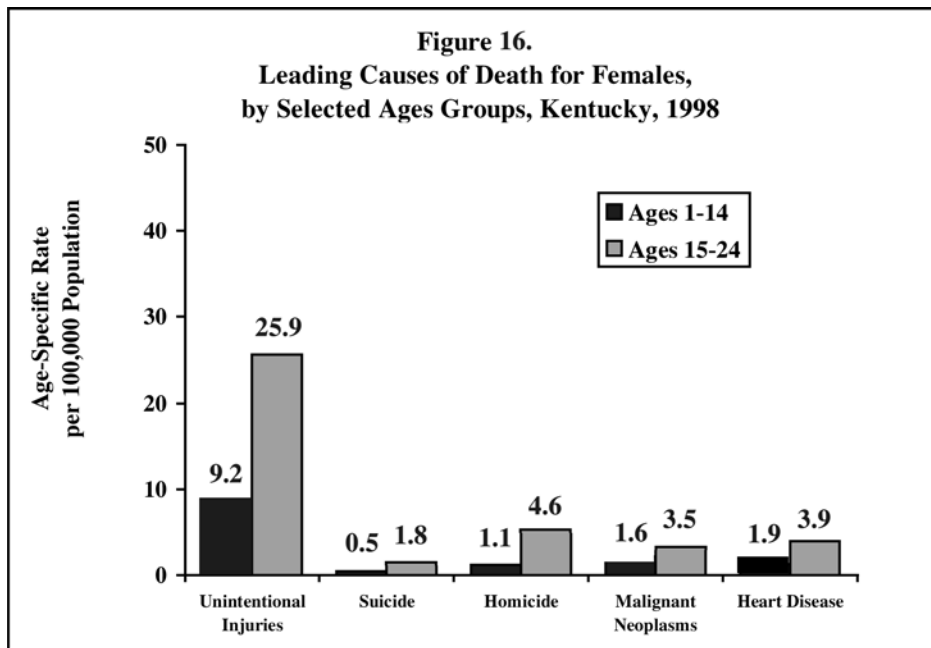
SOURCE: The Commonwealth Fund Survey of the Health of Adolescent Girls, 1997

Mortality

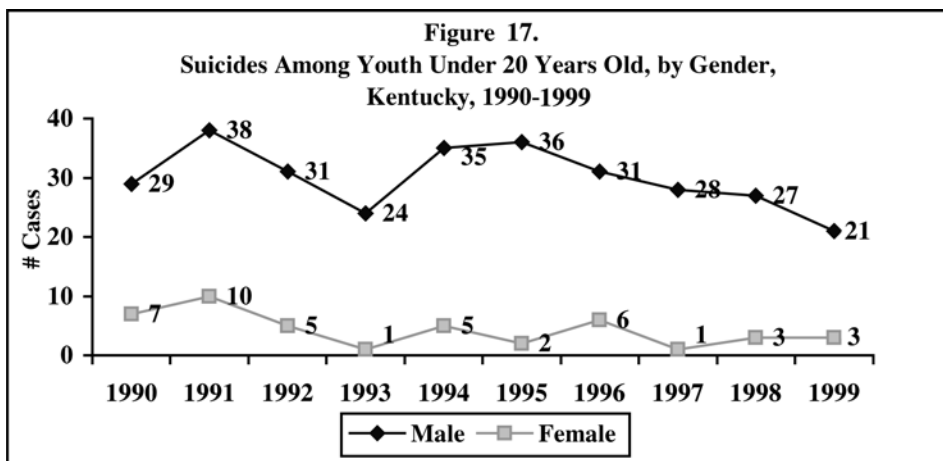
Nationally, four injury-related causes account for nearly 75 percent of all mortality and a great amount of morbidity and social problems among 15-24 year-olds. Motor vehicle crashes cause 29 percent of all deaths among this age group (40 percent of these are alcohol related), homicide causes 20 percent, suicide causes 12 percent, and other injuries (such as falls, fires, and drownings) cause 11 percent.³⁸ In Kentucky, the five leading causes of death for female youths ages 15 to 24 were unintentional injuries,



SOURCE: The Commonwealth Fund Survey of the Health of Adolescent Girls, 1997



SOURCE: Kentucky Department for Public Health, Surveillance and Health Data Branch, Vital Statistics File



SOURCE: Kentucky Department for Public Health, Surveillance and Health Data Branch, Vital Statistics File

suicide, homicide, malignant neoplasms and heart disease. (Fig. 16)

Behavioral risk factors associated with the leading causes of death (unintentional and intentional injuries) among youth, include seatbelt use, drinking and driving or riding with a drunk driver, carrying a weapon, physical fighting and attempting suicide. Among Kentucky youth in 1999, 20 percent reported rarely or never using safety belts, 30 percent responded that they had ridden with a drinking driver within

the past month, and another 30 percent responded they were in a physical fight during the past year.³⁹

Seven percent of Kentucky youth surveyed responded that they had attempted suicide during the past year.⁴⁰ The strongest risk factors for attempted suicide in youth are depression, alcohol or drug abuse, and aggressive or disruptive behaviors. Other factors are frequent episodes of running away or being incarcerated, family loss or instability, expressions of suicidal thoughts or talk of death or afterlife during moments of sadness or boredom, withdrawal from friends and families, and unplanned pregnancy.⁴¹ Women and girls attempt suicide twice as much as men, yet men complete suicide at a rate four times that of women. Suicide is not just a young person's issue, as suicide rates for males and females peak between the ages of 45-54 years old, and again after age 75.⁴²

1999 mortality data for Kentucky indicate there were 24 deaths to youth under 20 as a result of suicide (21 male deaths versus 3 female deaths).⁴³ (Fig. 17)

NOTES

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- ² U.S. Census 2000 & 1990 Summary File, Produced by the Kentucky Census Data Center.
- ³ U.S. Census Bureau, State Rankings.
- ⁴ 1980, 1990, and 2000 Census, Kentucky State Data Center, 5/29/01.
- ⁵ Annie E. Casey Foundation, 2001 KIDS COUNT Data Book Online, Profile for Kentucky, Internet: <http://www.aecf.org>.
- ⁶ U.S. Census Bureau, Census 2000.
- ⁷ U.S. Census Bureau, Census 2000.
- ⁸ The Commonwealth Fund – Improving the Health of Adolescent Girls Policy Report of the Commonwealth Fund Commission on Women's Health, January 1999.
- ⁹ Kentucky Department of Education Nonacademic Data 1993 to 2000, Briefing Packet, August 23, 2001.
- ¹⁰ Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report – National and State-Specific Pregnancy Rates Among Adolescents – United States, 1995-1997, July 14, 2000/Vol. 49/No. 27.
- ¹¹ The Allen Guttmacher Institute, *Teenage Pregnancy, Overall Trends and State-by-State Information*, April 1999. Internet http://www.agi-usa.org/pubs/teen_preg_stats.htm.
- ¹² Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report – National and State-Specific Pregnancy Rates Among Adolescents – United States, 1995-1997, July 14, 2000/Vol. 49/No. 27.
- ¹³ CDC/Morbidity and Mortality Weekly Report – National and State-Specific Pregnancy Rates Among Adolescents – United States, 1995-1997, July 14, 2000/Vol. 49, No. 27.
- ¹⁴ Kentucky Cabinet for Health Services, Division of Adult & Child Health, "1999 State Teen Pregnancy Prevention Policies and Programs by State".
- ¹⁵ Kentucky Annual Vital Statistics Report, 1999. Kentucky Department for Public Health, Health Data Surveillance Branch.
- ¹⁶ Cabinet for Health Services - Adult & Child Health: Teen Pregnancy Update 11/01/00.
- ¹⁷ The Commonwealth Fund – Improving the Health of Adolescent Girls Policy Report of The Commonwealth Fund Commission on Women's Health, January 1999.
- ¹⁸ Kentucky Department for Public Health, STD Branch, *Other HPV Viruses*, Internet http://publichealth.state.ky.us/std_infections_page_2.htm.
- ¹⁹ CDC. <http://www.cdc.gov/nccddphp/dash/ahson/foreword.htm>.
- ²⁰ Centers for Disease Control and Prevention, Division of STD Prevention, 1999.
- ²¹ CDC, Division of STD Prevention, *Chlamydia in the United States*, April, 2001. Internet: http://www.cdc.gov/nchstp/dstd/Fact_Sheets/chlamydia_facts.htm.
- ²² Ibid.
- ²³ Ibid.
- ²⁴ Kentucky STD Project for 2000.
- ²⁵ Kentucky STD Project for 2000.
- ²⁶ The Commonwealth Fund – Improving the Health of Adolescent Girls Policy Report of The Commonwealth Fund Commission on Women's Health, January 1999.
- ²⁷ The Commonwealth Fund – Improving the Health of Adolescent Girls Policy Report of The Commonwealth Fund Commission on Women's Health, January 1999.
- ²⁸ National Office of Women's Health. <http://www.4woman.gov/owh/girl.htm>.
- ²⁹ Center for Change web page, *Facts about eating disorders*. <http://www.centerforchange.com/articles/facts.html>.
- ³⁰ CMHS – Publications/Catalog: Eating Disorders (<http://www.mentalhealth.org>).
- ³¹ The Commonwealth Fund – Improving the Health of Adolescent Girls: Policy Report of the Commonwealth Fund Commission on Women's Health, January 1999.
- ³² The Commonwealth Fund – Improving the Health of Adolescent Girls: Policy Report of the Commonwealth Fund Commission on Women's Health, January 1999.
- ³³ National Institute on Alcohol Abuse and Alcoholism. Ninth special report to the U.S. Congress on Alcohol and Health. Secretary of Health and Human Services. Bethesda, Maryland: National Institutes of Health (NIH Publication No. 97-4017), June 1997.
- ³⁴ CDC – YBRFSS Risk Behaviors on Adolescent Health, Kentucky Profile, 1999.
- ³⁵ CDC – YBRFSS Risk Behaviors on Adolescent Health – Alcohol Use, 2000.
- ³⁶ 1999 NHSDA Report: Pregnancy and Illicit Drug Use July 13, 2001.
- ³⁷ The Commonwealth Fund – Improving the Health of Adolescent Girls: Policy Report of the Commonwealth Fund Commission on Women's Health, January 1999 and PA Sarigiani et al., "Prevention of High Risk Behaviors for Adolescent Women."
- ³⁸ CDC. <http://www.cdc.gov/nccddphp/dash/risk.htm>.
- ³⁹ 1999 Youth Risk Behavior Factor Surveillance System, Kentucky Profile, CDC.
- ⁴⁰ Ibid.
- ⁴¹ American Psychiatric Association on Teen Suicide (http://www.psych.org/public_info/teen.cfm).
- ⁴² American Foundation for Suicide Prevention, *Women and Suicide*, <http://www.afsp.org/about/NEWWOMEN.htm>.
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Maternal & Reproductive Health

MATERNAL HEALTH OVERVIEW

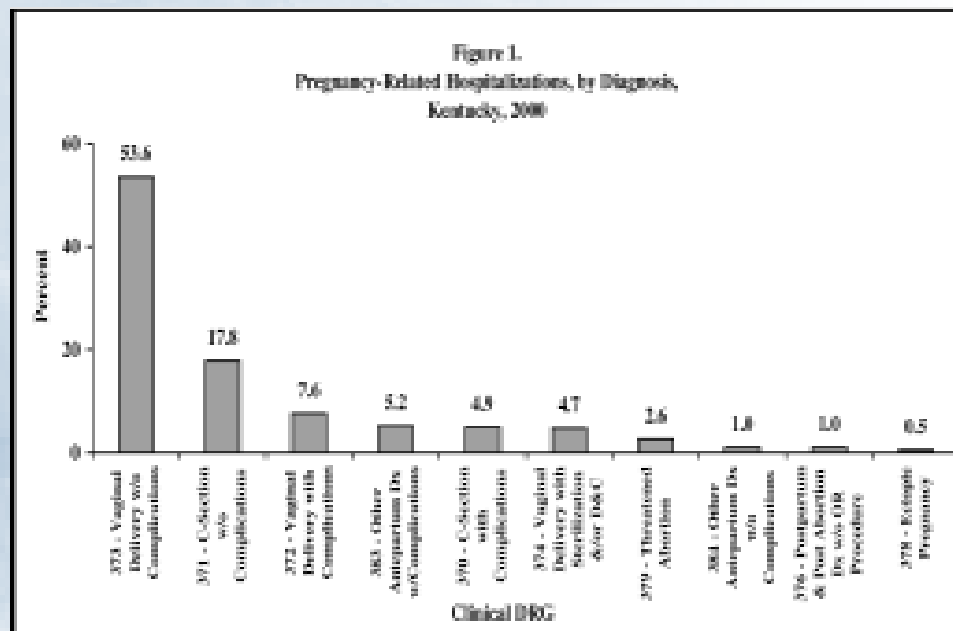
Maternal health has long been the hallmark of public health in this country and remains a vital indicator of women's health in the 21st century. Approximately 6 million American women become pregnant each year, and more than 10,000 give birth each day. Safe motherhood is a vital social and economic investment. It begins before conception with proper nutrition and a healthy lifestyle. It continues with appropriate prenatal care, the prevention of complications when possible, and the early and effective treatment of any complications that do occur. It ends with a labor at term without unnecessary interventions, the delivery of a healthy infant, and a healthy post-partum period in a

positive environment that supports the physical and emotional needs of the woman, infant, and family.¹

Pregnancy Related Complications

Among women who become pregnant in the United States each year, at least 30 percent have a pregnancy-related complication before, during, or after delivery. These complications can cause long-term health problems even when they do not result in death. Some of the most common complications of pregnancy are:

- Miscarriage
- Ectopic pregnancy
- Excessive vomiting
- Diabetes
- Hemorrhage
- Infection
- Pregnancy-induced



SOURCE: 2000 Kentucky Hospital Discharge File, Health Policy Development Branch

- hypertension
- Premature Labor
- Need for a cesarean delivery

In the United States, hospitalizations for pregnancy-related complications occurring before delivery account for more than 2 million hospital days of care each year.²

In Kentucky, childbirth and pregnancy related complications were the primary diagnosis for over 51,000 hospital discharges among females in 2000.³ Vaginal deliveries without complications represented 54% of all pregnancy-related hospitalizations. (Fig. 1)

Prenatal Care

Prenatal care is strongly linked to a healthy pregnancy and birth. In Kentucky in 1998, 85.5 percent of all live births occurred among mothers who received prenatal care in the first trimester of pregnancy.⁴ There is, however, a racial gap in the number of live births to women who received prenatal care in the first trimester. In 1998, 86.4 percent of live births to white women were to those who received prenatal care in the first trimester, compared to 77 percent of live births to black women receiving first trimester prenatal care.⁵

Providing appropriate prenatal care for pregnant women in Kentucky has long been a high public health

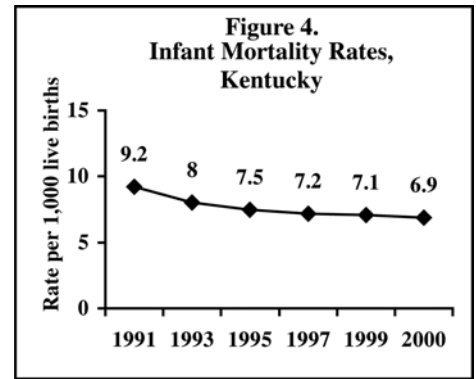
priority. To ensure access to important prenatal services, women in Kentucky who are pregnant may qualify for “presumptive eligibility” under Medicaid guidelines. These women receive 90 days of prenatal care while full eligibility for Medicaid services is being determined.

Maternal and Infant Mortality

At the beginning of the 20th century, for every 1,000 live births, six to nine women in the United States died of pregnancy-related complications, and approximately 100 infants died before age one year.⁶ Maternal mortality rates were highest in this country from 1900 – 1930. Poor obstetric care and delivery practices were mainly responsible for the high number of maternal deaths, most of which were preventable.⁷ Most births occurred at home with the assistance of midwives or general practitioners, with inappropriate and excessive surgical and obstetric interventions (e.g. induction of labor, use of forceps, episiotomy, and cesarean deliveries). These procedures were often performed without following principles of asepsis. As a result of these practices, 40 percent of maternal deaths were caused by sepsis or infections, with the remaining deaths primarily attributed to hemorrhage and toxemia.⁸

Environmental interventions, improvements in nutrition, advances in surveillance and monitoring of disease, increases in education levels, and improvements in standards of living contributed to the remarkable decline in maternal deaths since the turn of the 20th century.⁹ (Fig. 2)

Nationally, the decline in infant mortality is unparalleled



SOURCE: Kentucky Department for Public Health, Division of Adult and Child Health

by other mortality reductions this century. In 1900, in some areas of the U.S., up to 30 percent of infants died before reaching their first birthday.¹⁰ Nationally, from 1915 through 1997, infant mortality rates declined by over 90 percent to 7.2 per 1,000 live births.¹¹ (Fig. 3)

Infant mortality in Kentucky has decreased by 25 percent since 1991 and was the same rate as the nation (7.1/1,000 live births) for 1999. In 2000, Kentucky's infant mortality rate was the lowest since records have been kept at 6.9/1,000 live births.¹² (Fig. 4)

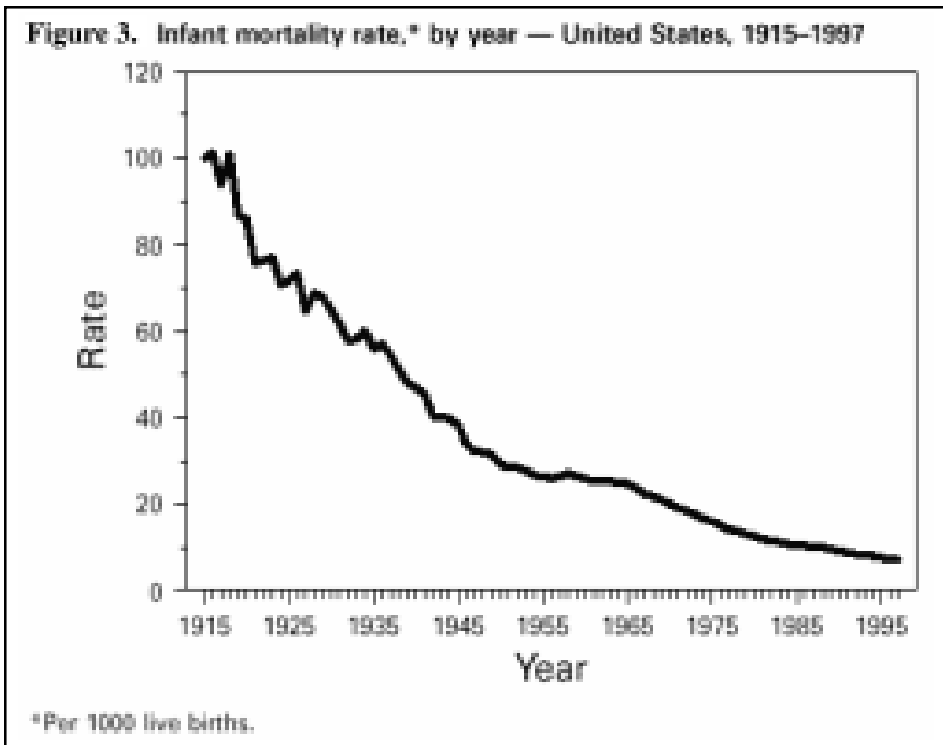
A racial disparity still exists among infant mortality rates in Kentucky. In 1998, there were 6.9 deaths per 1,000 live births for white women, versus 14.7 for black women. (Fig. 5) Likewise, national infant mortality rates among non-Hispanic black women are twice those of non-Hispanic white women.¹³

One in five infant deaths is due to birth defects, making them the leading cause of infant mortality. Birth defects rank second in leading causes of death among 1 to 4 year-olds and fourth among 5 to 14-year olds.¹⁴

Pre-term delivery is often another reason for infant



SOURCE: MMWR, *Achievements in Public Health, 1900 – 1999*. Vol. 48 No. 38., October 1, 1999



SOURCE: MMWR, *Achievements in Public Health, 1900 – 1999*. Vol. 48 No. 38., October 1, 1999

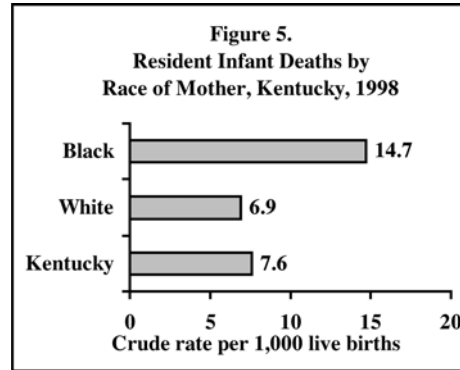
mortality. Nationally and in Kentucky, pre-term delivery rates are increasing among white females, from 75.4 per 1,000 live births in 1990 to 83.7 in 1997 nationally; and from 88.3 to 98 for Kentucky. Among black women, pre-term delivery rates are *decreasing*. National rates for black women dropped from 178.5 to 160.9 from 1990 to 1997. In Kentucky, these rates dropped from 186 to 170.5. Compared to neighboring states, Kentucky's rates for both black and white women in 1997 are slightly lower than Tennessee and West Virginia, but higher than Ohio. (Fig. 6)

Low Birth Weight

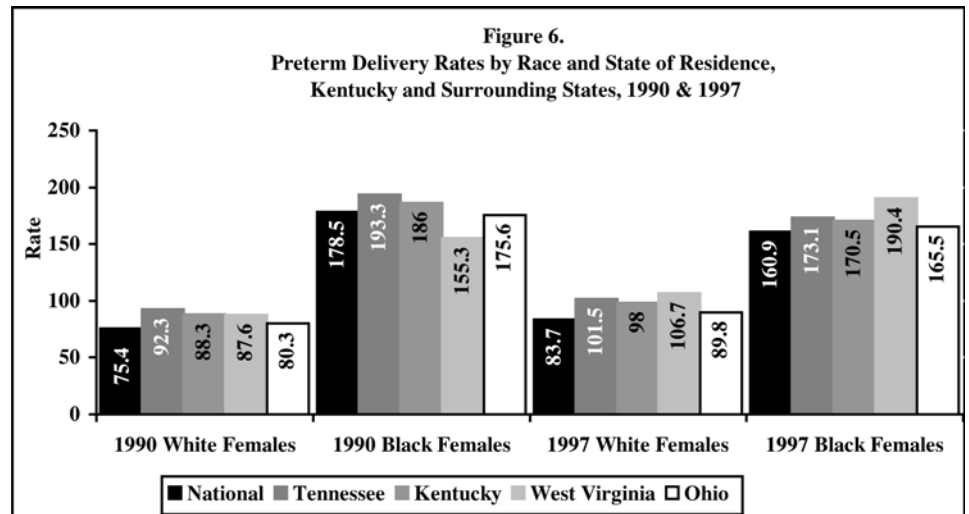
Despite the dramatic decline in infant and maternal mortality during the 20th century, challenges remain. Perhaps the greatest challenge is the persistent difference in maternal and infant health among various racial/ethnic groups, particularly between black and white women and infants. Although overall rates have plummeted, black infants are more than twice as likely to die as white infants; this ratio has increased in recent decades. A high risk associated with infant mortality is low birth weight (LBW 2500 grams or 5 lbs. 2oz.) Low birth weight incidence is nearly twice as high among black infants in Kentucky than white infants. (Fig. 7)

During the last few decades, the key reason for the decline in infant mortality has been the improved rates of survival among LBW babies, not the reduction in the incidence of LBW. The long-term effects of LBW include neurological disorders, learning disabilities, and delayed development.¹⁵

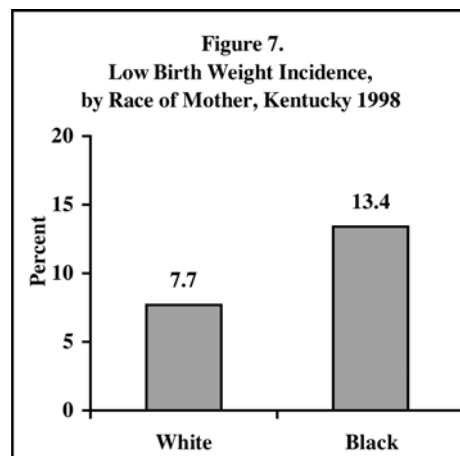
Cigarette smoking during pregnancy can result in LBW babies and has also been associated with infertility, miscarriages, tubal pregnancies, infant mortality and childhood morbidity. Additionally, cigarette smoking may cause long-term learning disabilities.¹⁶



SOURCE: Kentucky Department for Public Health, Surveillance and Health Data Branch, 1998 Vital Statistics Report



SOURCE: CDC/MMWR, "State-Specific Changes in Singleton re-term Births Among Black and White Women — United States, 1990 and 1997, September 22, 2000/49(37); 837-840



SOURCE: Kentucky Department for Public Health, Surveillance and Health Data Branch, 1998 Kentucky County Health Profile

The odds of a child developing asthma are twice as high among children whose mothers smoke at least 10 cigarettes a day. Sudden Infant Death Syndrome (SIDS) is also strongly linked to maternal smoking, according to the Campaign for Tobacco Free Kids.¹⁷

Fetal Alcohol Syndrome

Fetal Alcohol Syndrome (FAS) is a disorder characterized by growth retardation, facial abnormalities, and central nervous system (CNS) dysfunction, caused by a woman's use of alcohol during pregnancy.¹⁸ Not all women who drink heavily during pregnancy will have a child with FAS. Why some women are more susceptible than others is not entirely clear; however, by not drinking during pregnancy, women can ensure that their babies will not have FAS or any other alcohol-related outcomes.

The U.S. Public Health Service indicates that there is no safe level of alcohol use during pregnancy. If a woman drinks while pregnant, she puts her developing fetus at risk for a wide spectrum of adverse effects including spontaneous abortion; growth retardation; physical, mental, and behavioral abnormalities; facial abnormalities; and CNS impairment, such as developmental delay, speech or language delay, lower IQ, and decreased head circumference. In the worst cases, prenatal exposure to alcohol may result in fetal death.

The reported prevalence rates of FAS vary widely. In the general population, estimates vary from 0.7 cases per 1,000 to 1.0 cases per 1,000 live births

with higher rates (e.g., 3 per 1,000 live births) among American Indian and Alaska natives. Other neurodevelopmental effects of alcohol are believed to occur more frequently. In Kentucky, the number of FAS cases recorded by vital statistics on birth certificates is very low, with only eight cases statewide in 1997, and zero reported for 2000, however, this data is incomplete due to the difficulty in identifying FAS at birth. The Kentucky Birth Surveillance Registry program in the Kentucky Department for Public Health maintains a data registry of all children from birth to age five who are born with FAS and other birth defects.

Folic Acid

Folic acid, or folate, is a B-vitamin that can be found in some enriched foods and vitamin pills. If women have enough of it in their bodies before pregnancy, it can decrease the risk for neural tube defects, which are birth defects of the baby's brain (anencephaly) or spine (spina bifida).¹⁹

The U.S. Public Health Service recommends that all women who could possibly become pregnant get 400 micrograms (or 0.4 mg) of folic acid every day. This could prevent up to 70 percent of serious birth defects.²⁰ But to do this, women need folic acid before they get pregnant. Since one half of all pregnancies are unplanned, it is important to get enough folic acid every day, since by the time a woman realizes she's pregnant, the baby's brain and spine may already be formed.²¹

General public awareness of folic acid among women of childbearing age has increased from 52 percent in 1995 to 79 percent in 2001. However, only 32 percent of women were aware of the specific recommendations regarding folic acid intake and only 19 percent were aware that folic acid prevented birth defects. (Fig. 8)

To prevent the high rate of neural tube defects in Kentucky, which is 1 ½ times the national rate, the Governor’s Early Childhood Initiative program launched a folic acid awareness campaign with funds from Phase I of the Tobacco Master Settlement Agreement. This program provides several services to Kentucky women including:

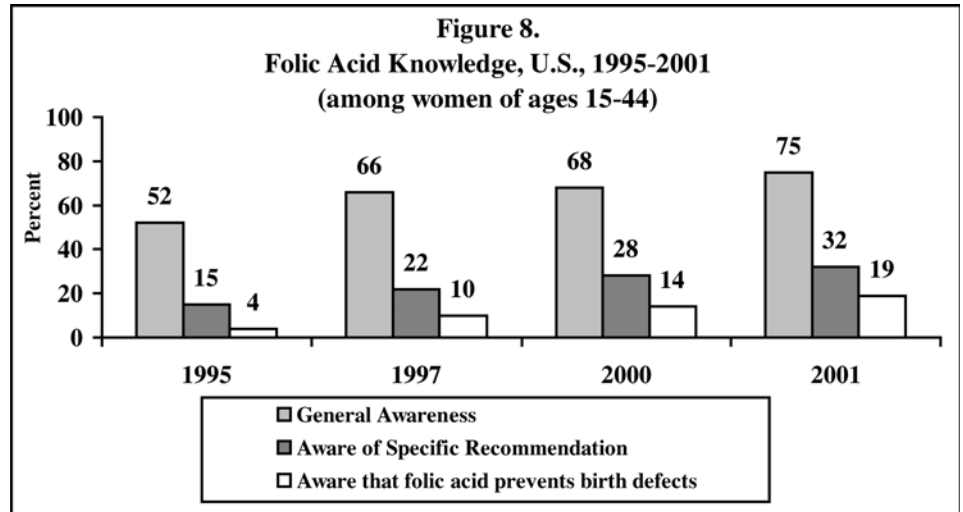
- Distribution of folic acid through all local health departments and the Commission for Children with Special Health Care Needs.
- Trained folic acid nurse coordinators in local health departments.
- Regional training programs and educational kits.

Nearly 75,000 women in Kentucky have received folic acid supplements and intensive counseling through this program.²²

For the combined years 1997 and 1999, 40 percent of African-American and white women ages 18-44 consumed vitamins containing 400 micrograms of folic acid daily. (Fig. 9)

Fertility

The fertility rate relates births to the population at risk of giving birth, (women aged 15 – 44). Recent data have



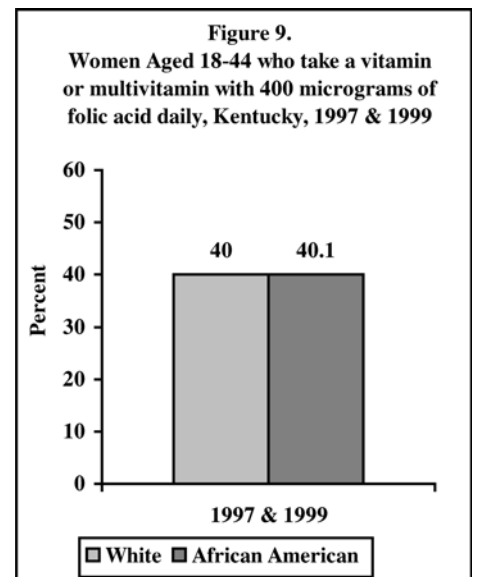
SOURCE: March of Dimes, *Folic Acid and the Prevention of Birth Defects, A national survey of pre-pregnancy awareness and behavior among women of childbearing age, 1995 – 2001.* August, 2001

reflected an increase in the fertility rate among women in the U.S., from 65.9 births per 1,000 women ages 15-44 in 1999 to 67.6 in 2000.²³ The fertility rate for Kentucky was 61.6 in 1999, the most recent year of available data.²⁴

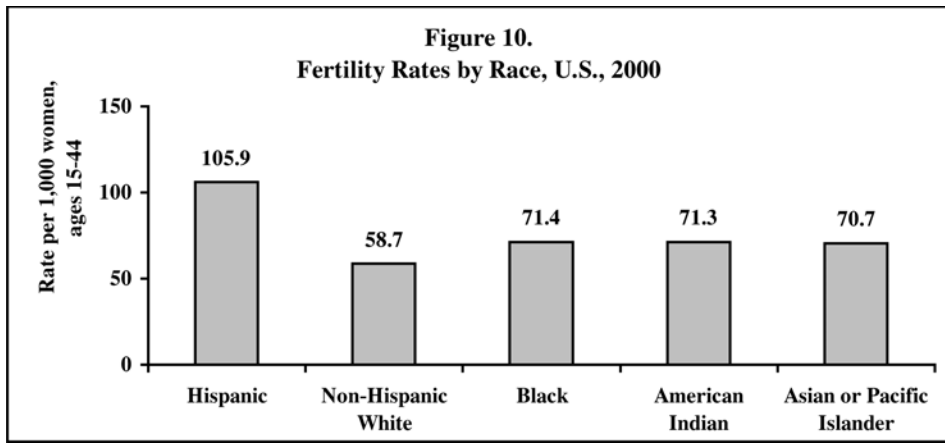
Nationally, the crude birth rate was 14.8 in 2000, representing an increase over the 1999 rate of 14.5. Kentucky’s rate was slightly lower at 13.8 per 1,000 women in 1999 – unchanged from the 1998 rate.²⁵

For 2000, Hispanic women had the highest fertility rate nationally with 105.9 births per 1,000 women aged 15 – 44. This rate was 80 percent higher than for non-Hispanic white women who had a rate of 58.7, representing the lowest rate nationally. (Fig. 10) Births to Hispanic women comprised 20 percent of all births in the United States in 2000.²⁶

The rate of births to women in Kentucky has increased slightly over the past five years. In 1995, there were 52,054 resident live births representing a crude rate of 13.5 and in 1999 there were 54,492 resident births at a rate of 13.8 births per 1,000 total population.



SOURCE: Kentucky BRFSS, 1997 and 1999



SOURCE: *National Vital Statistics Reports*, Vol 49, No. 5. National Center for Health Statistics, CDC: July 24, 2001

Nationally, as a result of the continued decline in teenage birth rates and increases in the birth rate for most groups aged 20 years and over, the proportion of all births occurring to women under the age of 20 years declined from 12.3 births per 1,000 population to 11.8 between 1999 and 2000. The birth rate for women ages 30-34 years rose five percent from 1999 to 2000, (89.6 to 94.2 births per 1,000 female population) and was the highest in 30 years.²⁷

Kentucky birthrates are lower than birthrates nationally, yet are following the same trends. Births among teenagers

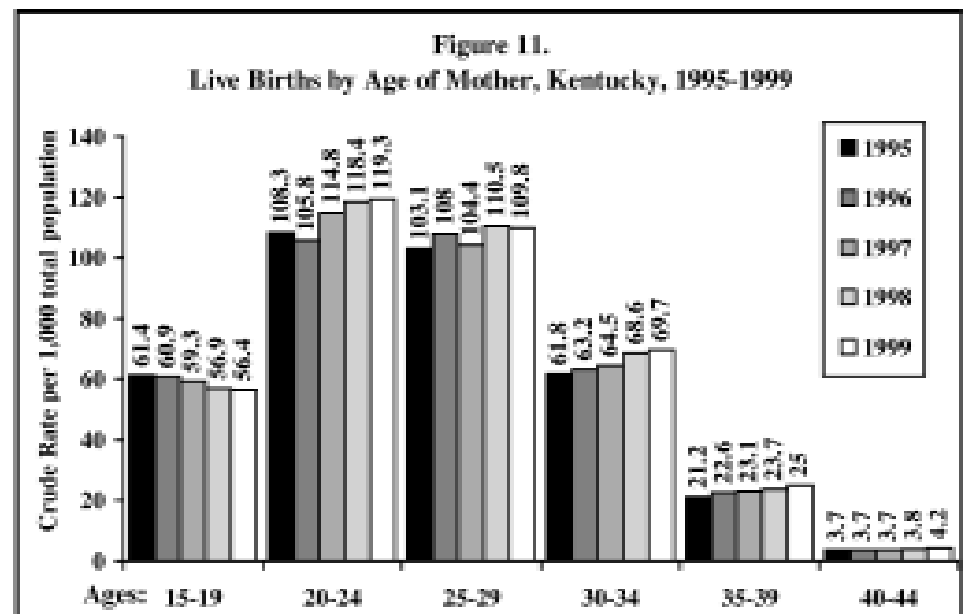
have dropped from a crude rate of 61.4 per 100,00 population in 1995 to 56.4 in 1999. Women aged 20 to 24 experienced the greatest increase in birth rates from 1995-99, growing from 108.3 to 119.3. (Fig. 11)

Breastfeeding

Breastfeeding is considered a special time for the whole family. It is the natural way to give a baby the best start in life.²⁸ (Fig. 12)

Exclusive breastfeeding is ideal nutrition and sufficient to support optimal growth and development for approximately the first six months after birth. The American Academy of Pediatrics recommends breastfeeding for the first 12 months of life, and thereafter for as long as mutually desired by baby and mother.²⁹

Despite the many benefits of breastfeeding, statistics reveal that 64 percent of American mothers' breastfeed in the early post-partum period, with only 29 percent still breastfeeding six months after birth. Racial and



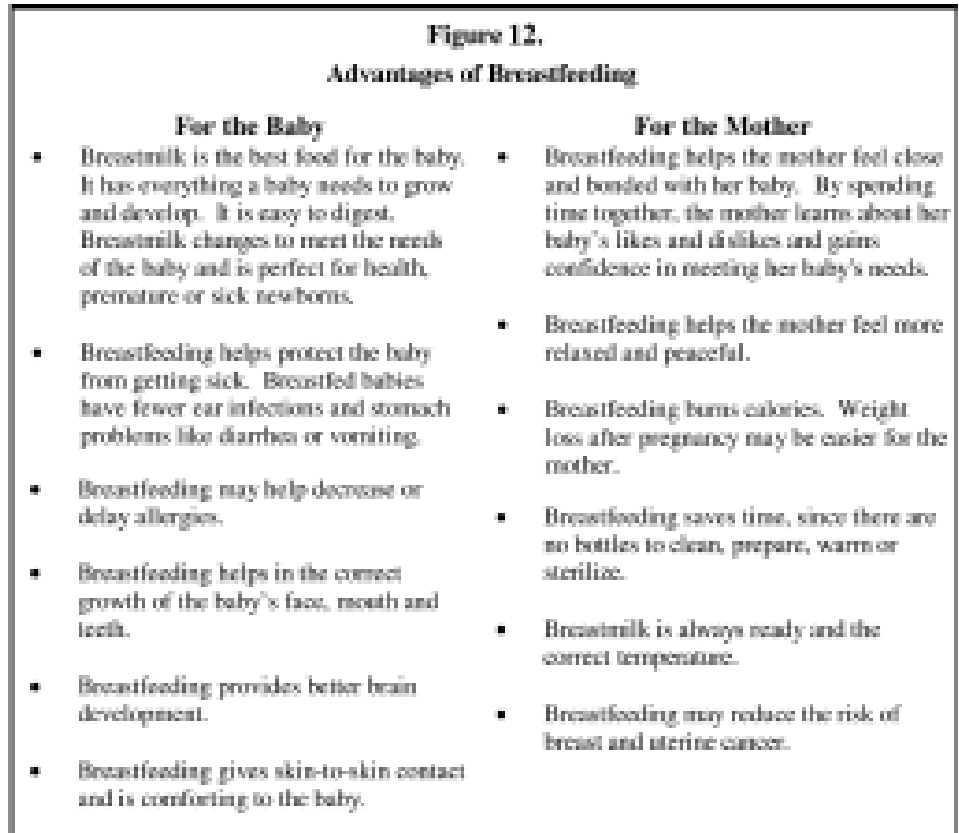
SOURCE: Kentucky Department for Public Health, Surveillance and Health Data Branch, 1995 to 1999 *Kentucky Annual Vital Statistics Reports*

ethnic disparities in breastfeeding are wide, revealing extremely low rates among African-American women. Healthy People 2010, the national's health agenda for the next decade, has set an objective to increase the proportion of all mothers who breastfeed in the early post-partum period to 75 percent.³⁰

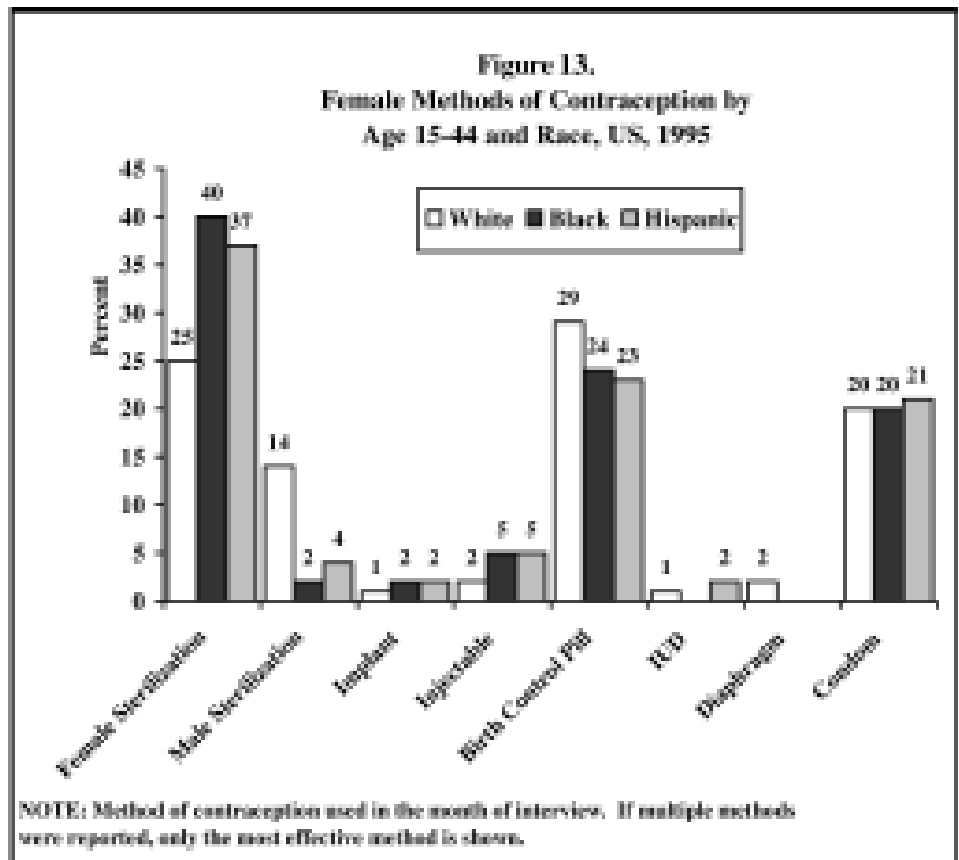
Family Planning

During the 20th Century, the hallmark of family planning in the United States has been the ability to achieve desired birth spacing and family size. Fertility decreased as couples chose to have fewer children; concurrently, child mortality declined and the average age at marriage increased.³¹

Family size increased from 1940 until 1957, when the average number of children per family peaked at 3.7. In 1960, the era of modern contraception began when both the birth control pill and intrauterine device (IUD) became available to women. These effective and convenient methods resulted in widespread changes in birth control. By 1965, the pill had become the most popular birth control method, followed by the condom and contraceptive sterilization. During the 1970s and 1980s, contraceptive sterilization became more common and is now the most widely used method in the United States. Since 1972, the average family size has leveled off at approximately 2 children, and the safety, efficacy, diversity, accessibility, and use of contraceptive methods has increased.³²



SOURCE: Kentucky Department for Public Health, Division of Adult and Child Health, WIC Program



SOURCE: Centers for Disease Control and Prevention (CDC), National Center for Health Statistics, *National Survey of Family Growth*

Figure 14.
Title X Family Planning Services
in Local Health Departments,
Kentucky, 2000

METHOD OF CONTRACEPTION	Female Users
Sterilization (user or partner)	470
Oral Contraceptives	56,656
IUD	120
Hormone Implant	136
Injection	20,718
Cervical Cap	0
Diaphragm (with or without jelly or cream)	128
Condom (with or without spermicide)	5,803
Spermicidal foam, jelly, or cream; or contraceptive film (used without another method of contraception)	172
Natural Methods	52
Method Unknown*	22,268
NO METHOD	
Pregnant	1,216
No method used for other reasons	11,132
TOTAL USERS	118,871

*Method unknown includes clients receiving pregnancy tests whose methods are either unknown or randomly used.

SOURCE: Kentucky Department for Public Health, Title X Family Planning Annual Report, 2000

In 1970, federal funding for family planning services was established under the Family Planning Services and Population Research Act, which created Title X of the U. S. Public Health Service Act.

The most commonly used contraceptives are female sterilization, male sterilization, implant, injectable, birth control pills, intrauterine device (IUD), diaphragm and condom. Female sterilization and birth control pills are the most often used contraceptives.³³ (Fig. 13)

In Kentucky, local health departments' family planning clinics served nearly 119,000 clients, primarily female, in 2000. Of these, the majority used oral contraceptives as their preferred method of birth control (56,656).³⁴ (Fig. 14)

Contraception coverage by private insurance is another issue affecting women's access

to healthcare. Most reversible birth control methods available to women require a visit to the doctor or a prescription. Many private insurance plans do not cover the full range of contraceptive options, thus forcing many women to forego birth control altogether. In 1995, nearly two-thirds (64 percent) of women ages 15-44 were using some form of contraception.³⁵ During women's childbearing years, out-of-pocket health expenditures for women are 68 percent more than their male counterparts.³⁶ A primary reason for this increased expense is reproductive health services, mostly pregnancy-related care, and to a lesser extent, contraception.³⁷ (Fig. 15)

Emergency Contraception

Emergency contraceptives are methods of *preventing* pregnancy *after* unprotected sexual intercourse. They *do not* protect against sexually transmitted infections. Emergency contraception can be used when a condom breaks, after a sexual assault, or any time unprotected sexual intercourse occurs.³⁸ Emergency contraception *is not* an abortifacient.

Emergency contraception, if taken within 72 hours of unprotected sexual intercourse, can prevent a pregnancy from developing. It has become popularly known as the "morning after pill". Emergency contraception pills can be taken right away or up to three days after having had unprotected sex - that is, sex during which no birth control was used or where birth control may have failed. Therapy is more effective the earlier it is initiated within the 72-hour window.³⁹

Figure 15.
Costs of Commonly Used
Contraceptives

Oral Contraceptives	\$250/year + \$40 office visit
Injectables	\$120/year + \$40 office visit
Diaphragm	\$35 + \$40 office visit
Implants	\$365 + \$330 insertion/\$100 removal
Copper-T IUD	\$184 + \$200 insertion/\$70 removal

Note: Based on costs in managed care settings.

SOURCE: Hatcher, RA et al. *Contraceptive Technology, Seventeenth Edition*. Ardent Media, Inc., New York: 1998. As printed in *Women's Issue Brief, "State Policies on Access to Gynecological Care and Contraception"*, Update: December 2000, The Henry J. Kaiser Foundation.

REPRODUCTIVE HEALTH

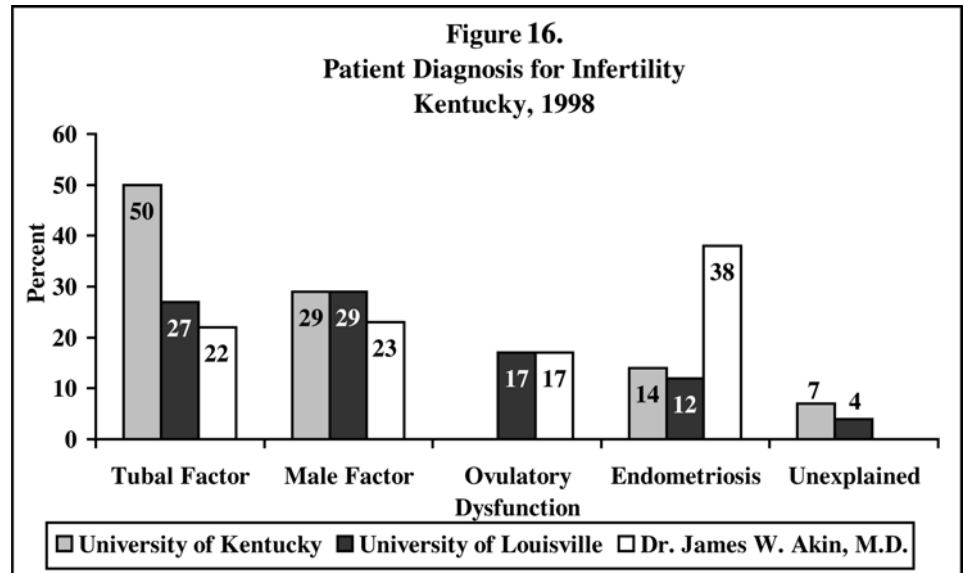
Infertility

Infertility is a disease of the reproductive system that impairs the body's ability to perform the basic function of reproduction. It is defined as the inability to conceive a child despite trying for one year.⁴⁰ Infertility affects about 6.1 million people in the U.S. — about ten percent of the reproductive age population.⁴¹

There have been major advances in reproductive medicine in the last several decades. In the 1960s, the sequence of physiologic events in the normal menstrual cycle and during pregnancy was characterized. This knowledge led to the successful use of various hormones or their analogues for ovulation induction. The combination of ovulation induction and in vitro fertilization (IVF) of the harvested ova resulted in the first “test tube” baby in 1978. During the last 20 years, refinements in ova harvesting and embryo culture techniques have led to a steady increase in pregnancy rates.⁴²

About one in four attempts at in vitro fertilization results in a successful birth.⁴³ For women using their own eggs, age plays a pivotal role in success: those under 35 years fare best, with a 32 percent success rate, while women aged 40 and older successfully carried a fertilization attempt to term just 8 percent of the time. For women who opt for a donor egg — a much smaller group — the success rate is about 40 percent, regardless of age.⁴⁴

The three fertility clinics in Kentucky are the University OB/GYN Associates Fertility



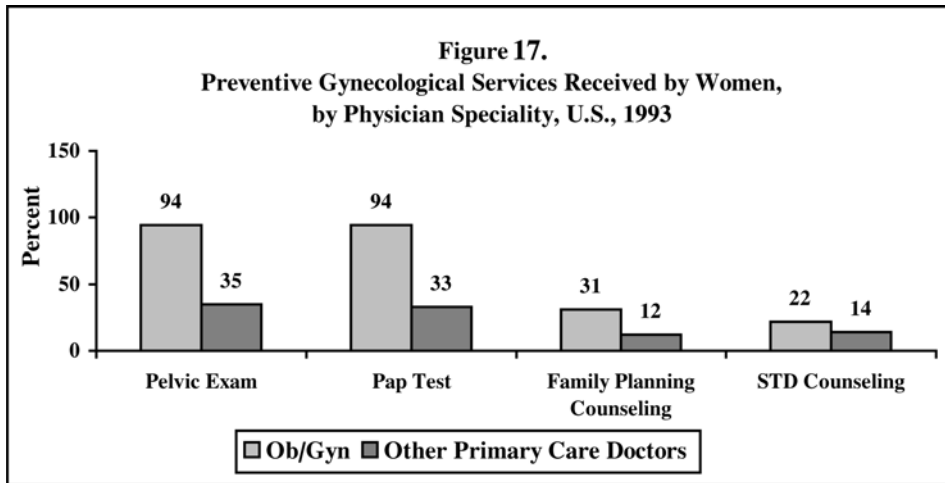
SOURCE: CDC, 1998 Assisted Reproductive Technology Success Rates, National Summary and Fertility Clinic Reports

Center in Louisville, Kentucky; University of Kentucky in Lexington, Kentucky; and Dr. James W. Akin, M.D. in Lexington, Kentucky. There are several diagnoses for infertility — tubal factor, male factor, ovulatory dysfunction, endometriosis, uterine factor, other factors and unexplained.⁴⁵ (Fig. 16)

Access to Gynecological Care

Women visit the doctor more often than men, particularly during their reproductive years. Women often rely on their primary care provider and/or their obstetrician/gynecologist (ob/gyn) for care related to reproductive and sexual health as well as general screening and counseling services.⁴⁶

Women who visit an ob/gyn are more likely to receive recommended preventive gynecological services, such as a pelvic exam and a Pap test, than those seeing other types of primary care providers. Ob/gyns also provide more extensive counseling about family planning and STDs,



SOURCE: *Women's Issue Brief, "State Policies on Access to Gynecological Care and Contraception"*, Update: December 2000, The Henry J. Kaiser Foundation

including HIV/AIDS.⁴⁷ (Fig. 17)

With 75 percent of women in the U.S. enrolled in managed care organizations, direct access to ob/gyns as primary care providers is increasing in many managed-care organizations. Currently, 38 states have adopted policies to regulate access to ob/gyns.⁴⁸ Of these states, 25, including Kentucky, provide direct access (no referral necessary) to ob/gyns. Sixteen other states have adopted laws requiring managed care plans to enable women to choose an ob/gyn as their primary care provider.⁴⁹

NOTES

- ¹ CDC, Safe Motherhood: Preventing Pregnancy-Related Illness and Death 2001.
- ² CDC, Safe Motherhood: Preventing Pregnancy-Related Illness and Death 2001.
- ³ Kentucky Department for Public Health, Health Policy Development Branch, 2000 Hospital Discharge File.
- ⁴ 1998 *Annual Vital Statistics Report*, Kentucky Department for Public Health, Health Data and Surveillance Branch.
- ⁵ 1998 *Annual Vital Statistics Report*, Kentucky Department for Public Health, Health Data and Surveillance Branch.
- ⁶ MMWR, *Achievements in Public Health, 1900 – 1999*. Vol. 48/No. 38 p. 849.
- ⁷ MMWR, *Achievements in Public Health, 1900 – 1999*. Vol. 48/No. 38 p. 853.
- ⁸ MMWR, *Ibid*.
- ⁹ MMWR, p. 850.
- ¹⁰ MMWR p. 850.
- ¹¹ 1998 *Annual Vital Statistics Report*, Kentucky Department for Public Health, Health Data and Surveillance Branch.
- ¹² Kentucky Department for Public Health, Division of Adult and Child Health, *Key Points on Infant Mortality*, 2000.
- ¹³ MacDorman ME, Atkinson JO. Infant mortality statistics from the period 1997 linked birth/infant death data set. Hyattsville, Maryland: US Department of Health and Human Services, CDC, National Center for Health Statistics, 1999 (National Vital Statistics Reports, vol 47, no. 23).
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- ¹⁵ JAMA, November 17, 1999 "Healthier Mothers and Babies – 1900 – 1999" – Vol 282, No. 19 (copyrighted 1999 American Medical Association).
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- ¹⁸ National Center on Birth Defects and Developmental Disabilities, *Frequently Asked Questions*, CDC web site, <http://www.cdc.gov/ncbddd/fas/default.htm>.
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- ²⁴ Kentucky Department for Public Health, Health Data and Surveillance Branch, *Vital Statistics Report*, [http://publichealth.state.ky.us/data-warehouse.htm#Vital Statistics](http://publichealth.state.ky.us/data-warehouse.htm#VitalStatistics).
- ²⁵ Kentucky Department for Public Health, Health Data and Surveillance Branch, *Vital Statistics Report*, [http://publichealth.state.ky.us/data-warehouse.htm#Vital Statistics](http://publichealth.state.ky.us/data-warehouse.htm#VitalStatistics).
- ²⁶ *National Vital Statistics Reports*, Vol 49. No. 5. National Center for Health Statistics, CDC: July 24, 2001.
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- ⁴² JAMA, February 7, 2001 – Vol 285, No. 5 (copyrighted 2001 American Medical Association).
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- ⁴⁴ JAMA, February 21, 2001 – Vol 285, No. 7 (copyrighted 2001 American Medical Association).
- ⁴⁵ 1998 Assisted Reproductive Technology Success Rates, National Summary and Fertility Clinic Reports, CDC.
- ⁴⁶ *Women's Issue Brief*, "State Policies on Access to Gynecological Care and Contraception", Update: December 2000, The Henry J. Kaiser Foundation.
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Chronic Conditions

DEFINITION AND SCOPE OF PROBLEM

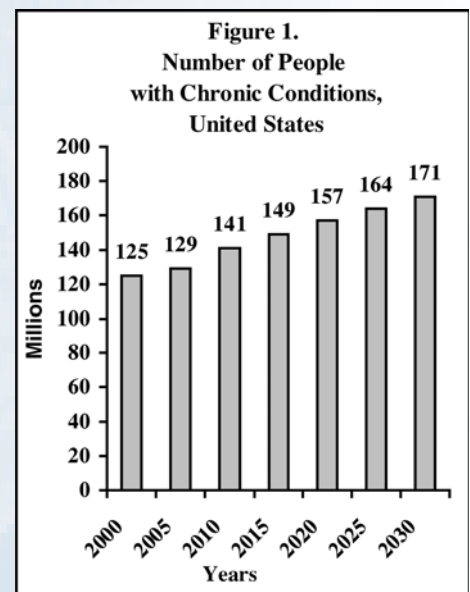
Chronic diseases are broadly defined as illnesses that are prolonged, do not resolve spontaneously, and are rarely cured completely. These illnesses, which are sometimes preventable, pose a significant burden in mortality, morbidity, and cost.¹

Chronic conditions are a major cause of illness, disability, and death in the United States. Approximately 125 million Americans have chronic conditions and millions more will develop them as the population ages.² According to the CDC, chronic illnesses and chronic diseases account for more than 70 percent of all deaths in the United States. Over 40 million people nationwide are limited in their daily activities by chronic conditions.³

By the year 2020, 25 percent of the American population will be living with multiple chronic conditions, and costs for managing these conditions will reach \$1.07 trillion.⁴ The number of people with chronic conditions is projected to increase from 125 million in 2000 to 171 million in the year 2030. (Fig. 1)

Chronic conditions mean different things to different people. Some are life-threatening and some are nuisances. No one is immune to chronic conditions. Men and women, people of all racial and ethnic groups, and all ages and financial means have chronic conditions. Chronic conditions vary, however, according to age and sex, with some being more prevalent than others among specific populations.

According to the National Academy on an Aging Society, men and women share four out of the five most prevalent chronic conditions: orthopedic impairments, sinusitis, hypertension, and hay fever. However, for all age groups, hearing impairments are more common in men and arthritis is more common in women. (Fig. 2)



SOURCE: Johns Hopkins University and Robert Wood Johnson, Partnership for Solutions, *Projection of Chronic Illness Prevalence and Cost Inflation, 2001*

Chronic Conditions and Poor Health: Who is at risk and why?

Generally, people with chronic conditions are more likely than the population as a whole to report they are in fair or poor health.⁵ When women in Kentucky were asked to rate their general health, nearly 23 percent responded that their health was “fair to poor”, compared to 14.9 percent of women responding that way nationwide. In general, gender differences for self-reported health status are not great, but the proportion of people reporting fair or poor health increases with age.

Not surprisingly, Kentucky women exhibit many of the lifestyle risk factors, which often contribute to poor health. Factors such as poor nutrition, sedentary lifestyle, and smoking, are markedly higher among Kentucky women than women nationwide. (Fig. 3)

Most modifiable risk factors are associated with the development of five well-known chronic conditions – hypertension, heart disease, diabetes, cancer, and stroke.

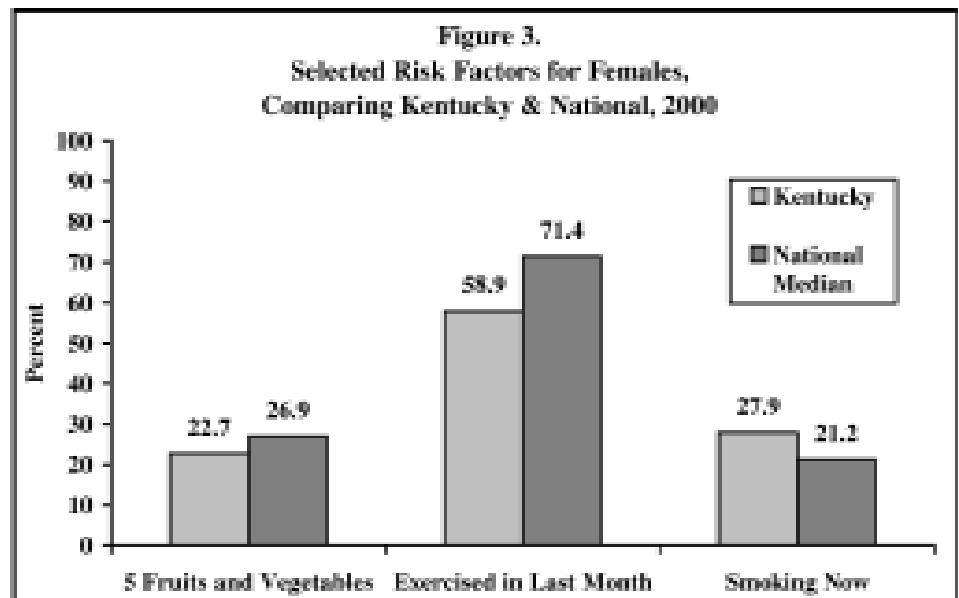
About one quarter of people with either hypertension, heart disease, diabetes, or stroke have three or more risk factors. Lack of exercise and being overweight are the most common risk factors, with 76

Figure 2.
Most Common Chronic Conditions in the US, by Age and Gender

	Male	Female
ALL AGES	<ul style="list-style-type: none"> • Orthopedic impairments • Sinusitis • Hearing Impairments • Hypertension • Hay Fever 	<ul style="list-style-type: none"> • Sinusitis • Arthritis • Orthopedic impairments • Hypertension • Hay Fever
0 - 17	<ul style="list-style-type: none"> • Asthma • Hay Fever • Sinusitis • Bronchitis • Dermatitis 	<ul style="list-style-type: none"> • Sinusitis • Asthma • Hay Fever • Bronchitis • Dermatitis
18 - 44	<ul style="list-style-type: none"> • Orthopedic impairments • Sinusitis • Hay Fever • Hearing Impairments • Hypertension 	<ul style="list-style-type: none"> • Sinusitis • Orthopedic impairments • Hay Fever • Migraine • Asthma
45 - 74	<ul style="list-style-type: none"> • Hypertension • Arthritis • Hearing Impairments • Orthopedic Impairments • Heart Disease 	<ul style="list-style-type: none"> • Arthritis • Hypertension • Sinusitis • Orthopedic Impairments • Hay Fever
75+	<ul style="list-style-type: none"> • Hearing Impairments • Arthritis • Heart Disease • Hypertension • Cataracts 	<ul style="list-style-type: none"> • Arthritis • Hypertension • Hearing Impairments • Heart Disease • Cataracts

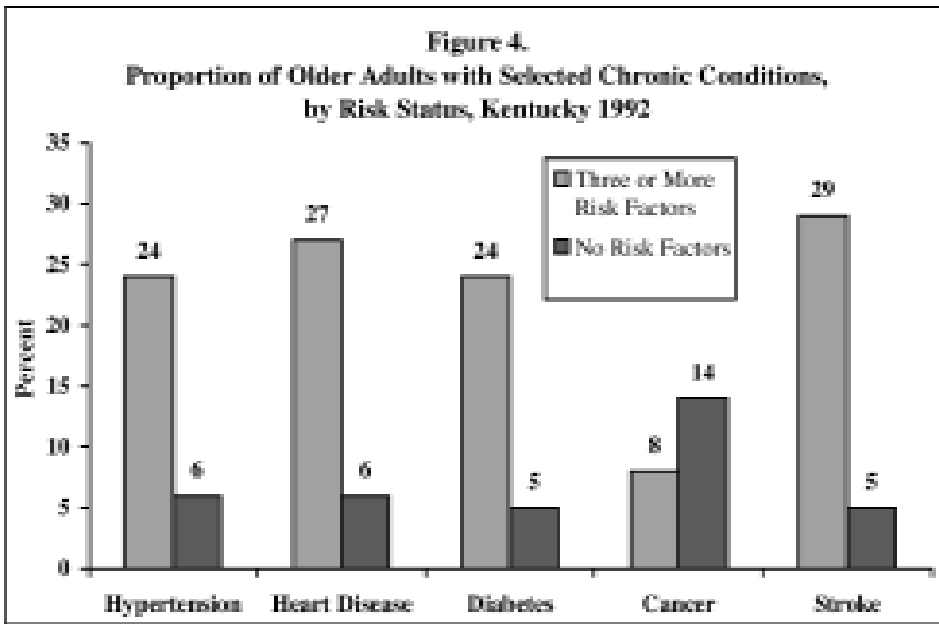
Note: Taken from *Chronic Conditions, A Challenge for the 21st Century*, Number 1; November 1999.

SOURCE: National Academy on an Aging Society analysis of 1994 National Health Interview data



SOURCE: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System (BRFSS), 2000

percent of people with hypertension and 72 percent of people with heart disease being overweight.⁶ (Fig. 4)

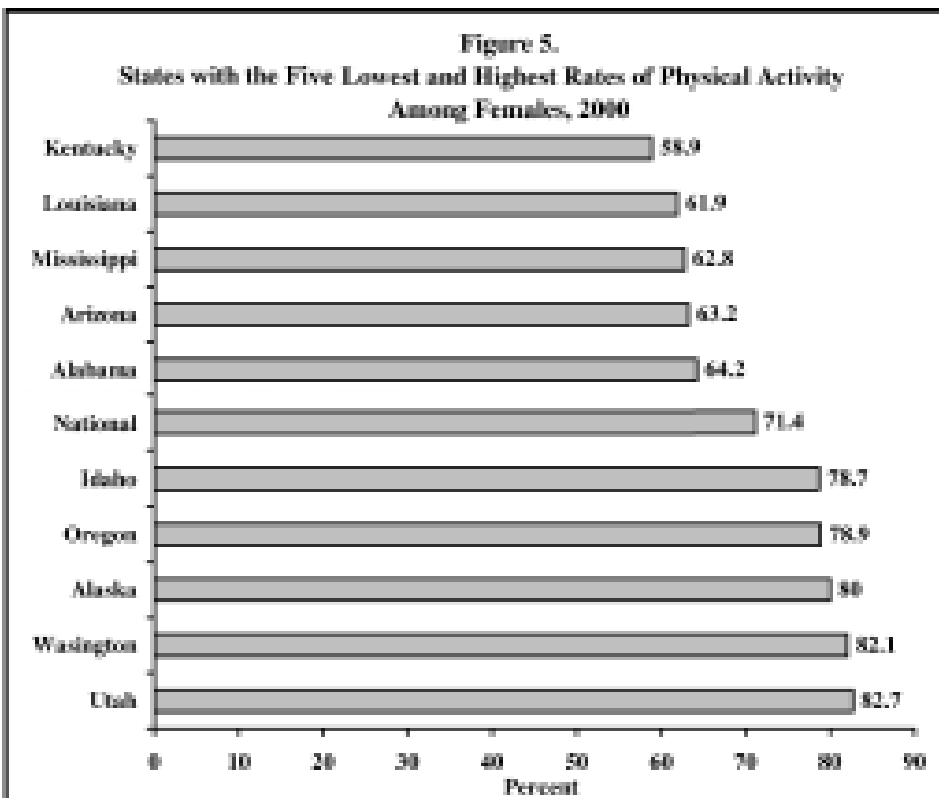


SOURCE: National Academy on an Aging Society analysis of data from the 1992 Health and Retirement Study

Physical Activity and Overweight

Lack of physical activity is a well-known risk factor for many chronic conditions, specifically, hypertension, cardiovascular disease and diabetes. According to the 2000 Behavioral Risk Factor

Surveillance System (BRFSS) data, women in Kentucky have the highest rate of sedentary lifestyle of women in the nation. Only 58.9 percent of women in Kentucky responded “yes” when asked if they have participated in physical activities in the last month, compared to 71.4 percent of women nationally. (Fig. 5)



SOURCE: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System (BRFSS), 2000

Lack of physical activity is also a major contributor to being overweight, which for women, is defined as a body mass index of 25 or higher (BMI is a measure which takes into account a person’s weight and height to gauge total body fat in adults). In Kentucky in 1999, 49.6 percent of women were determined to be at risk for health problems related to being overweight.⁷ (Fig. 6)

Another byproduct of poor diet and sedentary lifestyle is obesity (for women, defined as having a BMI equal to or greater than 30). BRFSS data indicate obesity rates for women in Kentucky have risen dramatically over the past ten years, from 12.7 percent in 1990, to 22 percent in 2000. (Fig. 7)

Overweight and obese individuals are more likely to die prematurely than individuals who are not overweight. Obesity is second only to smoking as the leading cause of preventable death in the United States.⁸

Smoking

Kentucky leads the nation as the state with the highest rate of current smokers. This habit increases mortality and morbidity for nearly all chronic conditions. Smoking is responsible for at least one out of every five deaths in the nation.⁹

For women, Kentucky had the second highest rate of smoking with 28 percent of females being current smokers in 2000.¹⁰ Nevada led the nation with 29.4 percent of female smokers. The national median for women who smoked was 21.2 percent. In 2000, Kentucky’s overall

Figure 6.
Percentage Adults at Risk for Health Problems Due to Being Overweight* and Lack of Exercise, 2000**

State	Males		Females	
	*Being Overweight	Lack of Exercise	*Being Overweight	Lack of Exercise
Kentucky	68.2	84.6	49.6	86.7
Nationwide Median	64.9	77.4	45.2	78.7

*BMI > 25

**Regular and sustained physical activity

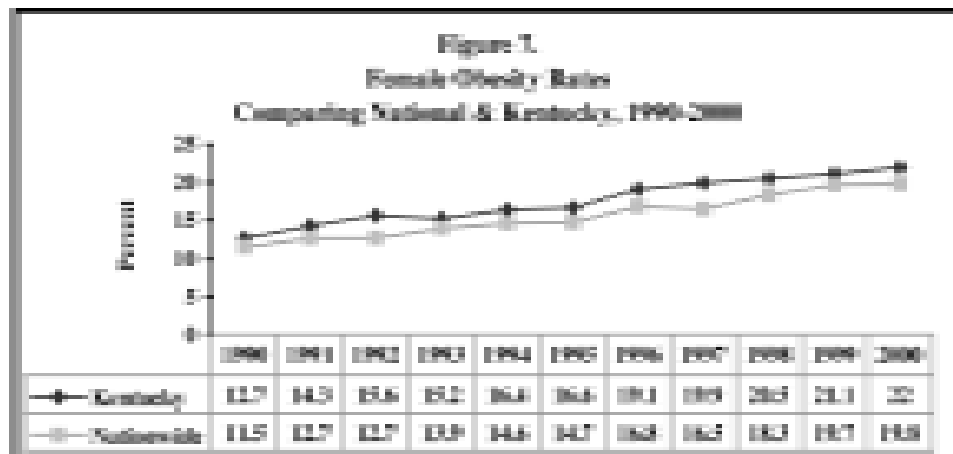
SOURCE: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System (BRFSS),

smoking rate (including men and women) was the highest in the nation with 30.5 percent being current smokers. Nevada had the second highest overall smoking rate at 29 percent. The national median for both sexes was 23.2 percent. (Fig. 8)

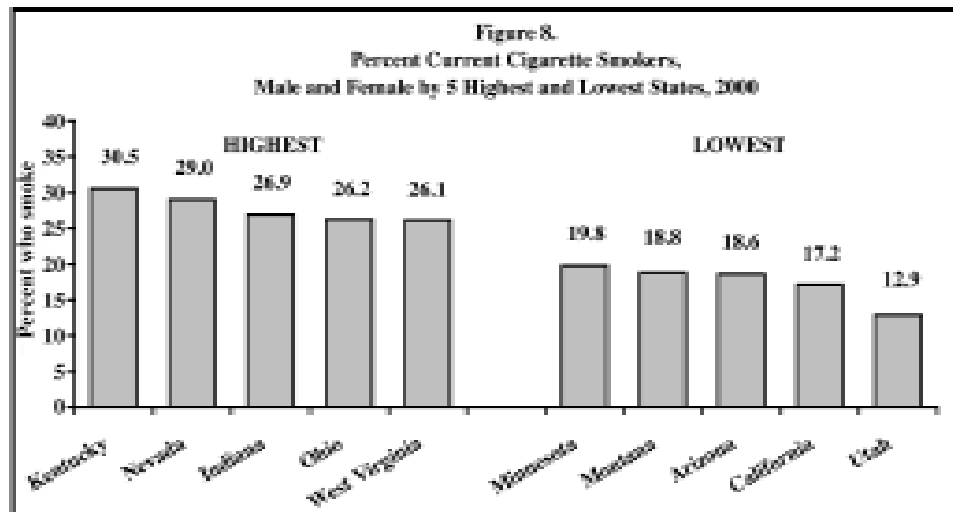
Smoking not only contributes to serious chronic diseases such as heart disease, cancer and stroke, but is also a primary contributor to other chronic respiratory conditions such as asthma and chronic obstructive pulmonary disease (COPD). Please refer to Chapter 5: *Tobacco Use and Smoking Related Illnesses*, for more information.

Outpatient Utilization for Chronic Conditions

In the U.S., women utilize health services more than men, even when excluding services related to pregnancy and childbirth. In 1998, approximately 500 million women in the United States utilized ambulatory care services, representing an age-adjusted rate of 4.6 visits per woman per year.¹¹ For non-pregnancy related visits, women still utilized ambulatory care services at a rate 33 percent higher than males.¹² For non-pregnancy related diagnoses, the age-adjusted rate



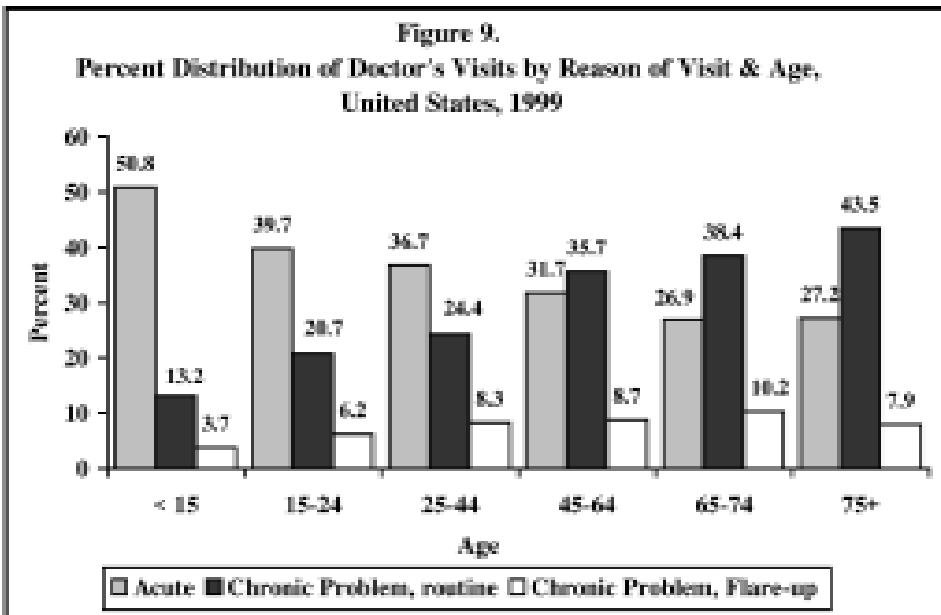
SOURCE: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System (BRFSS), 1990 - 2000



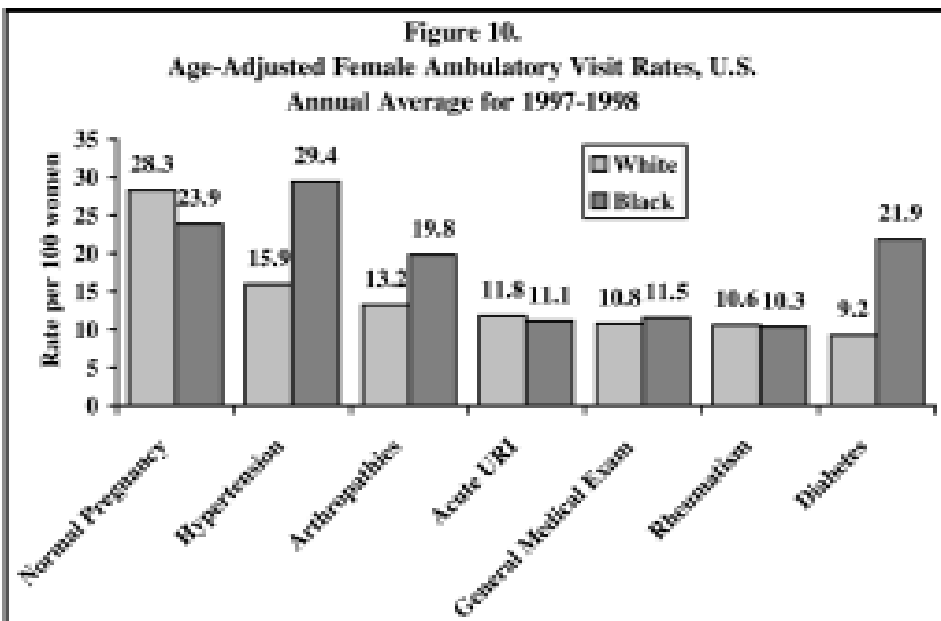
SOURCE: Centers for Disease Control and Prevention, Behavioral Factor Risk Surveillance System (BRFSS), 2000

of visits to primary care physicians was 58 percent higher among women than men and the rate of visits to outpatient departments was 40 percent higher for women than men.¹³

Chronic conditions are often the cause for female outpatient



SOURCE: National Hospital Ambulatory Medical Care Survey: 1999 Outpatient Department Summary. Advance Data from Vital and Health Statistics: Number 321, June 26, 2001. National Center for Health Statistics



SOURCE: Utilization of Ambulatory Medical Care by Women: United States, 1997-98. Series 13, Number 149. National Center for Health Statistics

visits. According to the National Center for Health Statistics (NCHS), the percent of female visits classified as a "routine" visit for a chronic problem was 28.6 percent, and another 8.2 percent were classified as "flare-up" of a chronic problem. The majority of visits for women overall were for acute problems, representing 34.5 percent of all doctor visits.¹⁴ However, as age increases, the rate for visits related to chronic problems increases. (Fig. 9)

Differences among physician office visits for chronic and acute conditions not only vary by age, but also by race. According to the NCHS, outpatient visits for hypertension, diabetes, and arthropathies (includes all arthritic conditions) are markedly higher for black women than white women. Visits related to hypertension show the biggest disparity with 29.4 percent for black women and 15.9 for white women. Diabetes visit rates were 21.9 percent for black women and 9.2 percent for white women. Visits for arthropathies showed less disparity with a rate of 19.8 percent for black women and 13.2 percent for white women. (Fig. 10)

LEADING CHRONIC DISEASE KILLERS

While much of the chronic disease burden is preventable, certain chronic diseases remain the nation's leading killers: cardiovascular disease, cancer, diabetes, and COPD. In fact, these four chronic diseases account for over 70 percent of all deaths to both men and women in Kentucky. (Fig. 11)

Cardiovascular Disease

Cardiovascular disease (CVD) is the term used to identify coronary heart disease, the disease that leads to a heart attack, and diseases of the blood vessels including hypertension and stroke. Illness and death from CVD are related to a number of modifiable risk factors including sedentary lifestyle, poor nutrition, obesity, smoking, hypertension and high cholesterol. Some risk factors, however, are not

Figure 11.

Deaths Due to Chronic Diseases as a Percentage of All Deaths, Kentucky, 1999

Cause of Death	Total	Percent Deaths	Female Total Deaths	Percent of Total
Four Chronic Diseases	27,452	70.5	14,013	71.1
Total Cardiovascular Diseases	15,116	38.8	8,108	41.1
All Cancers	8,933	22.9	4,179	21.2
COPD	2,285	5.8	1,085	5.5
Diabetes	1,118	2.8	641	3.2
Other deaths	11,482	29.4	5,680	28.8
Total	38,934	100.0	19,693	100.0

SOURCE : Kentucky Department for Public Health, Surveillance and Health Data Branch, Death Certificate File, 1999.

modifiable including age, gender, and family history. Taking these factors into account, an individual can modify their behavior to reduce their potential risk for cardiovascular disease by as much as 80 percent by following a healthy lifestyle.¹⁵

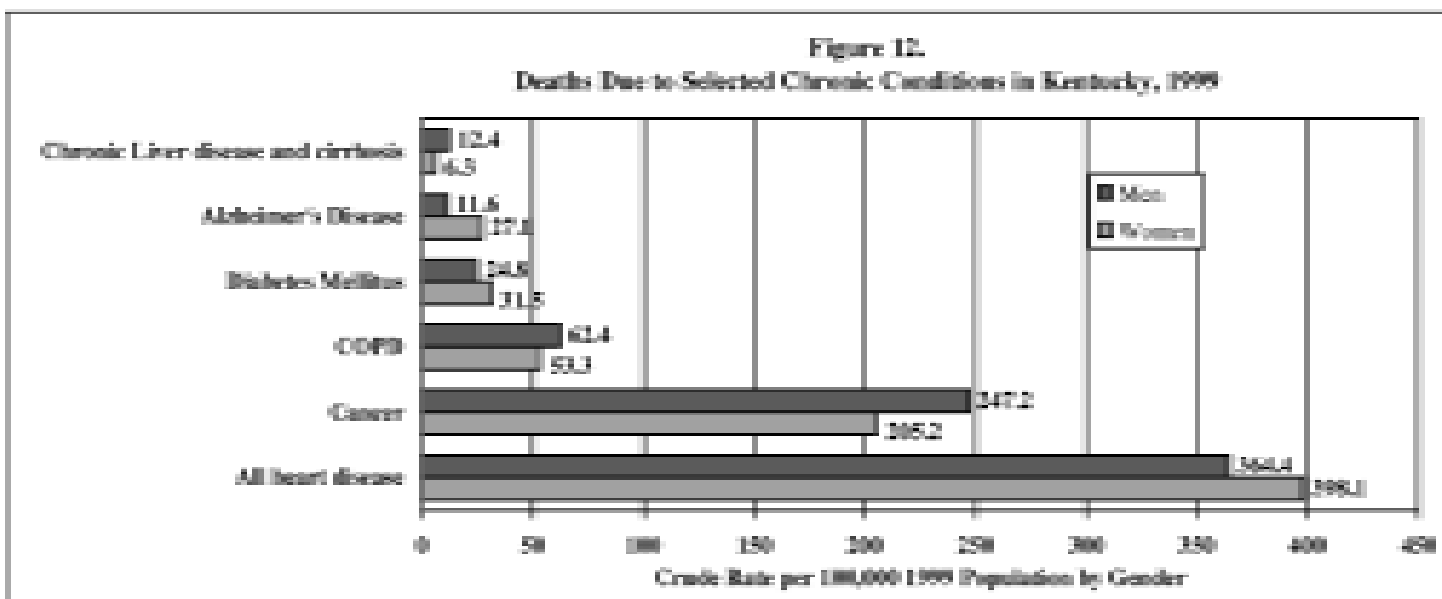
The burden of CVD in Kentucky is among the highest in the nation, ranking 5th in age adjusted mortality rates according to the American Heart Association's "2000 Heart and Stroke Statistical Update". The four states ranking higher than Kentucky are Louisiana, West Virginia, Tennessee and Mississippi.¹⁶

One of the most damaging myths about heart disease is that it is a "man's disease", thus contributing to the lack of awareness of the risk of heart disease among women. The fact, however, is that more women in Kentucky die each year from heart disease than men. In 1998, there were 6,102 female deaths compared to 5,768 male deaths.¹⁷ (Fig. 12)

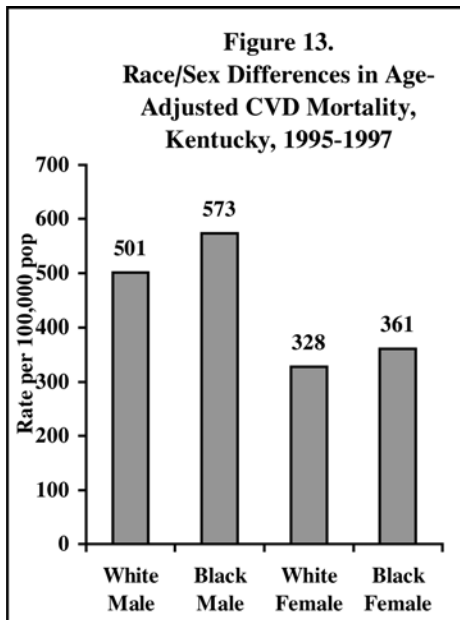
However, when adjusted for age, (taking into account the larger population of elderly women), rate of death due to heart disease is greater for men – 504 per 100,000 population versus 332 per 100,000 for women (rates averaged over

Figure 12.

Deaths Due to Selected Chronic Conditions in Kentucky, 1999



SOURCE : Kentucky Department for Public Health, Surveillance and Health Data Branch, Death Certificate File, 1999.



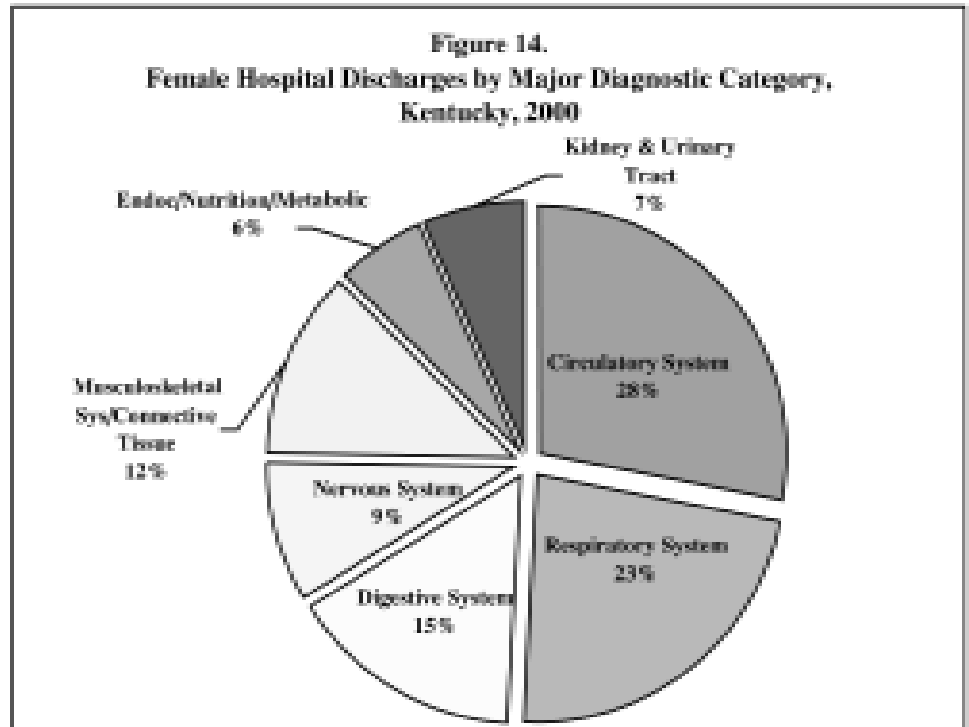
SOURCE: Reprinted from "Kentucky State of the Heart 2000", Kentucky Department for Public Health, Chronic Disease Prevention and Control Branch

three year period, 1995-1997).¹⁸ (Fig. 13)

Admissions to hospitals due to cardiovascular disease represent the largest proportion of non-pregnancy related hospitalizations for women in Kentucky. In 2000, nearly 50,000 women representing 28 percent of total discharges were hospitalized with a clinical diagnosis of

"diseases and disorders of the circulatory system" (classified as Major Diagnostic Category 05- includes heart disease, hypertension, and stroke). (Fig. 14)

Cardiovascular disease is statistically more threatening to women than other diseases. However, a survey conducted by the American Heart Association found that most women



SOURCE: Kentucky Department for Public Health, Health Policy Development Branch, 2000 Kentucky Hospital Discharge Data

Figure 15.

WOMEN'S SYMPTOMS (The ABCs)	MEN'S SYMPTOMS
Angina (or chest pain) – women often describe this as a tightness in the chest, sometimes radiating down the left arm or into the jaw. This is often mistaken for indigestion.	Sudden pressure, fullness, squeezing or pain in the center of the chest that lasts more than a few minutes or goes away and then comes back.
Breathlessness (chronic) or waking up at night having difficulty catching one's breath.	Pain that radiates from the center of the chest to the shoulders, neck, or arms.
Chronic Fatigue – fatigue associated with heart disease is usually overwhelming and unusual.	Chest discomfort with lightheadedness, fainting, sweating, nausea, or shortness of breath.
Dizziness – unexplained lightheadedness, even blackouts.	Sudden onset of rapid heartbeats.
Edema – swelling, particularly of the ankles, and/or lower legs.	
Fluttering (or rapid) heartbeats.	
Gastric upset (or nausea)	

SOURCES: *Healing the Female Heart*, By Elizabeth Ross, MD, and Judith Sachs, 1996, Pocket Books, A Division of Simon and Schuster; and the American Heart Association

believed their biggest health threat was cancer. In reality, heart disease claims nearly twice as many Kentucky women's lives as cancer, (8,108 v. 4,179 respectively in 1999) and over 13 times as many lives as breast cancer (614 deaths in 1999).¹⁹

One in eight women will develop breast cancer over the course of their lives; one in 25 will die of it. But one in three women will die of coronary heart disease, or heart attack. Heart disease is, by far, the biggest killer of women 55 and older. A woman's risk of heart disease is lower than a man's risk earlier in her life—before menopause, unless she has diabetes. But by the time she reaches 60, a woman has as much chance of having a heart attack as a man.

Heart disease is often referred to as the “silent killer” as heart attacks often occur without warning. More than half of the women who die suddenly of coronary disease had no previous symptoms.²⁰ Over 28 million American women are living with the effects of cardiovascular disease, including heart disease, high blood pressure and stroke. Of these, more than one-half are under the age of 65.

While angina (chest pain) is a major indicator of heart disease in both women and men, other symptoms in women, such as shortness of breath and chronic fatigue, are very common but are often ignored. (Fig. 15)

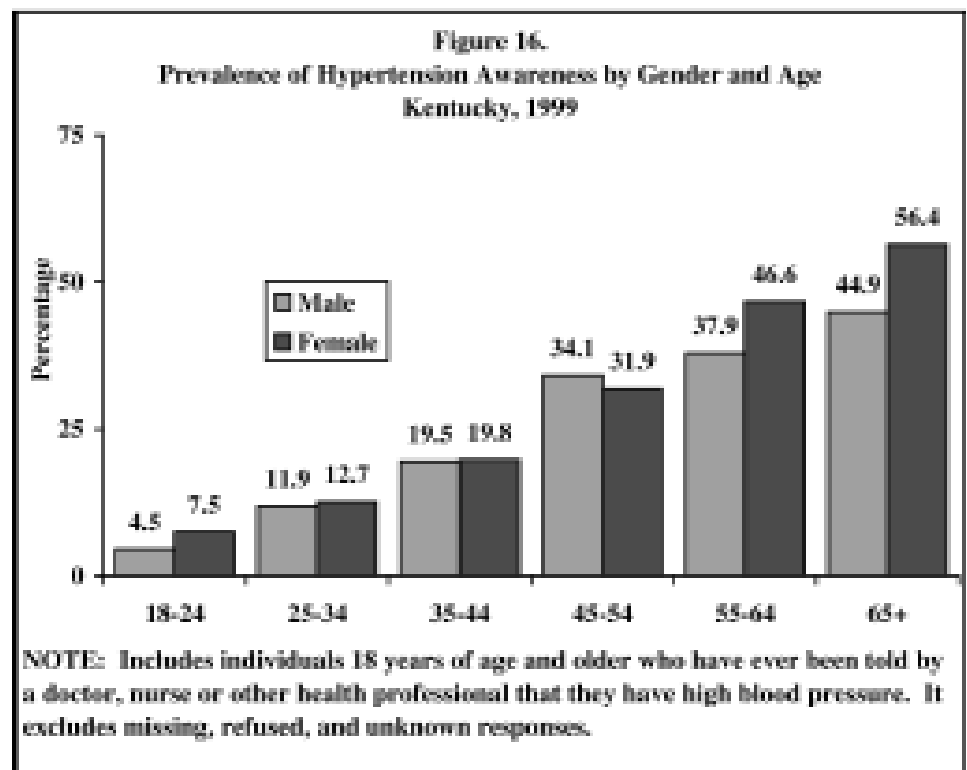
Hypertension

Hypertension, also known as high blood pressure, is the pressure

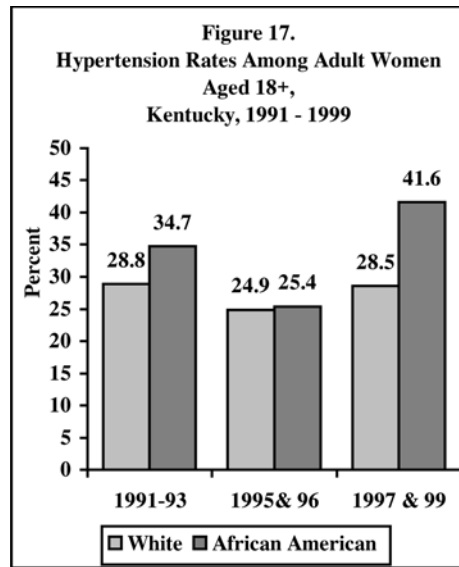
placed on the inside of the walls of arteries to keep blood flowing.²¹ Nationally, about 15 percent of the adult population have been told they have hypertension. According to the 1999 BRFSS data, 27.5 percent of the population in Kentucky had been told by a health professional that they have high blood pressure. More women than men report having high blood pressure, 30.1 percent of women versus 24.7 percent of men, with the prevalence rising as the population ages.²²

Among the elderly population with hypertension, nearly two-thirds (63 percent) are women. While men and women are almost equally likely to have hypertension before age 65, the gap widens later in life.²³ (Fig. 16)

Hypertension rates vary by race with blacks experiencing higher rates of hypertension



SOURCE: Kentucky BRFSS, 1999



SOURCE: Kentucky BRFSS, 1991-1999

than whites. Hypertension accounts for 20 percent of deaths among blacks in the U.S. — twice the figure for whites.²⁴ In Kentucky, 41.6 percent of black women have hypertension, compared to 28.5 of white women.²⁵ (Fig. 17)

Pregnant women can experience a fast-developing form of high blood pressure in the last three months before delivery, which can be hazardous to both mother and baby, if it isn't treated. Typically, the mother's blood pressure returns to normal after the baby is born. But sometimes pregnancy-induced

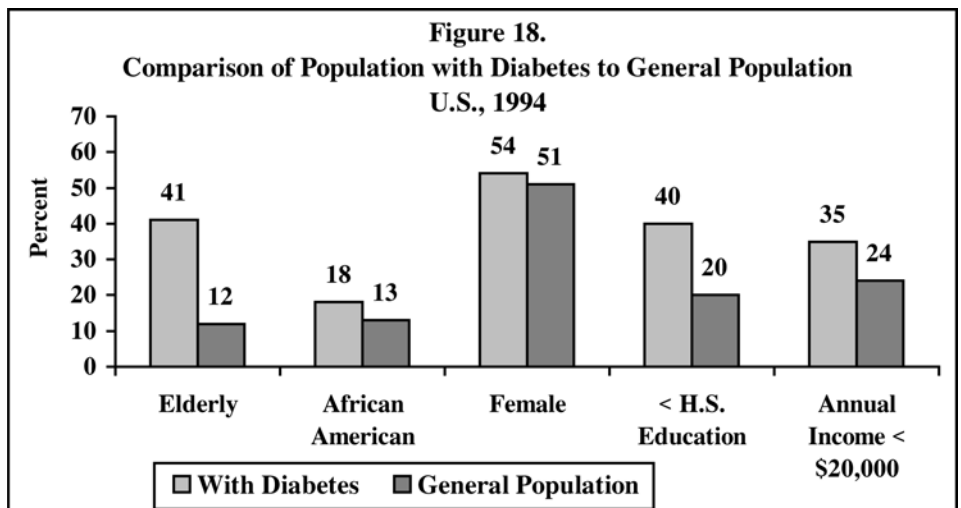
hypertension becomes chronic, requiring long-term treatment.²⁶

In some women, contraceptive pills have been known to raise blood pressure. This occurs most frequently among women who are overweight, who have had blood pressure problems in pregnancy, who have had kidney disease, or who have a family history of blood pressure problems. This pill-related hypertension is especially pronounced in women who smoke.²⁷

Diabetes

Diabetes is a chronic condition caused by the body's inability to create or effectively use its own insulin, a hormone necessary to convert food to glucose, which the body needs for energy.²⁸ Diabetes affects 6 percent of the U.S. population, 16 million people, yet more than 1 of every 10 U.S. health care dollars is spent on diabetes.²⁹

Women and the elderly account for more of the population with diabetes. Women comprise 54 percent of the population with diabetes and



SOURCE: National Academy on an Aging Society analysis of data from the 1994 National Health Interview Survey, as published in *Diabetes, A drain on U.S. Resources, Challenges for the 21st Century: Chronic and Disabling Conditions*, April 2000

Figure 19.
Diabetes Prevalence by Age,
Kentucky, 1995-2000

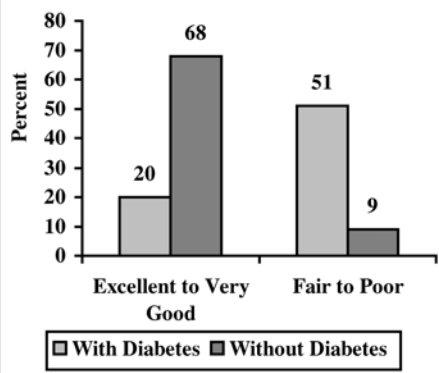
Age Group	1995	2000	%Change
18-24	0.2	1.8	11.1%
25-34	0.6	1.4	42.9%
35-44	0.7	1.7	41.2%
45-54	3.5	8.7	40.2%
55-64	8.0	12.7	63.0%
65+	10.2	14.1	72.3%

SOURCE: Kentucky BRFSS, 1995 - 2000

the elderly account for 41 percent of the population with diabetes.³⁰ (Fig. 18) From 1995-2000 in Kentucky, the elderly population over age 65 had the highest percent increase in diabetes prevalence, rising from 10.2 percent to 14.1 percent. (Fig. 19)

The most common form of diabetes is Type 2 diabetes. This form of diabetes generally develops after age 40 and affects up to 95 percent of adults who have the disease. The life expectancy of people with diabetes averages 15 years less than that of people without diabetes³¹ and people with diabetes report a poorer physical health status than the population without diabetes.³² (Fig. 20)

Figure 20.
Self-Reported Physical Health,
by Diabetes Status, U.S., 1994



SOURCE: National Academy on an Aging Society analysis of diabetes from the 1994 National Health Interview Survey

Diabetes rates are rising, increasing the burden of chronic disease on women in Kentucky. According to the 2000 Kentucky BRFSS, 6.1 percent of women responded that they had been told by a doctor at some point in their life, that they had diabetes, compared to 4.2 percent of women nationally. Diabetes is also disproportionately prevalent among blacks with 9.8 percent of black women over 18 years old reporting they have been told by a doctor that they have diabetes, versus 6.0 percent of white women. (Fig. 21)

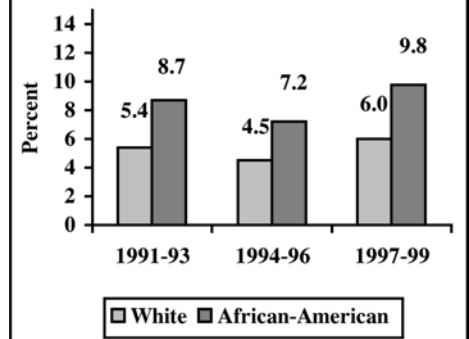
People with diabetes are two to four times more likely to have heart disease and suffer from stroke. As rates of obesity increase in Kentucky, so does the incidence of diabetes. Maintaining a healthy weight, eating a healthy diet and exercising regularly are lifestyle changes that can reduce your risk for diabetes.³³

Chronic Obstructive Pulmonary Disease (COPD)

COPD is the overall term for a group of chronic lung conditions including bronchitis, emphysema and other lung disorders. The main cause of COPD is smoking, and it is strongly associated with lung cancer, the number one cause of cancer death in women.

In Kentucky, 1,085 women died of COPD in 1999 (5.5 percent of all deaths), making it the fourth leading cause of death for Kentucky women. A woman who smokes is 10 times more likely to die of COPD than a woman who does not smoke. The quality of life for a person with COPD diminishes as the disease progresses.

Figure 21.
Women Aged 18+ who have been
told by a doctor they have diabetes,
Kentucky 1991 - 1999



SOURCE: Kentucky BRFSS, 1991 - 1999

Breathlessness and activity limitations develop, and eventually breathing may only be possible with mechanical respiratory assistance.³⁴

You can reduce your risk of COPD simply by not smoking.

Asthma

Asthma, a chronic inflammatory disorder of the airways, is a largely manageable condition. The CDC estimates that more than 15 million Americans suffer from asthma. The increase in asthma cases and deaths affects all ages, spans across all racial groups and occurs throughout the U.S.³⁵

Despite its manageability, asthma accounted for more than 1.8 million emergency room visits nationally in 1995. By race, ER visits nationally for asthma were 48.8 per 10,000 among whites and 228.9 per 10,000 among blacks.³⁶

In Kentucky, according to the 2000 Kentucky BRFSS, current asthma prevalence is 9.8 percent for women and 5.5 percent for men. National asthma rates reveal a dramatic increase over the past 20 years. Since 1980, female asthma rates have nearly doubled, from 29.2 per 1,000 population to 56.2 per 1,000 population. The number of doctor's office visits to treat asthma more than doubled between 1975 and 1995. These increases were evident in all races, both sexes, and all age groups.³⁷

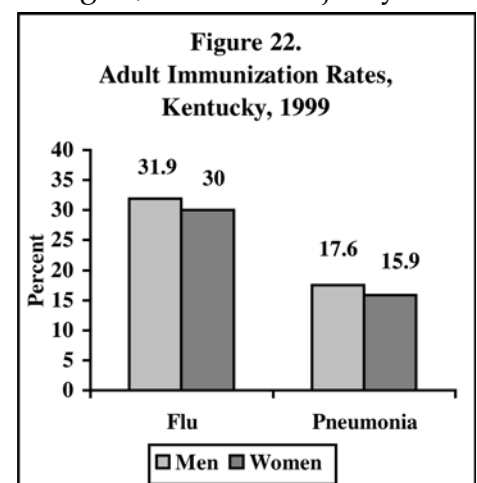
Pneumonia and Influenza

Pneumonia and influenza combined are the fifth leading cause of death in

U.S. women³⁸ and the 10th leading cause of death for women in Kentucky.³⁹ In 1999, influenza and pneumonia were responsible for 1.7 percent of all female deaths in Kentucky. When associated with other chronic conditions, pneumonia and influenza can be especially life threatening. Individuals with COPD, asthma, heart disease, diabetes, or other conditions that suppress the immune system are at high risk.⁴⁰

The risk of both pneumonia and influenza can be reduced by immunizations. A yearly flu shot can be up to 90 percent effective in preventing influenza in healthy adults and the pneumococcal vaccine can reduce the risk of pneumonia by 80 percent.⁴¹

People age 65 and older are at high risk and are more likely to get pneumonia. Many people who get pneumonia end up in the hospital while others take many months to recover. Older adults get sicker than younger people who get pneumonia. The CDC recommends a flu shot every year in the fall. For adults 65 and over, they also recommend a pneumonia vaccine. Adult immunization rates for Kentucky are outlined in Fig 22, with the majority of



SOURCE: Kentucky BRFSS, 1999

the shots being given to adults age 65 and over. (Fig. 22)

CHRONIC DEGENERATIVE CONDITIONS

Arthritis and Osteoporosis

Other, less life-threatening chronic conditions include arthritis and osteoporosis – conditions which disproportionately affect women. Arthritis and other rheumatic conditions affect nearly 43 million Americans, or about one of every six people, making it one of the most prevalent diseases in the United States.⁴² Arthritis comprises a variety of diseases and conditions, including osteoarthritis, rheumatoid arthritis, fibromyalgia, lupus, childhood arthritis, gout, bursitis, Lyme arthritis, and carpal tunnel syndrome.⁴³ (Fig. 23)

According to the CDC, arthritis is a leading cause of disability in the United States. Hip and knee osteoarthritis are the leading causes of arthritis disability and also the primary causes of expensive joint replacement surgery. As the population ages, this condition and expenses associated with it, will become more prevalent.⁴⁴ In Kentucky, joint replacement was one of the top ten medical diagnoses for women entering Kentucky hospitals, with 4,490 reported admissions in year 2000.⁴⁵ An average of 24 percent of hip fracture patients age 50 and over die in the year following their fracture.⁴⁶

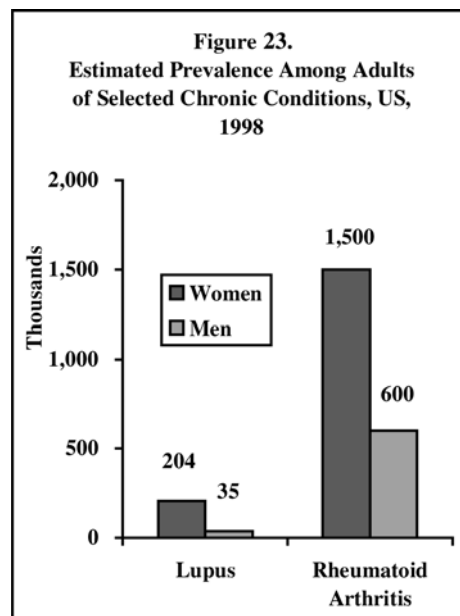
Osteoporosis, or brittle bones as it is often called, is a major contributing factor to hip

fractures. According to the National Osteoporosis Foundation, one in two American women over age 50 will suffer an osteoporosis-related fracture in their lifetime.

Osteoporosis is responsible for more than 1.5 million fractures annually, including:

- 300,000 hip fractures; and approximately
- 700,000 vertebral fractures,
- 250,000 wrist fractures; and
- 300,000 fractures at other sites⁴⁷

Osteoporosis is the loss of bone density or thinning of the bones.⁴⁸ Women are at particular risk for osteoporosis because, even at their peak, bone mass for women is naturally lower than for men. In fact, women suffer from osteoporosis at a rate four times as much as men.⁴⁹ Also, during menopause, when estrogen production slows down, women become more susceptible to osteoporosis. The hormone estrogen naturally protects women from bone loss. Women can protect themselves from osteoporosis by participating in moderate amounts of weight



SOURCE: National Institutes of Health, 1998

bearing exercise such as walking or jogging, eating a balanced diet high in calcium, and for post-menopausal women, hormone replacement therapy may provide some protective benefits.⁵⁰

Other Chronic Conditions

Another common chronic condition affecting primarily women is thyroid disease. Although the reason is not understood, women are at higher risk of most types of thyroid disease than men.⁵¹ Women develop thyroid disease earlier in life than men and about 10 percent of women will have thyroid dysfunction following pregnancy. An estimated 25 percent of those with an autoimmune disorder will develop thyroid malfunction.⁵²

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Cancers

OVERVIEW

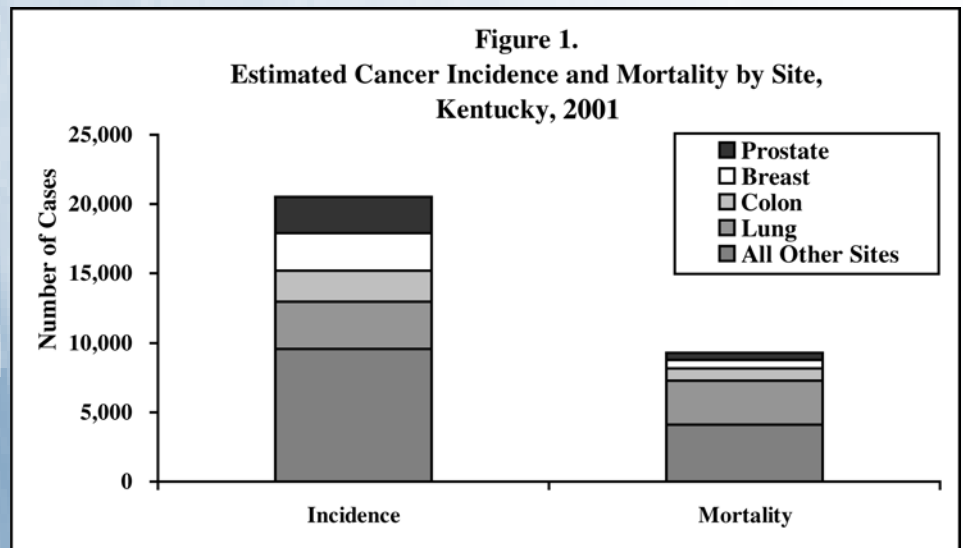
Cancer is the second leading cause of death among both men and women. It affects people of every age, race, and ethnicity, with an expected 1,268,000 new cases of cancer to be diagnosed nationally in 2001. Likewise, over 553,000 deaths are expected to occur in the U. S. due to cancer in 2001, at more than 1,500 people a day.¹ The same estimates for Kentucky include approximately 21,000 new cases of cancer for 2001 and 9,200 deaths.²

Four cancer sites (lung, prostate, breast, and colorectal) accounted for slightly over half of all new cancer cases among men and women and were also the leading causes of cancer deaths for every racial and ethnic group in 2000. (Fig. 1)

For nearly a century, breast, colon and reproductive cancer

mortality rates among women were high and held fairly constant until improved screening and advanced treatment regimes were realized in the mid 1990s. Just as better screening and treatment were realized for these cancers, the gain to women was offset by the surge in lung cancer mortality rates beginning in the 1970s that continued to rise well into the 90s. What were once the leading cancer killers among women are now less life-threatening, though still posing very real threats to the health and well-being of women in Kentucky. (Fig. 2)

While mortality rates are good indicators of disease patterns and trends, incidence rates enhance this knowledge by capturing the number of new cases diagnosed in any given year. Kentucky cancer incidence data is available through the Kentucky Cancer



SOURCE: American Cancer Society, *Cancer Facts and Figures 2001*

Figure 2.
Mortality Rate Per 100,000 Women, United States, 1930 - 1992

YEAR	Cervix/ Uterus	Breast	Ovary	Lung	Stomach	Colon/ Rectum
1930	31	25	4	2	28	22
1940	28	27	6	4	20	26
1950	22	26	7	5	13	26
1960	16	26	9	6	8	24
1970	11	27	9	11	6	20
1980	8	27	7	20	5	19
1990	6	26	7	20	5	19
1992	6	26	7	33	4	15

SOURCE: *Some Cancer Statistics*. Rich, MD, William M. (<http://www.obgyn.net/women/articles/rich/stats.htm>)

Registry. The Kentucky Cancer Registry began capturing cancer incidence data in the state in 1991.

Nationally, the National Institutes of Health maintains a more global registry run by the National Cancer Institute Surveillance, Epidemiology, and End Results Program – otherwise known as SEER. The SEER Program currently collects and publishes cancer incidence and survival data from 11 population-based cancer registries and three supplemental registries covering approximately 14 percent of the U.S. population. The SEER Program of the National Cancer Institute is the most authoritative source of information on cancer incidence and survival in the United States.³

BREAST CANCER

Breast cancer is the most common form of cancer among women in the U.S. and Kentucky, and the second leading cause of cancer deaths to women. Though breast cancer is often perceived as a young woman’s disease, 4 out of 5 breast cancer deaths are among women over age 50.⁴

A report from the National Cancer Institute (NCI) estimates that about 1 in 8 women in the United States (approximately 12.8 percent) will develop breast cancer during her lifetime.⁵ As a woman ages, her risk for developing breast cancer also rises. (Fig. 3)

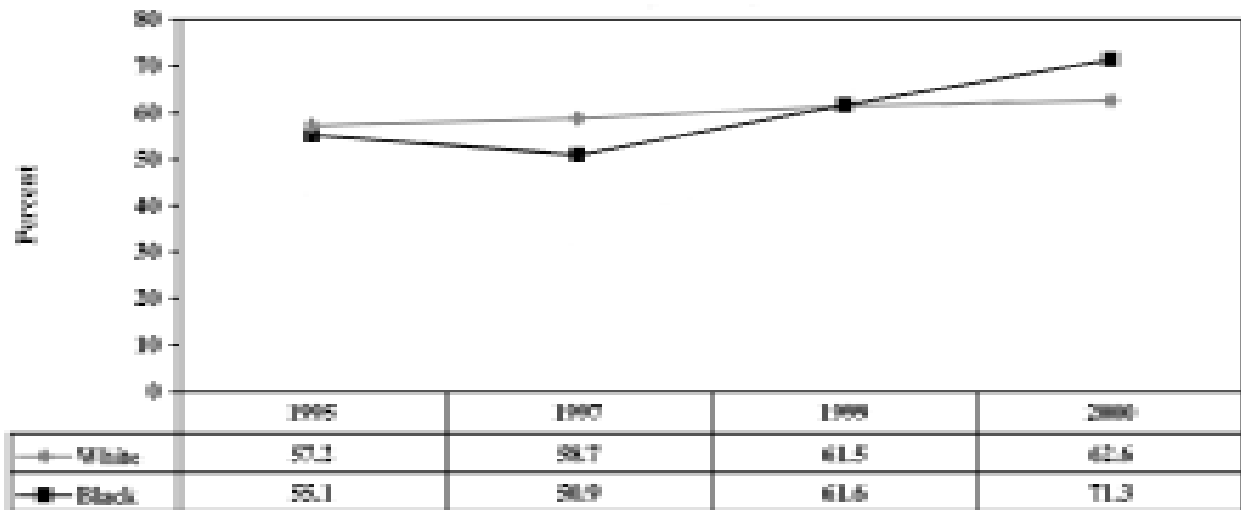
Other risks associated with breast cancer include a family history of breast cancer, having

Figure 3.
Woman’s Chance of Being Diagnosed with Breast Cancer (average)

from age 30 to 40	1 out of 257
from age 40 to 50	1 out of 67
from age 50 to 60	1 out of 36
from age 60 to 70	1 out of 28
from age 70 to 80	1 out of 24
Ever	1 out of 8

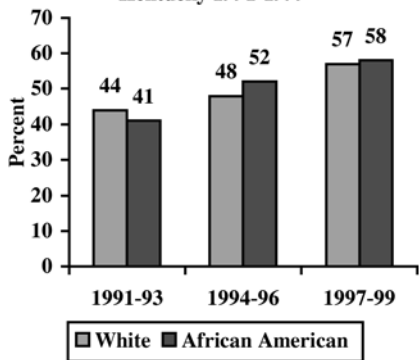
SOURCE: National Cancer Institute Surveillance, Epidemiology, and End Results Program, 1995-1997

Figure 4.
Women Reporting Having Ever Had a Mammogram
Kentucky BRFSS, 1995 - 2000



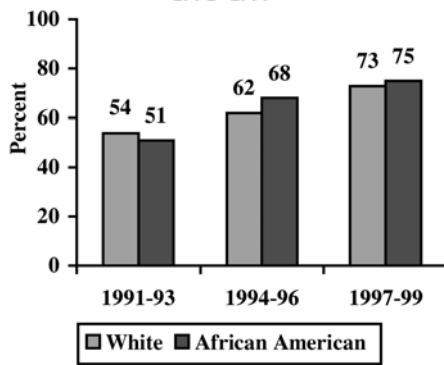
SOURCE: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System (BRFSS), 2000

Figure 5.
Percent of Women age 40 and Over
Who Reported Having Had a
Mammogram in Past Year,
Kentucky 1991-1999



SOURCE: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System (BRFSS), 2000

Figure 6.
Percent of Women Age 50 and Over
Who Reported Having Had a
Mammogram in Past Year, Kentucky,
1991-1999



SOURCE: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System (BRFSS), 2000

never had children or having a first child after age 30. However, despite these risks, over 70 percent of breast cancer cases occur in women who have no identifiable risk factors.⁶

As with many other chronic diseases, several lifestyle, or behavioral risk factors are associated with breast cancer. These include smoking, weight gain, obesity, fat intake, and level of physical activity. Weight gain and being overweight are commonly recognized risk factors for breast cancer, with overweight women most commonly observed to be at increased risk of postmenopausal breast cancer and at reduced risk of the much less common premenopausal breast cancer.⁷ Sedentary lifestyle may also be a risk factor.

Screening

The declines in breast cancer mortality have been attributed, in large part, to the use of regular

screening mammography. Mammography is a valuable early detection tool because it can identify breast abnormalities that may be cancer at an early stage, before physical symptoms develop.⁸ The American Cancer Society recommends the following screening guidelines to detect breast cancer:

- Women age 40 and over should have an annual mammogram, annual clinical breast examination by a health care professional, and perform monthly breast self-examination.
- Women ages 20 – 39 should have a clinical breast examination by a health care professional every three years and should perform monthly breast self-examination.

Breast cancer screening rates in Kentucky have increased over the past several years. According to the BRFSS, rates for Kentucky women reporting having ever

had a mammogram rose from 56.9 percent in 1995 to 63.1 percent in 2000. This increase is particularly dramatic for African-American women as their rate rose from 55.1 percent in 1995 to 71.3 percent in 2000. (Fig. 4)

In Kentucky, the gap in screening rates among white and African-American women has steadily closed. For combined years 1997-99, mammography screening rates for African-American women in Kentucky exceeded those of white women. (Figs. 5 & 6) Clinical breast exam screenings remain fairly consistent for both races. (Fig. 7)

In Kentucky, local health department screening mammograms increased from 1,023 in 1991 to 17,088 in 1998 - representing a nearly 17-fold increase. This successful public health program has provided thousands of low-income and uninsured Kentucky women with access to free screening mammograms. (Fig. 8)

Signs and Symptoms

There are several signs that can indicate breast cancer. A woman who notices any of these should immediately see her doctor for an evaluation:

- Lump
- Swelling
- Skin irritation, dimpling, or thickening
- Nipple pain or sudden inversion of the nipple
- Redness, scaling, or inflammation of the breast or nipple
- Abnormal discharge

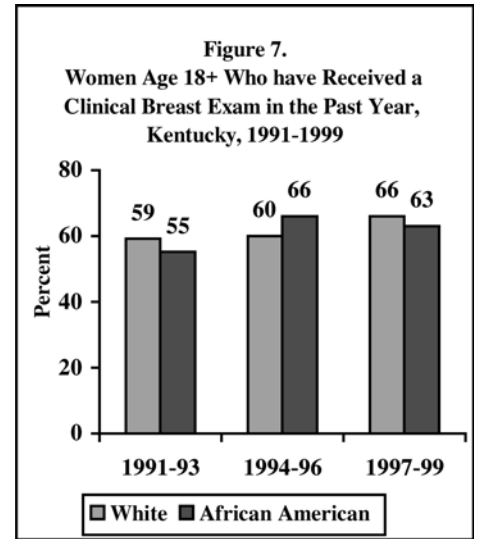
These symptoms can also be associated with benign breast

conditions, so it is important not to panic if you experience these symptoms. Instead, consult a doctor for further evaluation.

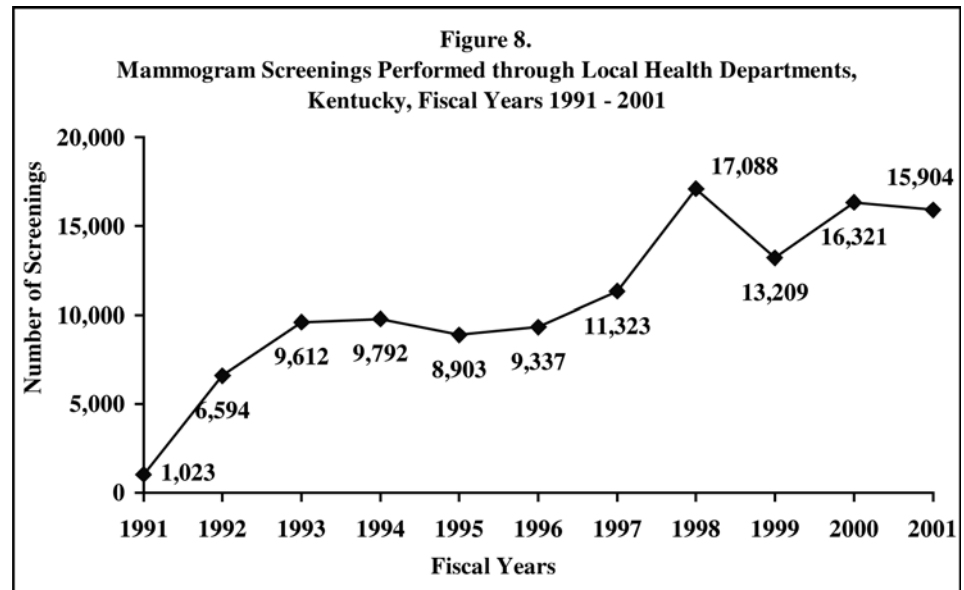
Incidence and Mortality

Breast cancer incidence rates have shown little change in the 1990s, while breast cancer deaths have declined about 2 percent per year since 1990 and have dropped sharply since 1995. In Kentucky in 1999, there were 614 deaths due to female breast cancer.⁹ The age-adjusted rate of death due to breast cancer in Kentucky was 28 per 100,000 women, averaged from 1996-

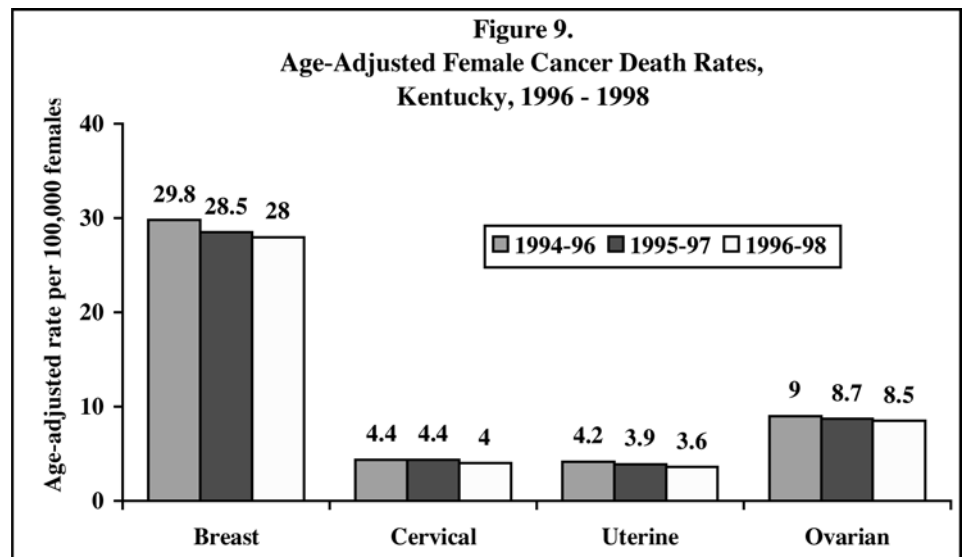
1998, versus 29.7 nationally.¹⁰ (Fig. 9)



SOURCE: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System (BRFSS), 2000

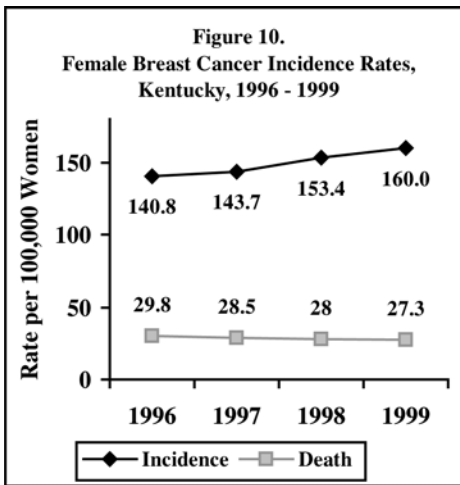


SOURCE: Kentucky Department for Public Health, Breast and Cervical Cancer Screening Program

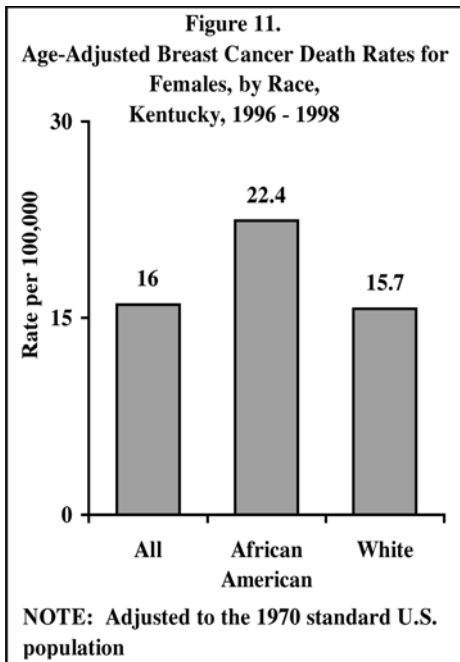


*(Adjusted to 2000 standard U.S. population)

SOURCE: National Center for Health Statistics, 1996-98 mortality data



SOURCE: Department for Public Health, Breast and Cervical Cancer Screening Program



SOURCE: National Center for Health Statistics, Vital Statistics Cooperative Program, 1996-1998

Increased screening and earlier detection of breast cancer have resulted in better outcomes and fewer deaths. According to the Kentucky Cancer Registry, the number of new female breast cancer cases diagnosed in Kentucky has risen from a rate of 140.8 per 100,000 females in 1996 to 160 in 1999. The number of deaths decreased from 29.8 per 100,000 to 27.3 during the same period. (Fig. 10)

Invasive breast cancer incidence rates in Kentucky are slightly less than the SEER rate, with 104.2 per 100,000 female population (2-year average for 97-98) versus 110.7 (1996 data) respectively.

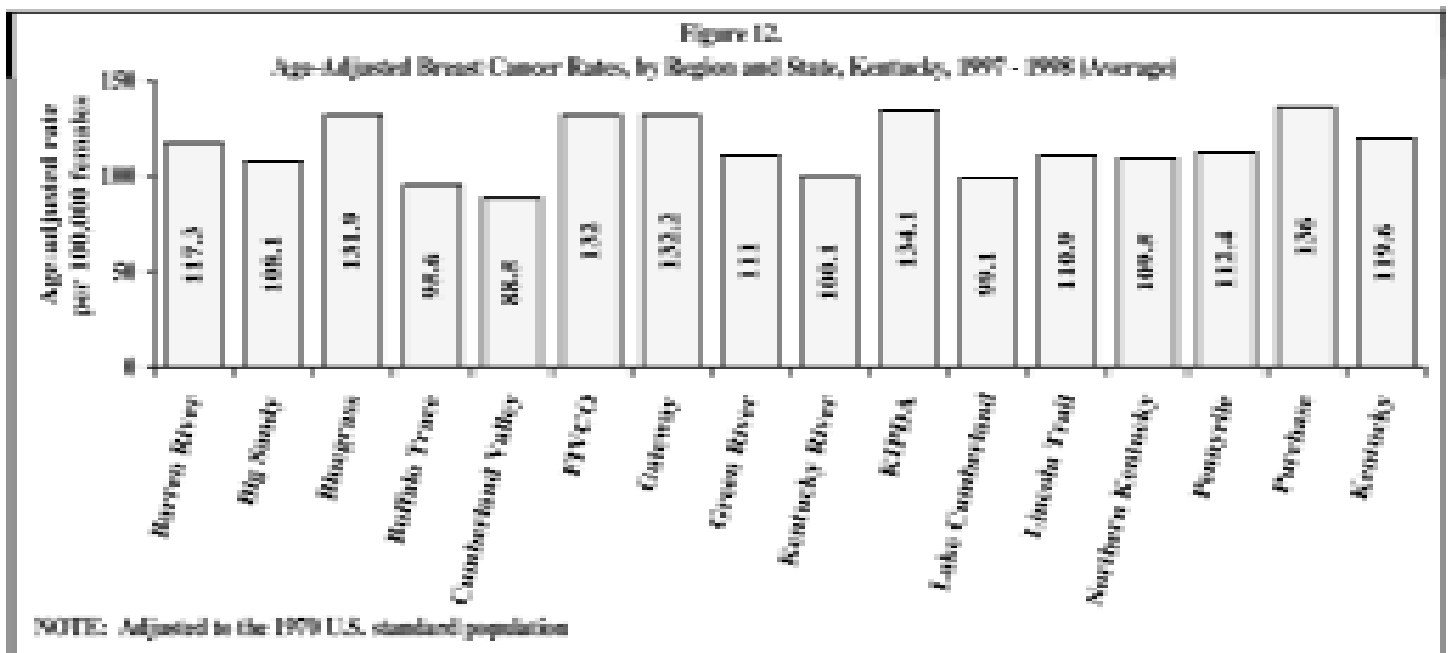
Despite the declining death rates from breast cancer, a disparity still exists between African-American and Caucasian (non-Hispanic) women. Combining all age groups, Caucasian women are more likely to develop breast cancer than African-American women, yet African-American women are more likely to die of breast cancer than are Caucasian

women. (Fig. 11) Past studies show that nearly half (47 percent) of all African-American women diagnosed with invasive breast cancer die from the disease within 10 years.¹¹

Regionally in Kentucky, there is a wide variance in breast cancer incidence rates among Area Development Districts. For 1997-98, Southeastern Kentucky regions had the lowest incidence rate for breast cancer with Cumberland Valley and Lake Cumberland having rates of 88.5 and 99.1 per 100,000 respectively. Likewise, Buffalo Trace in Northeastern Kentucky had a rate of 95.6. Regions with the highest rates include the Purchase region in far western Kentucky, with a rate of 136 per 100,000, and the KIPDA region, which includes Louisville, at a rate of 134. (Fig. 12)

COLON CANCER

The term "colon cancer" means any cancer in the colon (large intestine), from the beginning of the colon



SOURCE: Kentucky Cancer Registry, 1998 Kentucky Cancer Incidence Report

(cecum) to the end of the colon (rectum). Colon cancer, colorectal cancer and rectal cancer are all the same disease. It is often perceived to be a disease that primarily affects men, but colon cancer affects women at rates equal to men.¹²

Risk Factors

As people age, their risk of developing cancers such as colon cancer increases. Most people who have colon cancer are over the age of 50. The average person has about a six percent chance of developing colon cancer. A personal or family history of colon or rectal polyps and a family history of colon or rectal cancer are also considered risk factors for colon cancer. About 5 percent of colon cancers are directly caused by inherited genetic abnormalities.¹³

Symptoms

Many people with colon cancer have no symptoms at all, until the cancer advances. This makes routine screening for colon cancer and knowing if you are at risk very important. Some symptoms of colon cancer include¹⁴:

- Rectal Bleeding
- Pain
- Unexpected Weight Loss
- Change in Bowel Habits

Colorectal cancer screening tests are used to detect cancer, polyps that may eventually become cancerous, or other abnormal conditions. Screening tests are important because they check for health problems before they cause symptoms, often at an early stage meaning treatment will be more successful.

Screenings

Screenings for colon cancer include a fecal occult blood test (FOBT) which is a test for hidden blood in the stool. This test has been proven to reduce the death rate of colorectal cancer. Other screening tests are sigmoidoscopy, which is an examination of the rectum and *lower* colon with a lighted instrument, and colonoscopy, which is an examination of the rectum and *entire* colon with a lighted instrument. Double contrast barium enemas, and digital rectal exams are also considered effective screening tests for colon cancer.¹⁵

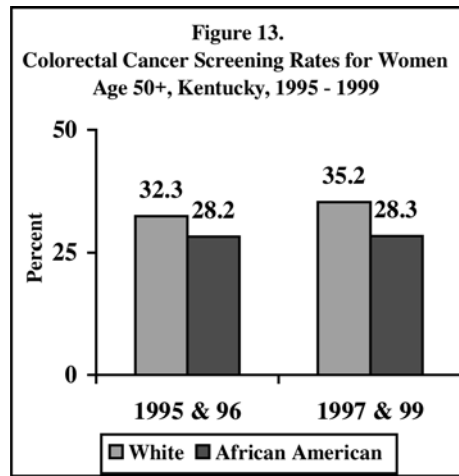
The U.S. Preventive Services Task Force and the American Cancer Society recommend the following screening procedures for all adults age 50 and older:

- An annual fecal occult blood test (FOBT)
- A flexible sigmoidoscopy every five years.
- Total colon examination by colonoscopy every 10 years or by double contrast barium enema every 5 to 10 years.

In Kentucky, screening rates for women over 50 have remained fairly constant with the exception of a rise in screening rates for white women from a 32.3 percent average for years 1995-96 to 35.2 percent for years 1997-99. (Fig. 13)

Incidence and Mortality

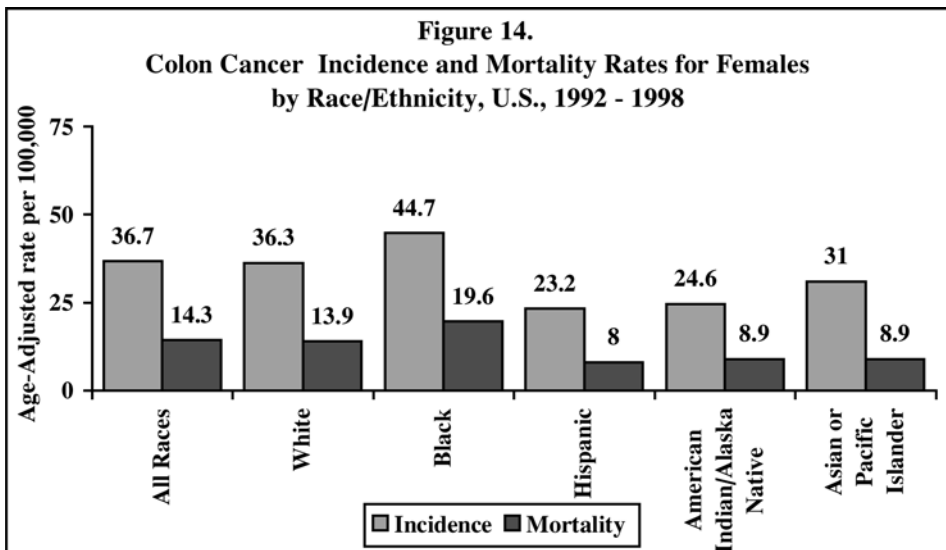
Colorectal cancer has the third highest incidence of any cancer site for U.S. men; ranks second to breast



SOURCE: Kentucky BRFSS, 1995 - 1999

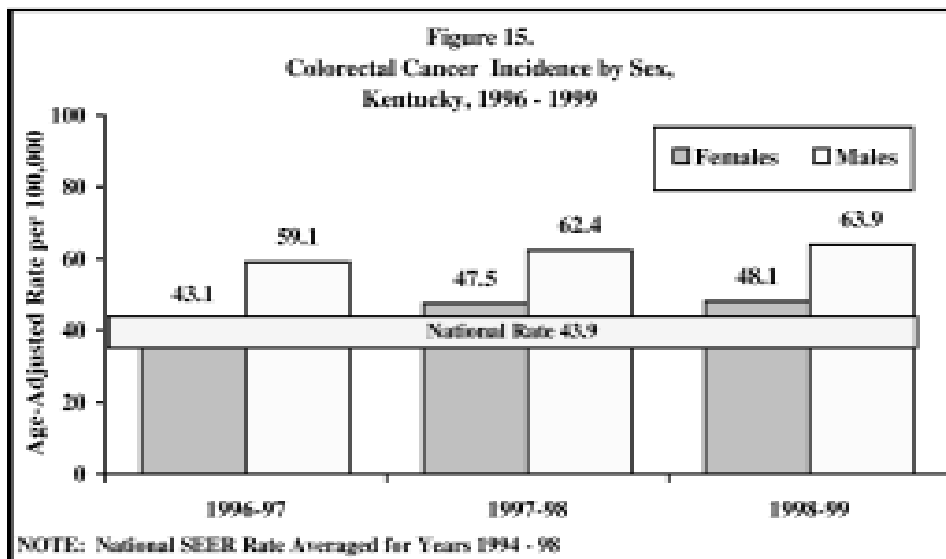
cancer for Hispanic, American Indian/Alaska Native, and Asian/Pacific Islander women; and ranks third for white and black women. Like incidence, deaths from colorectal cancer rank third after lung and prostate cancer for men and third after lung and breast cancer for women.¹⁶ The American Cancer Society estimates that 56,700 Americans will die of colorectal cancer this year.

According to SEER, the age-adjusted rate for colon cancer among women nationally was 36.7 per 100,000 population (1992 - 1998 average). Data by racial and ethnic group indicate black women have the highest incidence at 44.7, while Hispanics have the lowest incidence with 23.2. (Fig. 14)



* Adjusted to the 1970 population
SOURCE: National Cancer Institute, SEER Program, 1992 - 1998

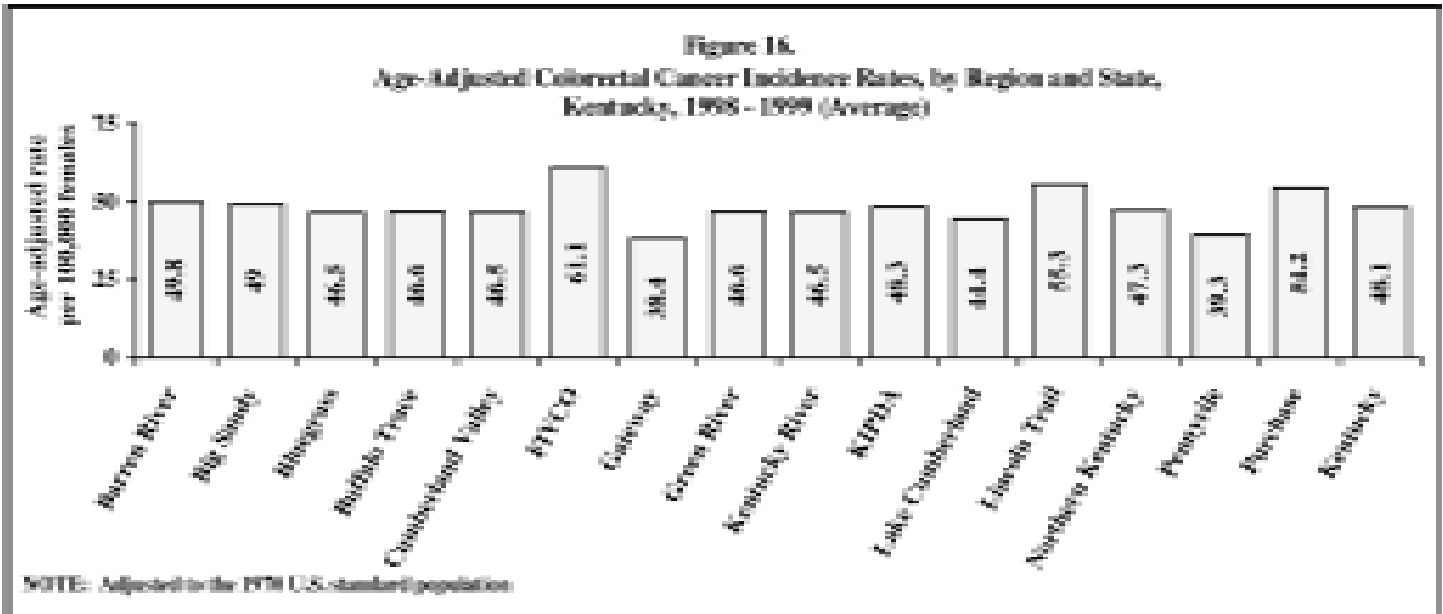
In Kentucky, the 1998-99 average, age-adjusted female incidence rate for colorectal cancer was 48.1 per 100,000 female population. The national average for females was 37.5 for combined years 1994 - 98. The national average for men and women combined was 43.9 for the same period. (Fig. 15)



SOURCE: Kentucky Cancer Registry, 1996 - 1999

Regionally in Kentucky, the FIVCO district has the highest rate of female colorectal cancer with a 2-year age-adjusted rate of 61.1 per 100,000 females. The district with the lowest rate was Gateway with 38.4 cases per 100,000 females. (Fig. 16)

As with incidence rates, racial and ethnic disparities exist among colorectal deaths nationally and in Kentucky. African-American women have the highest rate of death due to colon cancer, while Hispanics have the lowest. Death rates for white women with colon cancer



SOURCE: Kentucky Cancer Registry, 1999 Cancer Incidence Report

are the second highest but have steadily declined since 1990. Conversely, mortality rates for black women have increased since 1994. (Fig. 17)

The colorectal mortality rate for females in Kentucky was 18.4 per 100,000 population in 1999, compared to 18.5 for women nationally in 2000.¹⁷

CERVICAL CANCER

Cervical cancer was the 11th leading cause of cancer death to women in Kentucky in 1999. Cervical cancer occurs in the cervix, where the uterus opens into the vagina. It can be detected with a Pap test, and is curable when detected early. As Pap tests are becoming more common, the death rate for cancer of the cervix is falling.¹⁸

Risk Factor

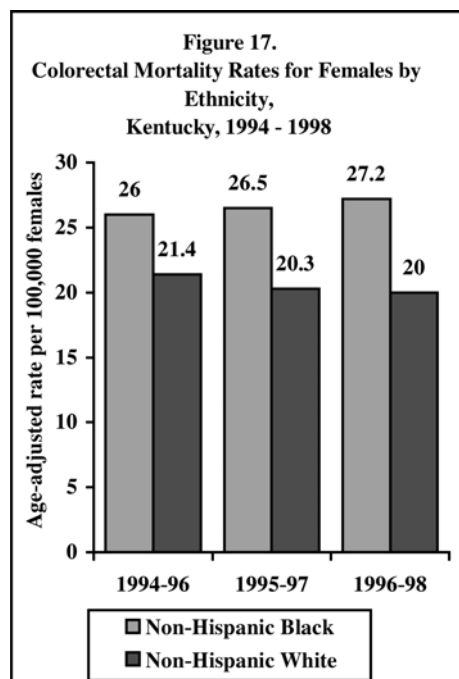
The major risk factors for cervical cancer include early age at initiation of sexual activity, multiple sexual partners, infection with Human Papilloma Virus 16 (HPV), and cigarette smoking.¹⁹

Screening

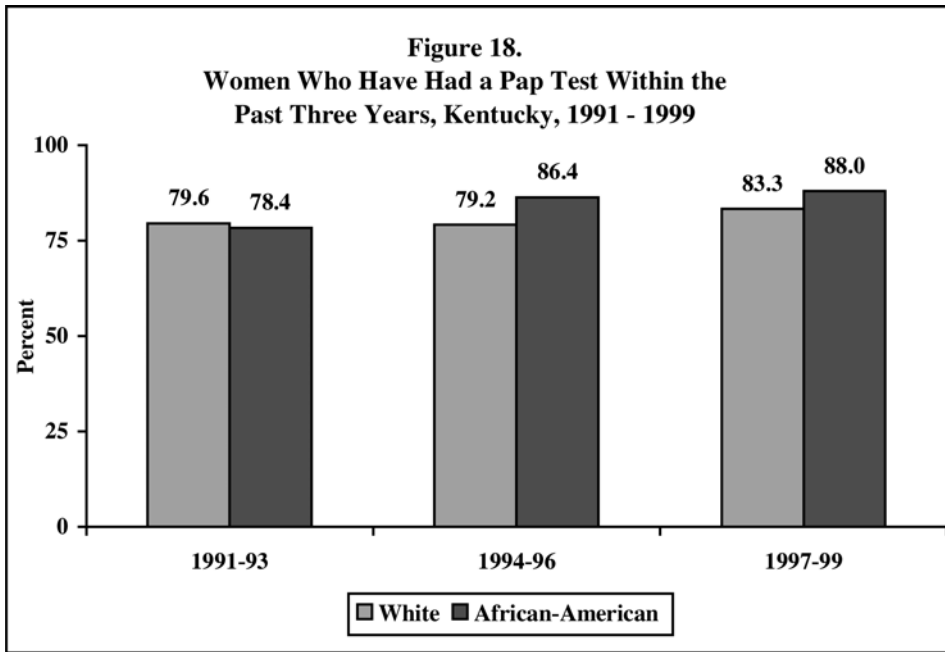
Overall, cervical cancer screening rates in Kentucky have risen slightly over the past decade with African-American women's screening rates jumping from 78.4 percent in 1991-93 to 88 percent in 1997-99. (Fig. 18)

Incidence & Mortality

Nationally, cervical cancer incidence rates have continued to decline with rates dropping



SOURCE: CDC, National Center for Health Statistics



SOURCE: Kentucky BRFSS, 1991 - 1999

from 13.1 per 100,000 female population in 1996 to 10.9 in 1999.

The age-adjusted cervical cancer incidence rate for 1997-98 in Kentucky overall was 10.4 per 100,000 female population.²⁰ According to the SEER program, the national incidence rate for cervical cancer was 7.7 in 1996. Though Kentucky's rate is above the SEER rate by less than 3 percent, cervical cancer rates in some regions of Kentucky are over twice as high as the SEER rate. The Big Sandy and Kentucky River Districts, both in far Eastern Kentucky, have two-year average rates of 16.1 and 13.4 respectively. (Fig. 19)

The ethnic patterns of this disease are quite different from those of any of the other female reproductive system cancers. The highest age-adjusted incidence rate in the national SEER areas occurs among Vietnamese women (43 per 100,000). Their rate is 7.4 times higher than the lowest incidence rate of 5.8 per 100,000 in Japanese women. Incidence

rates of 15 per 100,000 or higher also occur among Alaska Native, Korean, and Hispanic women.²¹

Because cervical cancer is highly curable, mortality rates are about 50 percent to 80 percent lower than the incidence rates.²² For years 1996-98, the average, age-adjusted mortality rate from cervical cancer was 3.2 per 100,000 female population nationally and 4.0 per 100,000 female population in Kentucky in 1999.²³

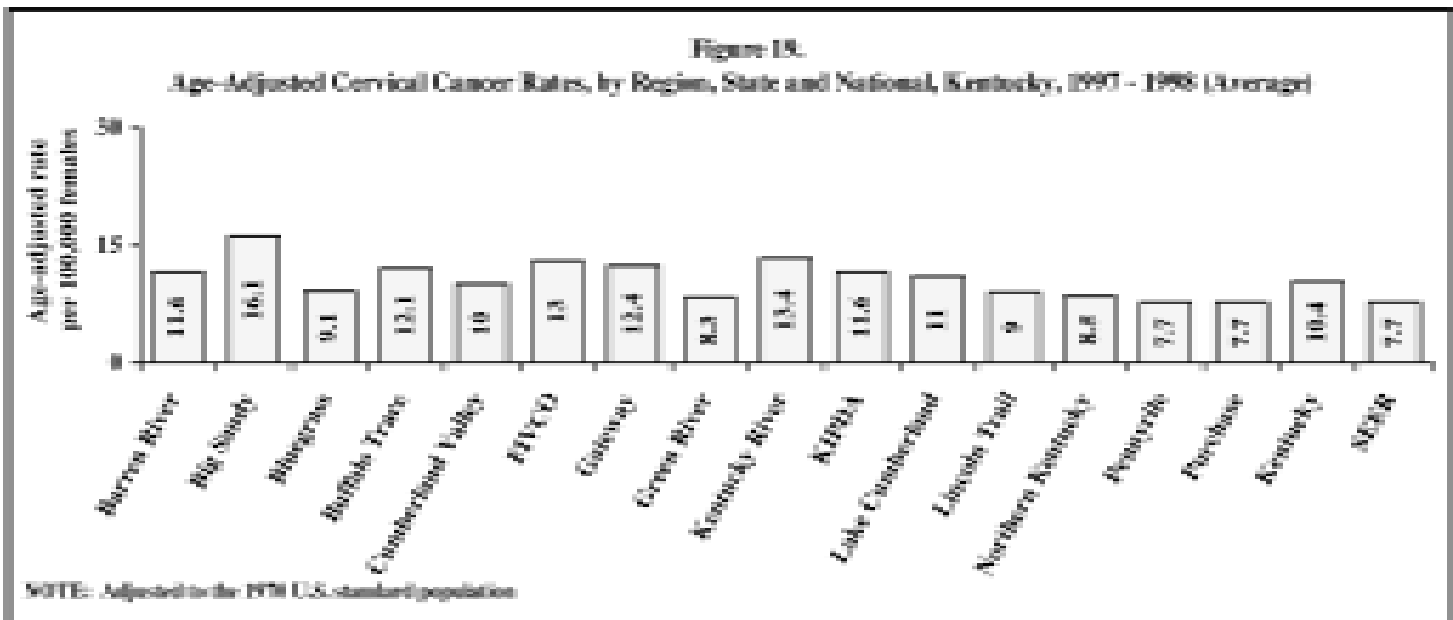
Mortality rates for cervical cancer vary however by ethnicity with non-Hispanic black women having higher rates of mortality than non-Hispanic white women. (Fig. 20)

OVARIAN CANCER

Ovarian cancer is the fourth leading cause of cancer death in women nationally and in Kentucky, preceded by lung, breast, and colon. It is the deadliest of all female reproductive cancers. It has long been called a silent killer because it occurs in an organ deep in the pelvis and produces only vague, easily dismissed symptoms, if any at all, before it reaches an advanced stage. (Fig. 21)

The most common form of cancer of the ovary is epithelial ovarian cancer, which grows in the lining — or epithelium — of the ovaries. This cancer is readily treated when caught early, but as mentioned above, it often does not show symptoms in its early stages.²⁴

Ovarian cancer is further complicated by the fact that no simple early detection method



SOURCE: Kentucky Cancer Registry, 1998 Kentucky Cancer Incidence Report

exists that could be used for screening.²⁵ However, the University of Kentucky's Gynecologic Cancer Screening program does provide free ovarian cancer screening to women with a family history or other risk factors. For more information on this program, call 1-800-766-8279.

Risk Factors

In the United States, the lifetime risk for developing ovarian cancer is approximately 1 out of 70, or 1.4 percent. Although reproductive, demographic, and lifestyle factors affect the risk of ovarian cancer, the single greatest ovarian cancer risk factor is a family history of the disease.²⁶ First-degree relatives (mother, daughter, sister) of a woman who has had ovarian cancer are at increased risk of developing this type of cancer themselves. The risk is somewhat less, but still above average, if other relatives (grandmother, aunt, or cousin) have had ovarian cancer. A family history of breast or colon cancer is also associated with an increased

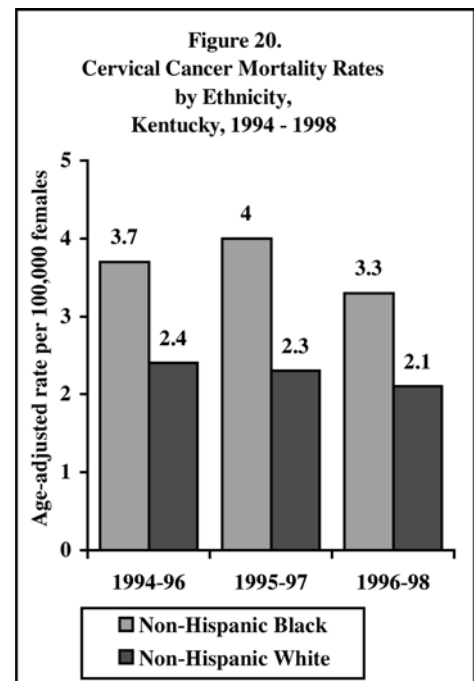
risk of developing ovarian cancer.²⁷

Risk for ovarian cancer also increases as a woman gets older. Before age 30, the risk of developing ovarian cancer is remote, and even in hereditary cancer families, epithelial ovarian cancer is virtually nonexistent before age 20.²⁸

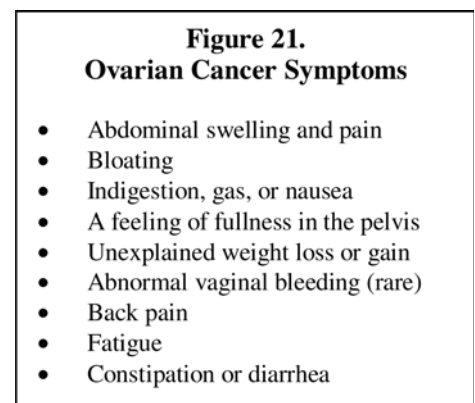
Incidence & Mortality

Ovarian cancer incidence rises in a linear fashion between ages 30 and 50, and continues to increase, although at a slower rate, thereafter. The highest incidence is found in the eighth decade of life, with a rate of 57 cases per 100,000 women in the 75-79 year age group, compared to 16 cases per 100,000 women in the 40-44 year age group.²⁹

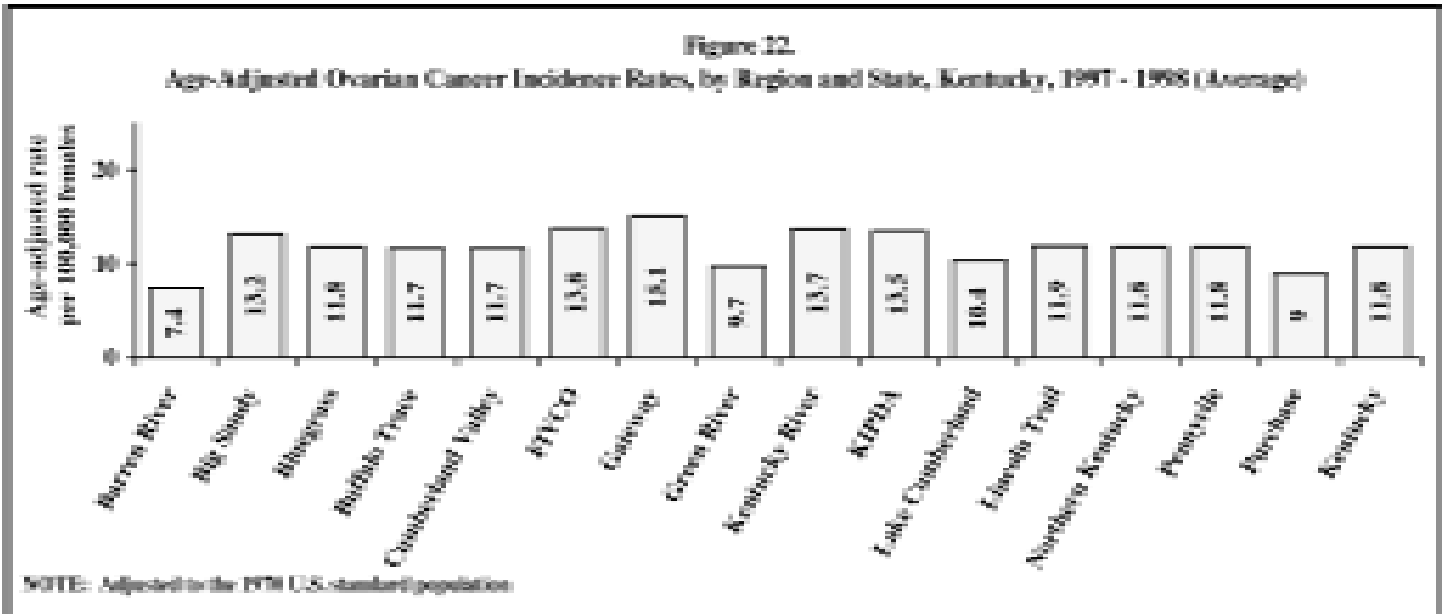
In Kentucky, the 1997-98 average, age-adjusted incidence rate for ovarian cancer was 11.8 per 100,000 females. Rates were steady among most regions in Kentucky, however Barren River district had the lowest rate with 7.4 and Gateway had the highest at 15.1. (Fig. 22)



SOURCE: National Center for Health Statistics, Mortality Data, 1994 - 1998



SOURCE: *The Deadly Whisper of Ovarian Cancer*, The New York Times on the Web, October 2, 2001.



SOURCE: Kentucky Cancer Registry, 1998 Kentucky Cancer Incidence Report

Age-adjusted ovarian cancer mortality in Kentucky was 9.3 per 100,000 women in 1999, accounting for 212 deaths.

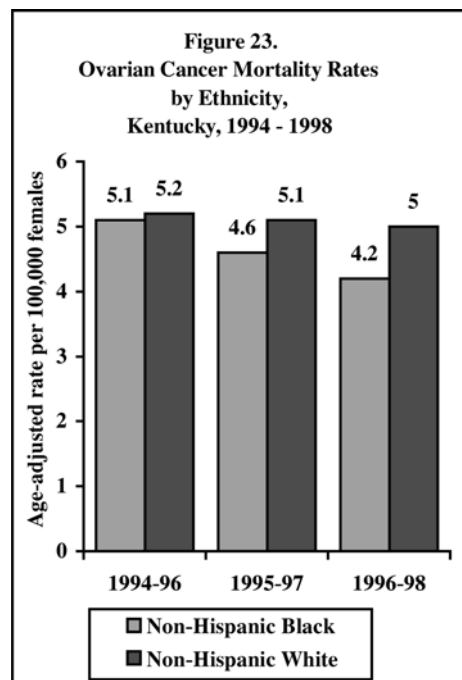
Ovarian cancer mortality rates are higher for non-Hispanic white women than for non-Hispanic black women. Mortality rates for both black and white women have declined since 1994. (Fig. 23)

UTERINE CANCER

In the United States, cancer of the uterus accounts for six percent of all cancers in women in this country³⁰ and was the 9th leading cause of cancer death to women in Kentucky. Uterine cancer usually occurs after menopause, but it may also occur around the time that menopause begins. Abnormal vaginal bleeding is the most common symptom of uterine cancer.³¹

Risk Factors

Risk factors for uterine cancer include age, endometrial hyperplasia (increased number of cells in the lining of the uterus – often characterized by heaving menstrual bleeding and bleeding between periods) hormone replacement therapy without progesterone, and obesity. The body makes some of its estrogen in fatty tissue. That’s why obese women are more likely than thin women to have higher levels of estrogen in their bodies. High levels of estrogen may be the reason that obese women have an increased



SOURCE: National Center for Health Statistics, Mortality Data, 1994 - 1998

risk of developing uterine cancer. The risk of this disease is also higher in women with diabetes or high blood pressure (conditions that occur in many obese women) and higher among women who have no children, begin menstruation at a very young age or enter menopause late in life.³²

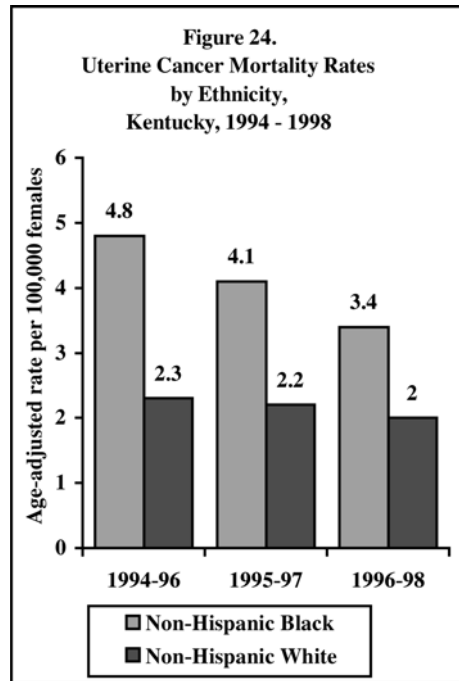
Incidence & Mortality

For 2001, an estimated 38,300 cases of uterine cancer were expected to be diagnosed among women nationally. The national incidence rate for uterine cancer was 21.4 per 100,000 women for combined years 1994 - 98. Incidence rates are higher among white women than black women, at 22.6 compared to 15.3, respectively for the same period.³³ However, the relationship for mortality is reversed with uterine cancer mortality rates among black women nearly twice as high as those among white women. (Fig. 24)

Uterine cancer incidence among women in Kentucky was 20 cases per 100,000 females in 1999. The age-adjusted rate of death due to uterine cancer was 3.9 per 100,000 females in Kentucky for 1999.

SKIN CANCER

SKin cancer is the most common form of cancer in the United States. The three major types of skin cancer are the highly curable basal cell and squamous cell carcinomas and the more serious malignant melanoma. The American Cancer Society estimates that about 1.3 million cases of nonmelanoma skin cancer are diagnosed in the U.S. each year, although this number is not



SOURCE: National Center for Health Statistics, Mortality Data, 1994 - 1998

accurately known because physicians are not required to report non-melanoma skin cancer to cancer registries.³⁴

Risk Factors

The primary risk factor for skin cancer is ultraviolet (UV) sun exposure. Consistently avoiding overexposure to UV rays is the best preventative measure to protect against skin cancer. Despite this, approximately 70 percent of adults do not protect themselves from the sun's rays.³⁵

Caucasians are at far greater risk for skin cancer than those of other races. Nationally, the incidence of malignant melanoma doubled for whites between 1973 and 1995.³⁶ Although anyone can get skin cancer, people with certain characteristics are at particularly high risk. (Fig. 25)

Incidence & Mortality

It is estimated that about 51,400 of the more deadly

**Figure 25.
Skin Cancer Risk Factors**

- Fair to light skin
- Family or personal history of skin cancer
- Chronic exposure to sun
- History of sunburns early in life
- Atypical or large number of moles
- Freckles (an indicator of sun sensitivity and sun damage)

SOURCE: CDC, Cancer Prevention and Control, "Skin Cancer: Preventing America's Most Common Cancer", (<http://www.cdc.gov/cancer/nscpep/skin.htm>)

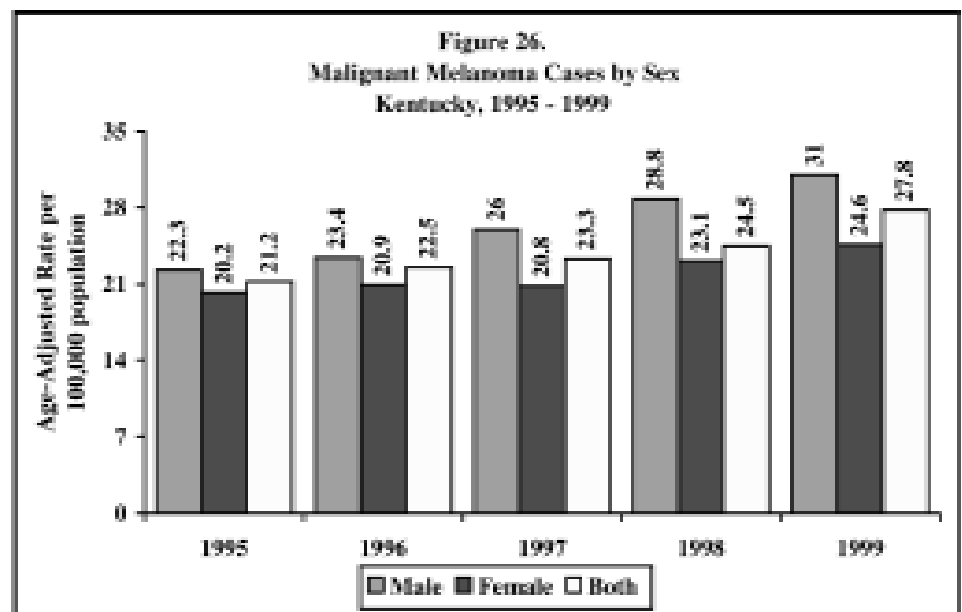
malignant melanomas will be diagnosed in the U.S. during 2001, claiming the lives of almost 9,800 people.³⁷ Nationally, malignant melanoma is the sixth most common cancer in men and the seventh most common cancer in women and is the most rapidly increasing form of cancer in the U.S.³⁸ Malignant melanoma accounts for about 4 percent of skin cancer cases, yet causes nearly 79 percent of all skin cancer deaths.³⁹

in Kentucky.⁴¹ Of these deaths, 40 were female and 72 were male. In 1999, the age-adjusted rate of death for females was 1.8 per 1,000 female population.⁴²

In 1999 malignant melanoma was the fourth most frequently reported cancer among women in Kentucky, following breast, lung and colon.⁴⁰

Melanoma incidence rates among females in Kentucky rose from 20.2 cases per population in 1995 to 24.6 in 1999. Male rates in Kentucky jumped from 22.3 cases per 100,000 population in 1995 to 31 in 1999. (Fig. 26)

Deaths from melanoma are more common among men than women. In 1999, melanoma was responsible for 112 deaths



SOURCE: Kentucky Cancer Registry

NOTES

¹ American Cancer Society (ACS), *Cancer Facts and Figures 2001*.

² ACS, 2001.

³ National Cancer Institute, <http://seer.cancer.gov/AboutSEER.html>.

⁴ WebMD – *How likely are you to get breast cancer?* <http://content.health.msn.com/content/article/1728.91338>.

⁵ National Institutes of Health, internet, http://cis.nci.nih.gov/fact/5_6.htm.

⁶ National Alliance of Breast Cancer Organizations, <http://www.nabco.org/resources/facts/usafacts.html>.

⁷ National Cancer Institute. <http://cancernet.nci.nih.gov>.

⁸ American Cancer Society, *Cancer Facts and Figures 2001*.

⁹ Department for Public Health, Health Data Surveillance Branch.

¹⁰ National Center for Health Statistics, <http://www.cdc.gov/nchs/datawh/statab/usetables.htm#download>.

¹¹ National Breast Cancer Coalition, <http://www.natlbcc.org/bin/index.htm>.

¹² <http://www.cancercare.org/campaigns/colon2.htm>.

¹³ <http://www.cancercare.org/campaigns/colon2.htm>.

¹⁴ <http://www.cancercare.org/campaigns/colon2.htm>.

¹⁵ National Cancer Institute website: http://cis.nci.nih.gov/fact/6_32.htm.

¹⁶ Cancer Facts, National Cancer Institute http://cis.nci.nih.gov/fact/1_16.htm.

¹⁷ Kentucky Department for Public Health, Health Data and Surveillance Branch.

¹⁸ http://content.health.msn.com/content/dmk/dmk_summary_account_1538.

¹⁹ National Cancer Institute website. http://cancernet.nci.nih.gov/seer/cervical_cancer.html.

²⁰ Kentucky Cancer Registry. *1998 Cancer Incidence Report*, pp. 126-127.

²¹ http://cancernet.nci.nih.gov/seer/cervical_cancer.html.

²² National Cancer Institute website. http://cancernet.nci.nih.gov/seer/cervical_cancer.html.

²³ National Center for Health Statistics, State Mortality by Race, 1996-98.

²⁴ http://content.health.msn.com/content/dmk/dmk_summary_account_1480#Overview.

²⁵ *The Deadly Whisper of Ovarian Cancer*, The New York Times on the Web. October 2, 2001. www.nytimes.com/2001/10/02/health/womenshealth.

²⁶ National Cancer Institute. <http://cancernet.nci.nih.gov>.

²⁷ Internet. <http://www.nlm.nih.gov/medlineplus/ovariancancer.html>.

²⁸ National Cancer Institute. <http://cancernet.nci.nih.gov>.

²⁹ Amos CI, Struwing JP: Genetic epidemiology of epithelial ovarian cancer. *Cancer* 71(2 suppl): 566-572, 1993. As cited at National Cancer

Institute website: <http://cancernet.nci.nih.gov>.

³⁰ National Cancer Institute, CancerNet, http://cancernet.nci.nih.gov/wyntk_pubs/uterus.htm#1.

³¹ National Cancer Institute, CancerNet, http://cancernet.nci.nih.gov/wyntk_pubs/uterus.htm#1.

³² National Cancer Institute, CancerNet, http://cancernet.nci.nih.gov/wyntk_pubs/uterus.htm#4.

³³ National Cancer Institute, Surveillance, Epidemiology, and End Results (SEER) Program. <http://seer.cancer.gov/>.

³⁴ American Cancer Society, "What are the Key Statistics for Melanoma Skin Cancer?"

³⁵ CDC, Cancer Prevention and Control, "Skin Cancer: Preventing America's Most Common Cancer", (<http://www.cdc.gov/cancer/nscpep/skin.htm>).

³⁶ American Academy of Dermatology – Melanoma Risk Factors (<http://www.aad.org/>).

³⁷ American Cancer Society, "What are the Key Statistics for Melanoma Skin Cancer?"

³⁸ American Academy of Dermatology – Melanoma Risk Factors (<http://www.aad.org/>).

³⁹ CDC, Cancer Prevention and Control, "Skin Cancer: Preventing America's Most Common Cancer", (<http://www.cdc.gov/cancers/nscpep/skin.htm>).

⁴⁰ Kentucky Cancer Registry.

⁴¹ Kentucky Department for Public Health, Health Data and Surveillance Branch, *1999 Kentucky Annual Vital Statistics Report*.

⁴² Kentucky Department for Public Health, Health Data Surveillance Branch.

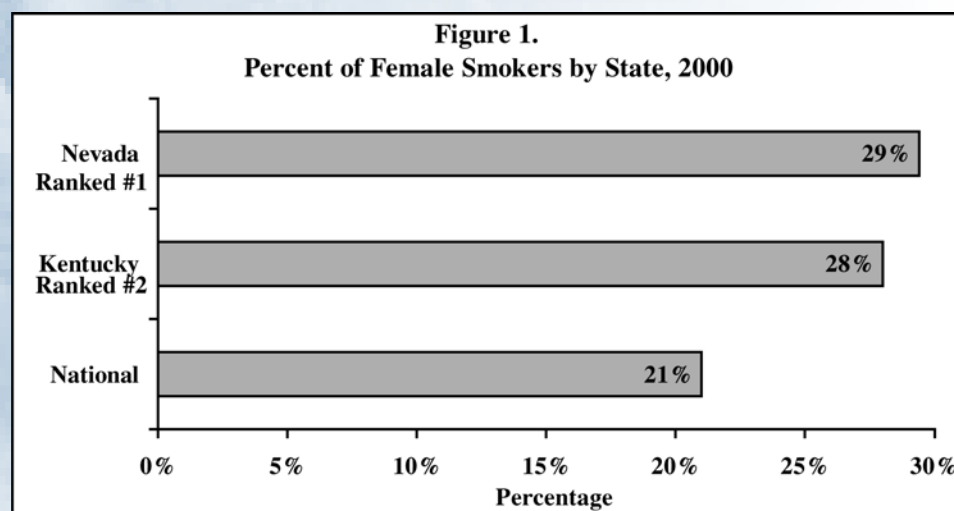
Tobacco Use and Smoking-Related Illnesses

Tobacco use in Kentucky is an issue that evokes strong emotional reactions from all sides. It is as much an economic, agricultural and cultural issue in Kentucky as a health issue. This poses an unenviable challenge to policy makers who attempt to balance these interests. Nonetheless, it is a challenge that must be addressed. Despite the fact that most people know of the negative health consequences associated with tobacco use, Kentucky's population overall had the highest percentage of smoking adults than any other state in the nation in 2000. Kentucky women had the second highest smoking rate nationally in 2000, down from the leading spot in 1999. (Fig. 1) The most recent statistics indicate that 28 percent of adult women in Kentucky smoke cigarettes.

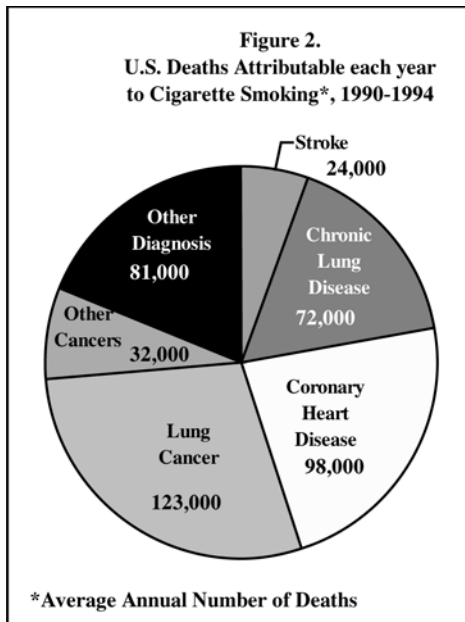
Smoking is a woman's health issue. It is inextricably

linked to numerous causes of morbidity and mortality to women, and men, nationally and in Kentucky – including lung cancer. (Fig. 2) Kentucky's rate of lung cancer ranks among the highest in the nation, due in large part to our high smoking population. Where female mortality from cancer was once highest for breast cancer, lung cancer surpassed that number after smoking caught on as a way of life for many women. The death rate for lung cancer in women surpassed the death rate for breast cancer in 1987. (Fig. 3) Deaths due to lung cancer continue to increase among women but have been declining for men since 1990.¹

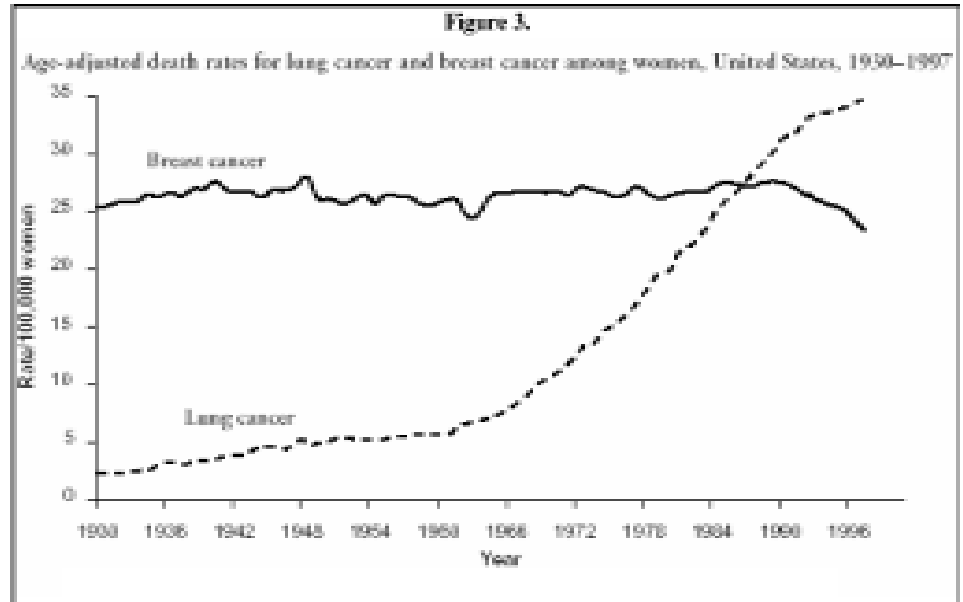
Smokers in Kentucky share some common characteristics. Kentuckians who smoke generally have 12 years of education or less, live in poverty and are under the age of 44. (Fig. 4) Most smokers, up to 90 percent, begin smoking before age 18.²



SOURCE: Centers for Disease Control and Prevention, *Investment in Tobacco Control – State Highlights 2001*



SOURCE: CDC, MMWR, March 3, 1999; 48; 131-38



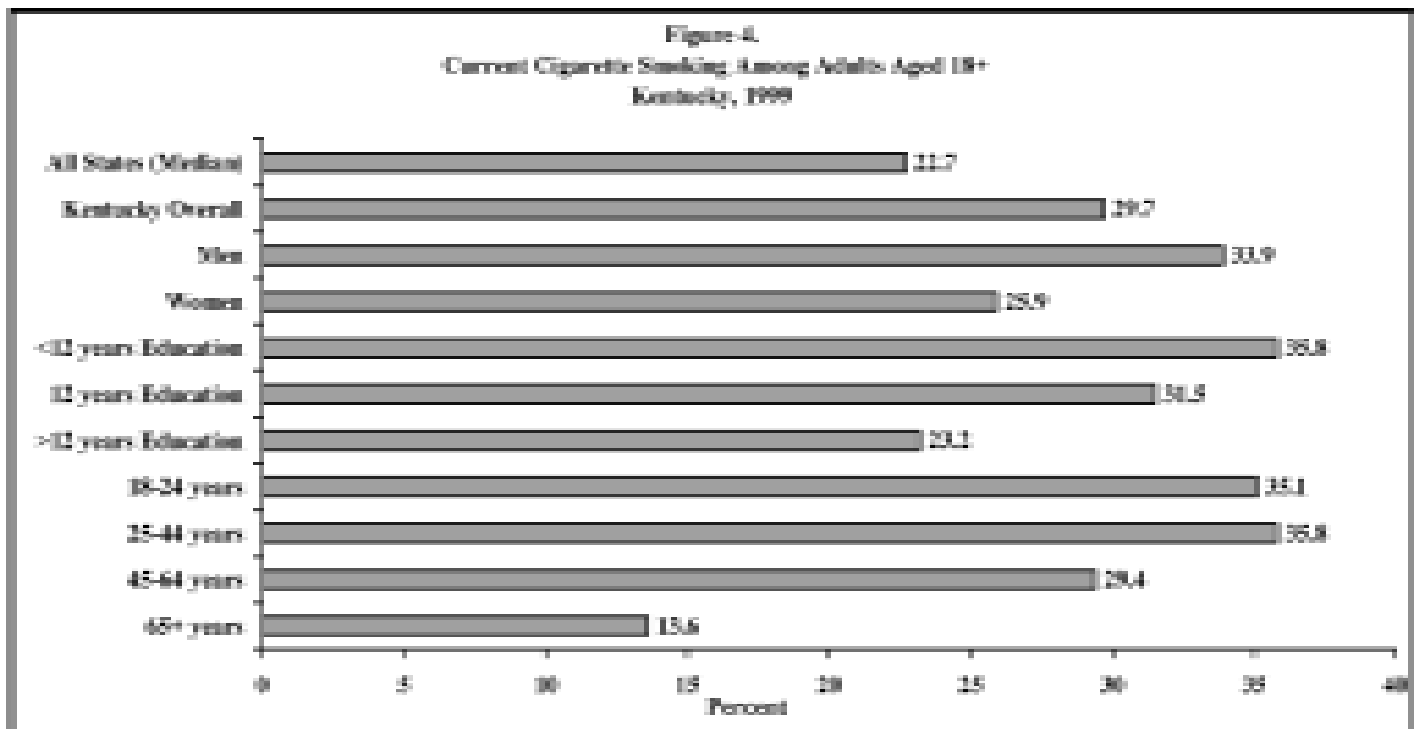
SOURCE: Parker et al. 1996; National Center for Health Statistics 1999; Ries et al. 2000; American Cancer Society, unpublished data

Health Effects

The negative health consequences of smoking are well documented. Individual tobacco use and second-hand smoking, or “passive smoking” are directly related to many chronic illnesses and an increased risk of various conditions (Fig. 5).

An analysis of data from the National Household Survey on Drug Abuse (interviewing 22,292 smokers) revealed that adolescents, women and whites are particularly vulnerable to developing nicotine-dependence symptoms and that at similar or lower levels of use, women were more likely than men to become nicotine depen-

dent.³ Once dependent, smokers are more likely to continue smoking and to smoke more to sustain the nicotine effect. Furthermore, research shows that cigarette smoking is more damaging to women than men. Women who smoke experience more wheezing, breathlessness, persistent cough and asthma than men who smoke.⁴



SOURCE: Kentucky BRFSS, 1999

Smoking During Pregnancy

Pregnancy is a strong motivator for women to stop smoking. Cigarette smoking during pregnancy can result in low birth weight babies and has also been associated with infertility, miscarriages, tubal pregnancies, infant mortality and childhood morbidity. Additionally, cigarette smoking may cause long-term learning disabilities.⁵ In 1999, Kentucky had the second highest rate in the nation of women smoking during pregnancy at 24.5 percent.⁶ (Fig. 6)

In most of Eastern Kentucky, where smoking rates tend to be higher than the rest of the state, smoking during pregnancy rates ranged from 33 to 49 percent.⁷ Meanwhile, the national rate of smoking during pregnancy has dropped from 18.4 percent in 1990 to 12 percent in 1999.

Efforts to reduce maternal smoking in Kentucky include the *Make Yours a Fresh Start Family* program administered through local health departments. This program counsels pregnant women on the effects of smoking on the child's health and exposes her to maternal cessation materials as well as other smoking-related health information. The patients' progress is evaluated and documented at every prenatal visit and literature most appropriate to her situation is also provided.

Another initiative recently launched in Kentucky is the *Healthy Babies* campaign, part of the Governor's Early Childhood Initiative KIDS NOW. *Healthy Babies* is a statewide health information initiative to educate

Figure 5.
Health Effects of Smoking

On reproduction:

- Increased primary and secondary infertility
- Delays in conceiving
- Increased risk of premature membrane rupture
- Increased risk of pre-term delivery

On infants/children:

- Low birth weight babies (approximately 200-250 grams lower)
- Higher rate of stillbirths
- Increased risk of SIDS
- Less likely to breastfeed

On cardiovascular:

- Two to six times more likely to have a heart attack
- Increased risk of coronary artery disease
- Increased risk of ischemic stroke and cerebral hemorrhaging
- Increased risk of peripheral vascular atherosclerosis

On respiratory:

- Increased risk of dying from chronic obstructive pulmonary disease
- Decline in lung function leading to shortness of breath

On cancer:

- Lung cancer is the leading cause of cancer-related death among women
- Increased risk of cancer of the larynx, pharynx, and esophagus
- Increased risk of cervical cancer

On bone density:

- Lower bone density in post-menopausal women
- Increased risk of hip fracture

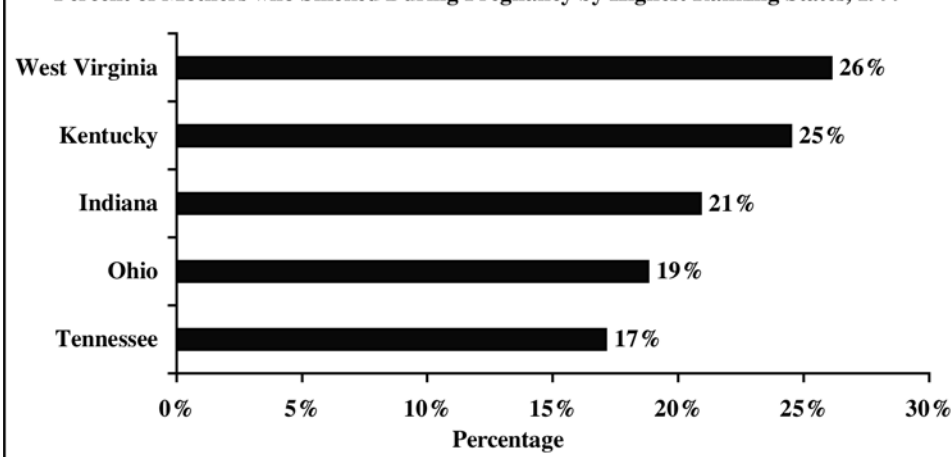
Other:

- Increased risk of gall bladder disease, facial wrinkling, peptic ulcer, and senile cataracts

SOURCE: *Women and the Tobacco Epidemic: Challenges for the 21st Century*, World Health Organization, 2001

Figure 6.

Percent of Mothers who Smoked During Pregnancy by Highest Ranking States, 1999



SOURCE: National Vital Statistics Reports, *Smoking During Pregnancy in the 1990s*, Vol 49, No 7, August 28, 2001

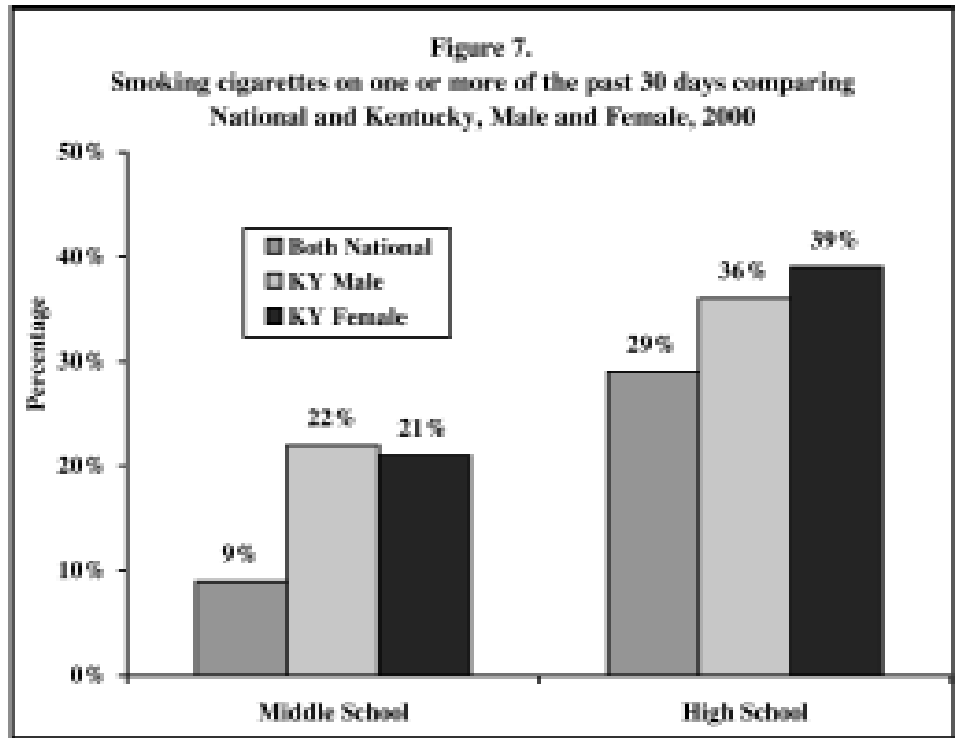
women of child-bearing age and new parents on the importance of making healthy lifestyle choices during pregnancy and the first years of life. This campaign, funded by Kentucky's Phase 1 Tobacco Master Settlement Agreement, consists of an advertising campaign geared towards women of childbearing age and the statewide distribution of educational resources for all new parents.⁸

Despite pregnancy being a strong motivator for many women to quit smoking, other factors also influence maternal smoking rates. At least one study has shown that smoking rates among pregnant women are responsive to tax increases. A tax hike of \$0.55 per pack of cigarettes can reduce maternal smoking by about 22 percent for certain sub-populations and overall, a 10 percent increase in price is capable of reducing smoking rates by 7 percent.⁹

Young Women Smoking

Young women in Kentucky have one of the highest rates of smoking in the country. According to the 2000 Kentucky Youth Tobacco Survey, both male and female middle school and high school students smoking rates greatly surpassed national rates. (Fig. 7)

According to the U.S. Surgeon General's Report on Women and Smoking, nearly all women smokers started their habit in adolescence.¹⁰ Despite the widespread knowledge that cigarette smoking is bad for your health, many teens continue to pick up the habit. Why they decide to become smokers is a complex issue. A study conducted by the

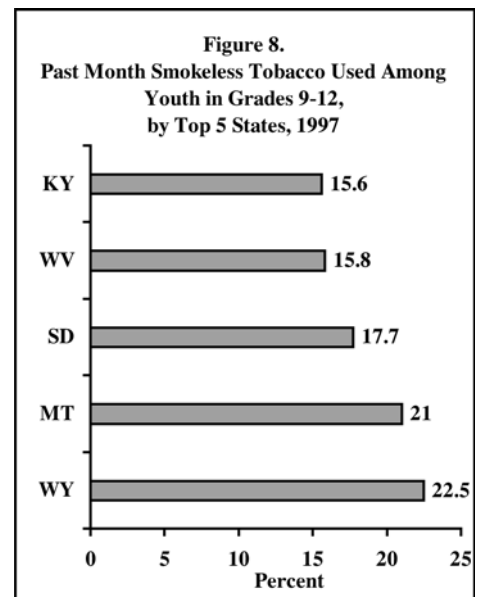


SOURCE: 2000 Kentucky Youth Tobacco Survey

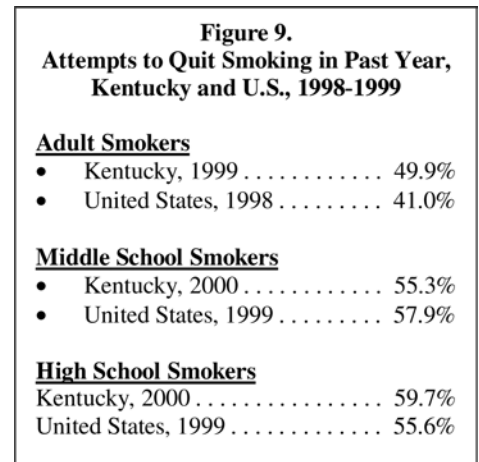
University of Illinois at Chicago found that the percentage of regular smokers was substantially greater among girls with a high level of family conflict than those with a low level (17.7 percent versus 7.1 percent respectively).¹¹ Other findings influencing an adolescent's decision to smoke include¹²:

- Not doing well in school;
- Having parents who smoke, as well as parent-child conflicts;
- Peer pressure and alcohol use;
- Friends who smoke, offers of cigarettes, believing that "most other kids" smoke, and marijuana use.

Kentucky youth are also among the top users of smokeless tobacco products (e.g., dip and chew). Approximately 16 percent of Kentucky's high school youth in grades 9 through 12 used some type of smokeless tobacco in the last month, compared to 9.3 percent nationally.¹³ (Fig. 8)



SOURCE: Centers for Disease Control and Prevention, Kentucky Tobacco Control Highlights, 1997



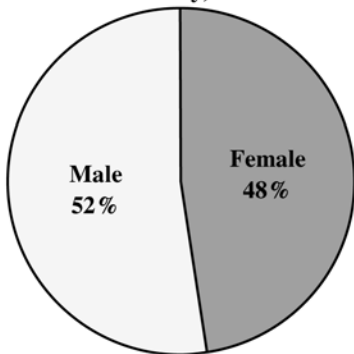
SOURCE: Kentucky Tobacco-Related Data, Dr. Ellen Hahn, UK College of Nursing, 2001

Figure 10.
Gender Differences in Smoking Cessation

- Nicotine replacement therapy may not be as effective for women.
- Women smokers are more fearful than men of gaining a lot of weight, if they quit.
- Medications to aid smoking cessation are not currently recommended for pregnant women.
- A woman's menstrual cycle affects tobacco withdrawal symptoms, and responses to anti-smoking drugs may vary by cycle phase.
- Husband may provide less effective support to women who are trying to quit smoking than wives give to husbands.
- Women may be more susceptible than men to environmental cues to smoking, such as smoking with specific friends or smoking associated with specific moods.
- Many women may enjoy the feeling of control associated with smoking a cigarette.

SOURCE: National Institutes of Health, NIH News Release, "Quitting Smoking Harder for Women than for Men," May 1, 2001

Figure 11.
Percent of Deaths from Chronic Obstructive Pulmonary Disease, by Sex, Kentucky, 1999



SOURCE: Kentucky Department for Public Health, 1999 Kentucky Annual Vital Statistics Report

High school girls are much less likely to use smokeless tobacco products than high school boys.

Smoking Cessation

Nearly 50 percent of all Kentucky adult and youth smokers have attempted to quit at some time (Fig. 9). The health benefits from quitting smoking are numerous and outweigh the concern many women have of gaining weight. More women than men fear weight gain if they quit smoking, however, few studies have found a relationship between weight gain and successfully quitting smoking for either women or men. For women, the average weight gain is around five pounds and can be controlled through positive daily lifestyle changes with increased exercise and diet.¹⁴

Since the late 1970s and early 1980s, the probability of attempting to quit smoking, and succeeding, has been equal among women and men.¹⁵ However, there are reports of gender differences between women and men that may make it more difficult for women to stop smoking than men.¹⁶ (Fig. 10)

The majority of smokers who try to quit smoking report doing so on their own, even though this is the least effective method.¹⁷ The most successful treatments are multi-component cognitive behavioral programs that incorporate strategies to prepare and motivate smokers to stop smoking. Women are more likely than men to use intensive methods and generally prefer to find mutual support through a "buddy" system where shared responsibility and encouragement are available.

There are numerous effective smoking cessation programs available to women in Kentucky. Among the most effective is the Cooper/Clayton method promoted and supported by the Kentucky Department for Public Health in partnership with the Kentucky Cancer Program and available through local health departments. Several tobacco control organizations, voluntary health groups such as the American Lung Association and coalitions of concerned individuals such as Kentucky ACTION have joined efforts to control the use of tobacco, especially by Kentucky youth. Also, the Department for Public Health makes available a tobacco control coordinator in every local health department throughout the state as a result of funds available from Phase I of the Tobacco Master Settlement Agreement.

Smoking-Related Illnesses

Smoking is the number one avoidable risk factor for most chronic obstructive lung diseases also known as chronic obstructive pulmonary diseases (COPD). COPD includes several related irreversible conditions that limit one's ability to exhale.¹⁸ The two major diseases in this category are emphysema and chronic bronchitis. In emphysema caused by smoking, which constitutes the vast majority of cases, the very small airways (bronchioles) that join the alveoli are damaged, and the lung walls lose elasticity, making it difficult to exhale.¹⁹ Shortness of breath is the predominant early symptom of emphysema, however, emphysema patients have typically lost between 50 and 70 percent of their lung

tissue by the time symptoms begin to appear.²⁰

Chronic bronchitis is characterized by structural changes in the airways of the lungs, and enlargement of mucous glands, which causes coughing and production of sputum.²¹ Cigarette smoke causes chronic bronchitis through inflammation and damage to the airways. Chronic bronchitis also causes shortness of breath and is often accompanied by infection, mucus production, and coughing.²² As chronic bronchitis often coincides with emphysema, it is frequently difficult to distinguish between the two conditions.²³

Nationally, there are approximately 1.8 million people living with emphysema. Emphysema ranks 15th among chronic conditions that contribute to activity limitations with almost 44 percent of individuals with emphysema reporting that their daily activities have been limited by the disease.²⁴

Many of the people with emphysema are older men, but the condition is rapidly increasing among women. Nationally, in 1994, male outnumbered females by more than 54 percent. Within 2 years the percent difference between males and females decreased to 10 percent.²⁵ In Kentucky, nearly 55 percent of COPD deaths between 1995 and 1997 were to men²⁶, however, in 1999, men constituted 52.5 percent.²⁷ (Fig. 11)

While COPD is more common among men than women, it is one of the few leading causes of death that has a higher age-adjusted rate for whites than blacks. White males had the highest rate of

death in 1999 at 78.9 per 100,000 population, while black females had the lowest, at 39.1.²⁸ (Fig. 12) The overall state rate was 58.6, making it the fourth leading cause of death in Kentucky.²⁹

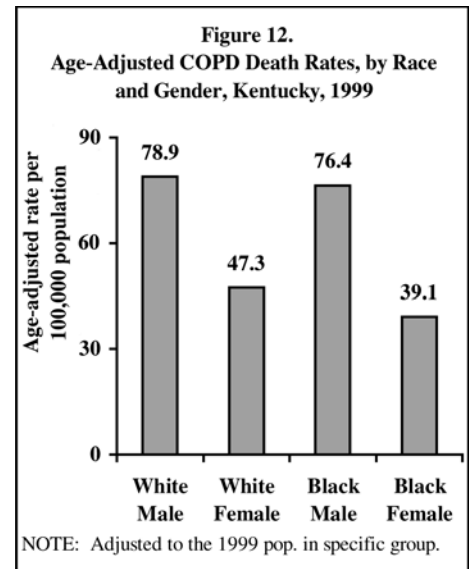
COPD is also a major contributor to morbidity in Kentucky, particularly among women. In 2000, there were 16,467 hospital discharges with a diagnosis of COPD (coded as DRG 088). More women are hospitalized with a COPD diagnosis than men. Of the total COPD discharges, 9,556 were among women, while the remaining 6,911 were to men.³⁰ (Fig. 13)

Kentucky's hospitalization rate for diseases of the respiratory system (classified as Major Diagnostic Category 04) doubles the national rate. In 2000, Kentucky had 70,182 hospitalizations for MDC 04, representing 14.1 percent of all hospitalizations – second only to diseases of the circulatory system (MDC 05).³¹ Nationally, MDC 04 represented only 7.9 percent of all hospitalizations.³²

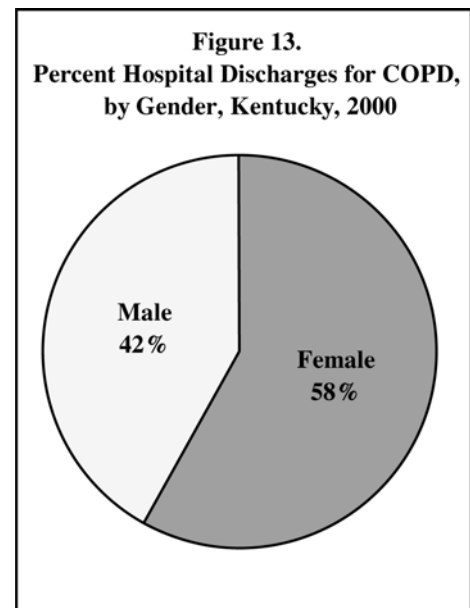
Lung Cancer³³

Nationally, in 2001, there were approximately 625,000 new cases of cancer with 267,300 women dying of cancer. Lung cancer makes up over 25 percent of those deaths killing approximately 67,300 women and has been the leading cause of cancer death to women since 1987. Nationally, smoking is directly responsible for 87 percent of all lung cancer cases.³⁴

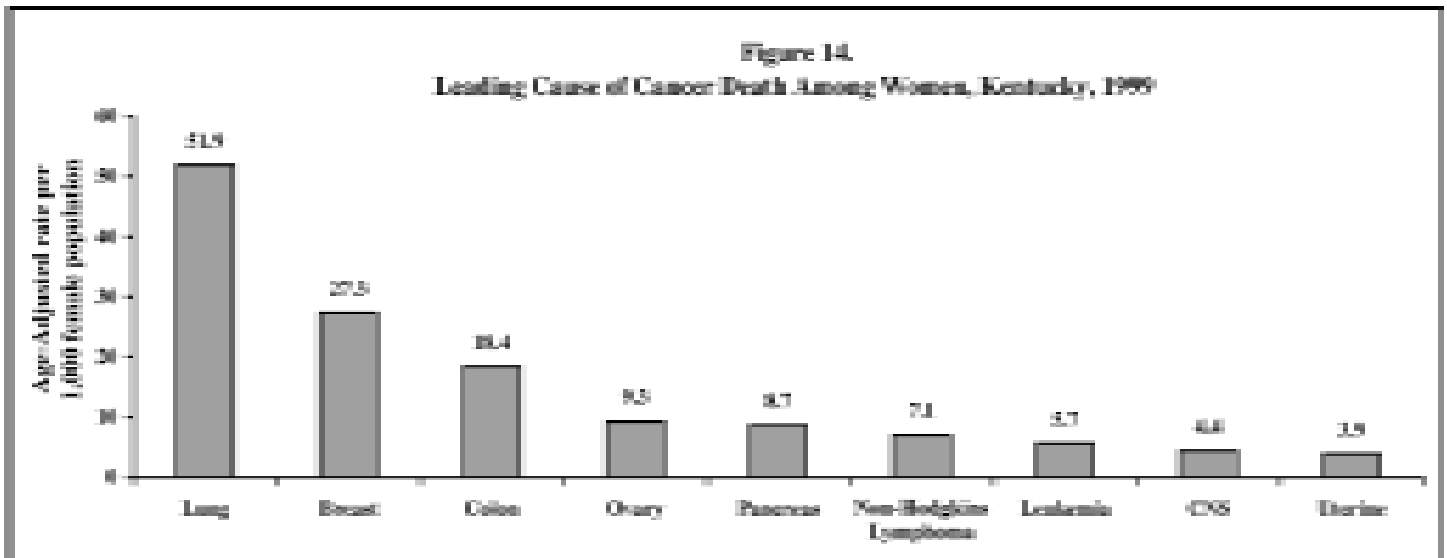
Female deaths from lung cancer far exceed deaths from the other three most common



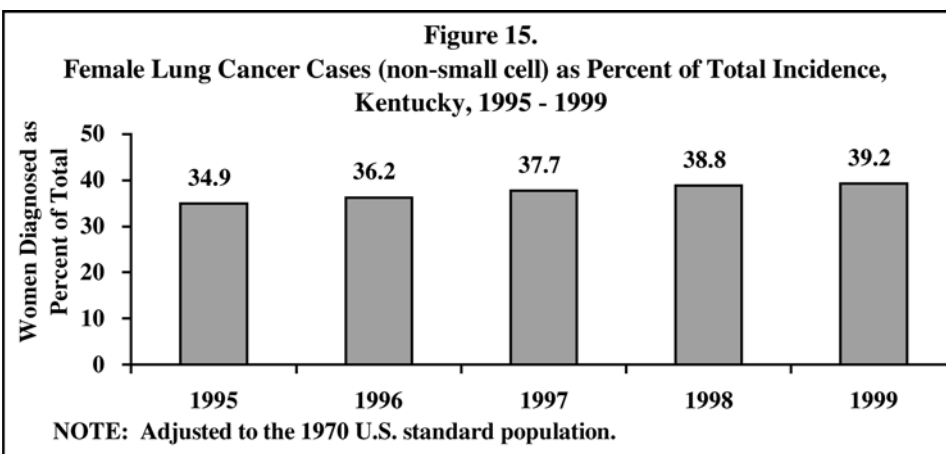
SOURCE: Kentucky Department for Public Health, 1999 Kentucky Annual Vital Statistics Report.



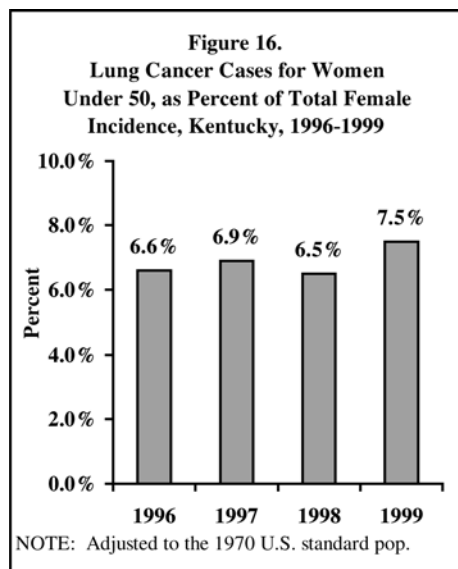
SOURCE: Kentucky Department for Public Health, Health Policy Development Branch, 2000 Kentucky Hospital Discharge File



SOURCE: Kentucky Department for Public Health, Surveillance and Health Data Branch



SOURCE: Kentucky Cancer Registry, calculated from 1999 *Kentucky Cancer Incidence Report*



SOURCE: Kentucky Cancer Registry, calculated from 1999 *Kentucky Cancer Incidence Report*

the age-adjusted female death rate from lung cancer was 51.9 per 100,000 - the second highest in the nation. While the incidence of lung cancer in females has leveled off nationally, the distribution of women developing lung cancer (as a percent of all diagnosed cases) continues to increase, particularly in Kentucky. (Fig. 15) In Kentucky in 1995, women constituted 34.9 percent of all newly diagnosed lung cancer cases. However, that figure grew over 4 percent by 1999, as women constituted 39.2 percent of newly diagnosed lung cancer cases.³⁷

Likewise, lung cancer is striking women at younger ages. The percent of women under 50 developing lung cancer is increasing in Kentucky. From 1996 to 1999, the percent of women under 50 diagnosed with cancer (as a percent of all women) grew from 6.6 percent to 7.5 percent respectively.³⁸ (Fig. 16)

The nation's lung cancer death rate in females continues to increase, although at a slower rate since the beginning of the 1990s. While there is an overall decrease in the national death rate from lung cancer, there remains a persistently high death

female cancer killers: breast, colon, and ovary. (Fig. 14) In Kentucky, over 3,400 new cases of lung cancer among men and women were reported in 2001, with 3,200 deaths.³⁵ There are two main categories of lung cancer: non-small cell lung cancer and small cell lung cancer. Non-small cell lung cancer (NSCLC) is the most common type of lung cancer and occurs in eighty percent of those diagnosed. Small cell lung cancer (SCLC) is more aggressive, but is only diagnosed in twenty percent of lung cancer patients.

In 1999, the Kentucky lung cancer incidence rate for females was 56.8 per 100,000 people,³⁶ the third highest in the nation, and

rate among Kentucky women. Many factors may contribute to this increase - lack of early detection methods, social factors (i.e. gender differences in seeking health care), psychological factors (i.e., fear of diagnosis), and high rates of smoking.

Smoking and the Development of Lung Cancer

With 87 percent of lung cancer deaths associated with cigarette smoking, this makes smoking the greatest preventable risk factor. The prevalence of smoking among women in Kentucky remains high and is expected to surpass male rates within the next five years. Whether lung cancer represents a different disease process in women than in men is unclear. Strong evidence suggests that women are more susceptible than men to the carcinogenic effects of cigarettes on their lungs. There also appears to be a difference in the relative distribution of types of lung cancer (by histology) between men and women that is not fully explained by differences in smoking patterns. Women who smoke appear to be at higher risk of developing small-cell lung cancer than squamous-cell lung cancer, whereas men who smoke have a similar risk for the two types of lung cancer. Nationally, women smokers, particularly younger women, are more likely to develop adenocarcinoma of the lung. Studies suggest that estrogen may play a causative role in the development of this particular type of lung cancer.

Risk Factors

The number one risk factor in developing lung cancer is smoking. A smoker can

reduce their risk of developing lung cancer by quitting. A former smoker always has a higher risk of developing lung cancer than someone who has never smoked.³⁹ Other risk factors include:

- Age
- Gender
- Genetics
- Exposure to environmental factors, such as radon, asbestos and other chemicals.

Staging and Symptoms

Often, a person exhibits no symptoms of lung cancer until the disease is advanced. (Fig. 17) Only 15 percent of lung cancers are diagnosed in the early stages when curative treatments are the greatest.

As with most cancers, lung cancer treatment is more successful when found and treated in its earliest stages. The stage of lung cancer defines the extent of the spread of the cancer from its original location in the lung to other parts of the body, and determines the prognosis of the disease. The frequency of lung cancer cases found in advanced stages is high among both sexes. For women in Kentucky, the majority of non-small cell lung cancer cases (34 percent) are diagnosed in the “distant” stage, meaning the cancer has already spread from the lungs to other “distant” parts of the body. For the more deadly small cell lung cancer, an alarming 56 percent of cases are found in the distant stage, versus 7 percent that are found in the localized stage.⁴⁰ (Figs. 18 and 19)

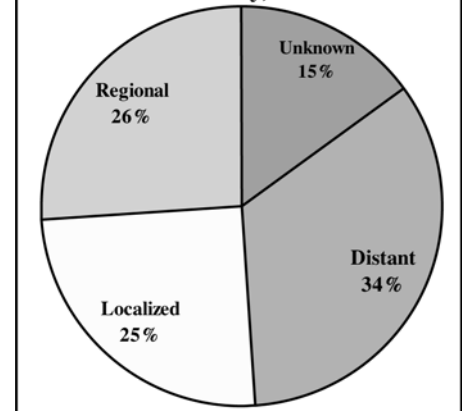
Currently, there is not an official lung cancer screening

Figure 17.
Symptoms of Lung Cancer

- Persistent cough or coughing
- Shortness of breath
- Fatigue
- Chest, shoulder, upper back, or arm pain
- Repeated bronchitis or pneumonia
- Blood coughed up in sputum
- Loss of appetite and weight loss
- Hoarseness
- Wheezing
- Swelling in the face or neck
- General pain

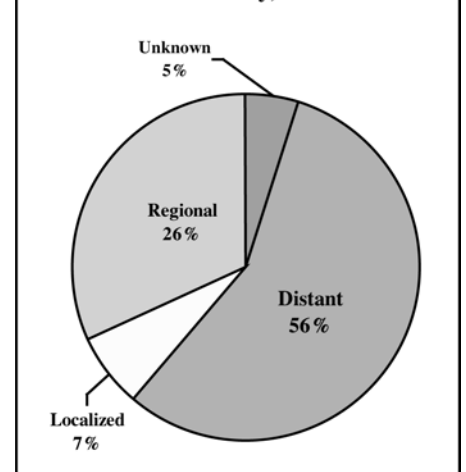
SOURCE: Alliance for Lung Cancer Advocacy, Support and Education (ALCASE), The Lung Cancer Manual, 1999

Figure 18.
Female Lung Cancer Frequency (non-small cell) by Stage of Diagnosis, Kentucky, 1999

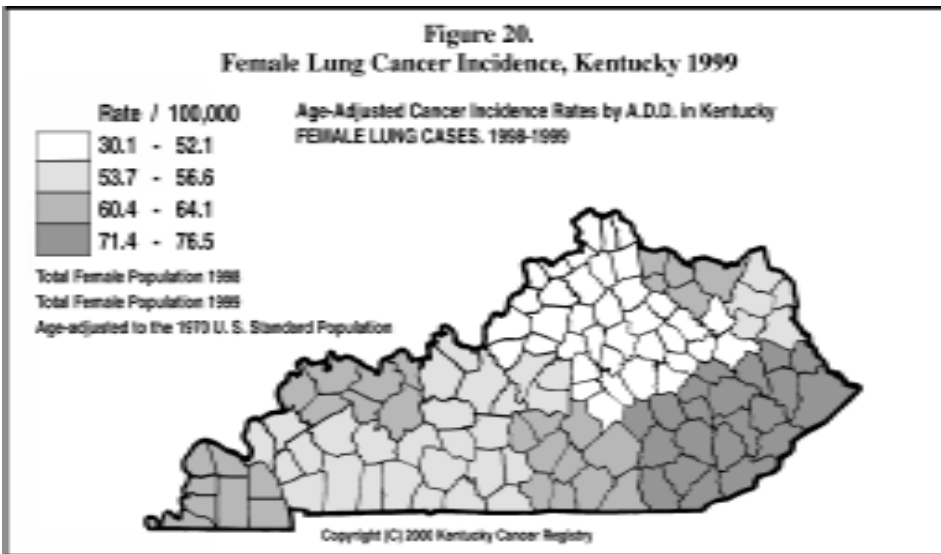


SOURCE: Kentucky Cancer Registry, 1999 Kentucky Cancer Registry Incidence Report

Figure 19.
Female Lung Cancer Frequency (small cell), by Stage of Diagnosis, Kentucky, 1999



SOURCE: Kentucky Cancer Registry, 1999 Kentucky Cancer Registry Incidence Report



SOURCE: Kentucky Cancer Registry, 1999

program recommended for the general population. If a person is considered to be at high risk because of a smoking history, family history or work exposure, then a discussion regarding diagnostic testing should be brought up with a health care provider. The most common diagnostic testing routines for lung cancer include chest x-rays and spiral CT exams.

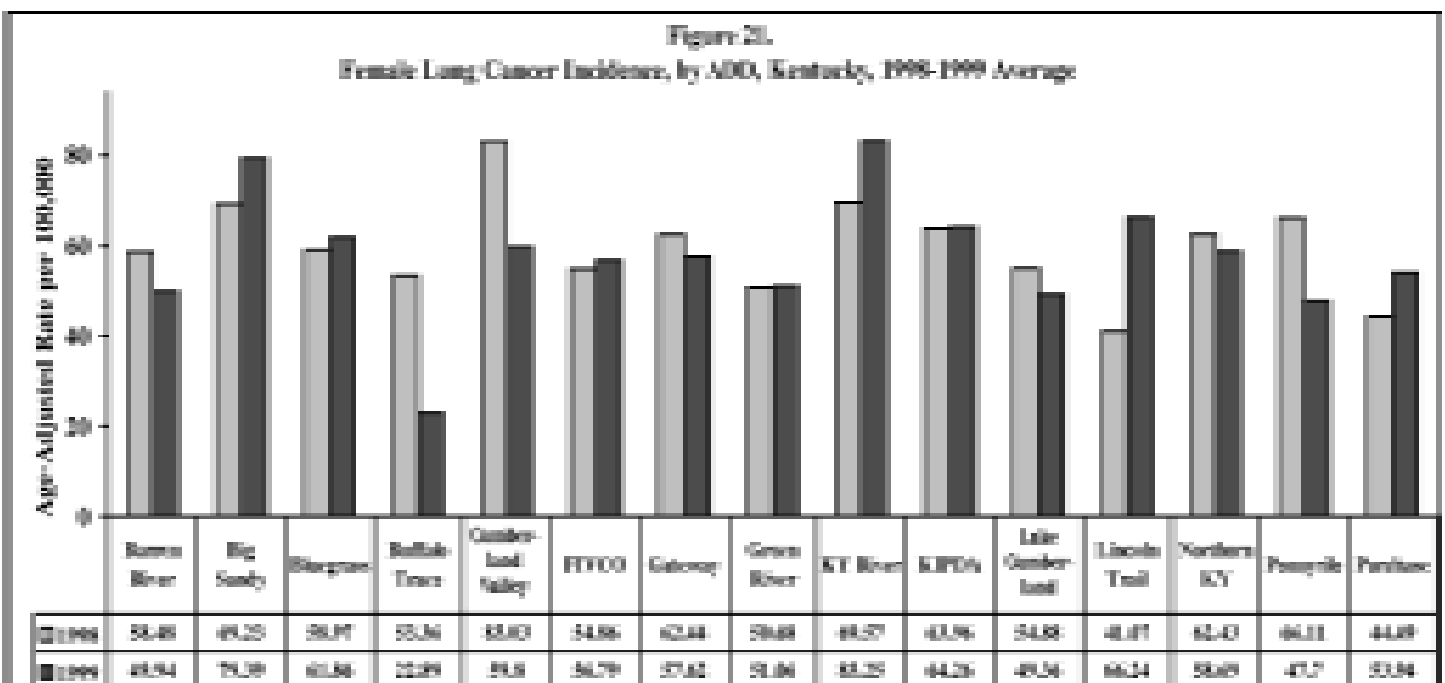
Geographic Variation in Lung Cancer Incidence

Lung cancer cases in Kentucky reveal a higher incidence among women in the Southeastern region of the state. In 1999, the Kentucky Cancer Registry reported the lung cancer incidence rate for women in this area to be 74 per 100,000 female population, far exceeding the average statewide rate for

females of 56.8. (Figs. 20 and 21) This phenomenon may be attributed to a higher number of smokers in the area, lack of adequate health care, less access to physicians, and exposure to environmental factors.

Conclusion

Now more than ever, notable attention has been focused on this very important public health issue. While smoking rates may have dropped in the overall population since the 1960s, trends in Kentucky indicate it is increasing among the most vulnerable populations – pregnant women and youth. Reducing the prevalence of smoking in Kentucky will undoubtedly improve the health and well-being of the general population and save millions of dollars in related health care expenses. While it is difficult to balance the economic issues with the health consequences, it is something that cannot be ignored.



SOURCE: Kentucky Cancer Registry, 1999

NOTES

- ¹ National Cancer Institute, *Cancer Facts*, Fact Sheet 1.16, 9/26/2000. http://cis.nci.nih.gov/fact/1_16.htm.
- ² *National Women's Health Report*, Vol. 23, Number 4. National Women's Health Center, August 2001.
- ³ NIDA News Release, *Teens, Women and Whites More Vulnerable Than Others to Becoming Nicotine-Dependent*, <http://www.drugabuse.gov>.
- ⁴ *Cigarette Smoking More Damaging to Women Than Men*, *Journal of Epidemiology and Community Health*, Nov. 2000.
- ⁵ CDC, <http://www.cdc.gov/ncbddd/bd/abc.htm>.
- ⁶ CDC National Vital Statistics Reports, *Smoking During Pregnancy in the 1990s*, Vol 49, No 7, August 28, 2001.
- ⁷ Kentucky Tobacco-Related Data, Dr. Ellen Hahn, UK College of Nursing, 2001.
- ⁸ Press Release: *Governor's Office Launches Healthy Babies Campaign*, Frankfort, KY. (December 4, 2001).
- ⁹ *Cigarette Taxes and Smoking During Pregnancy*, *American Journal of Public Health*, Nov. 2001.
- ¹⁰ Surgeon General's Report on Women and Smoking, *Pattern of Tobacco Use Among Women and Girls*, 2001.
- ¹¹ Analysis of Multiple Data Sets for Predictors of Different Stages of Tobacco Use Among Adolescents (<http://www.rwiff.org/app/health/028676s.htm>).
- ¹² Ibid.
- ¹³ Centers for Disease Control and Prevention, *Kentucky Tobacco Control Highlights, 1997*.
- ¹⁴ U.S. Department of Health and Human Services. *The Health Benefits of Smoking Cessation*. DHHS publication no. (CDC 90-8416, 1990).
- ¹⁵ Surgeon General's Report on Women and Smoking, *Pattern of Tobacco Use Among Women and Girls*, 2001.
- ¹⁶ National Institutes of Health, NIH News Release, "Quitting Smoking Harder for Women than for Men," May 1, 2001.
- ¹⁷ Surgeon General's Report on Women and Smoking, *Pattern of Tobacco Use Among Women and Girls*, 2001.
- ¹⁸ WebMD – *Chronic Obstructive Lung Disease*, <http://my.webmd.com/content/article/1680.50719>.
- ¹⁹ WebMD – *Chronic Obstructive Lung Disease*, <http://my.webmd.com/content/article/1680.50719>.
- ²⁰ Ibid.
- ²¹ Ibid.
- ²² Ibid.
- ²³ Ibid.
- ²⁴ American Lung Association. <http://www.lungusa.org/diseases/lungemphysem.html>.
- ²⁵ American Lung Association. <http://www.lungusa.org/diseases/lungemphysem.html>.
- ²⁶ Kentucky Department for Public Health, *Health Status of Kentuckians 1999*.
- ²⁷ Kentucky Department for Public Health, 1999 *Kentucky Annual Vital Statistics Report*.
- ²⁸ Kentucky Department for Public Health, 1999 *Kentucky Annual Vital Statistics Report*.
- ²⁹ Ibid.
- ³⁰ Kentucky Department for Public Health, Health Policy Development Branch, 2000 *UB-92 Hospital Discharge File*.
- ³¹ Kentucky Department for Public Health, Health Policy Development Branch, 2000 *UB-92 Hospital Discharge File*.
- ³² MEDSTAT Group 2000 *DRG Guide*, The MEDSTAT Group, Inc., 2001.
- ³³ University of Kentucky Multidisciplinary Lung Cancer Program provided the majority of statistical data in this section.
- ³⁴ American Lung Association. <http://www.lungusa.org/tobacco/>.
- ³⁵ American Cancer Society (ACS), *Cancer Facts and Figures 2001*.
- ³⁶ Kentucky Cancer Registry, 1999 *Kentucky Cancer Incidence Report*.
- ³⁷ Kentucky Cancer Registry, 1999 *Kentucky Cancer Incidence Report*.
- ³⁸ Kentucky Cancer Registry, 1999 *Kentucky Cancer Incidence Report*.
- ³⁹ Alliance for Lung Cancer Advocacy, Support and Education (ALCASE), *The Lung Cancer Manual*, 1999.
- ⁴⁰ Kentucky Cancer Registry, 1999 *Kentucky Cancer Incidence Report*.

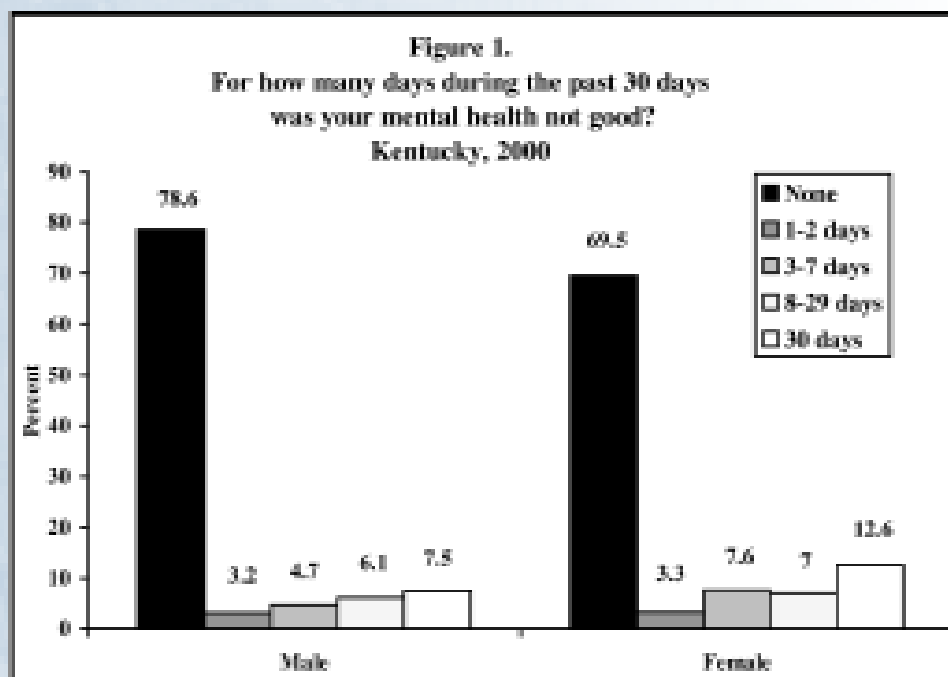
Mental Health & Mental Illness

At least one in five Americans is affected by mental illness. In the United States, mental disorders, including suicide, collectively account for 15.4 percent of the overall burden of disease from all causes, ranking second after cardiovascular conditions (18.6 percent) and before malignant diseases which rank third (15.0 percent).¹

It is important to understand the difference between mental illness and mental health. The 1999 Surgeon General's Report on Mental Health defines mental health as a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity.² Certain common

events of midlife (e.g. divorce or other stressful life events) can create mental health problems (not necessarily disorders) that may be addressed through a range of interventions.

The same report defines mental illness as the term that refers collectively to all diagnosable mental disorders. Mental disorders are health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning.³ In Kentucky, a diagnosable mental illness occurs when a mental health professional determines that a person has a mental illness diagnosis as defined in the Diagnostic and Statistical Manual (DSM IV) or International Classification of Diseases (ICD 9).



SOURCE: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System (BRFSS), 2000

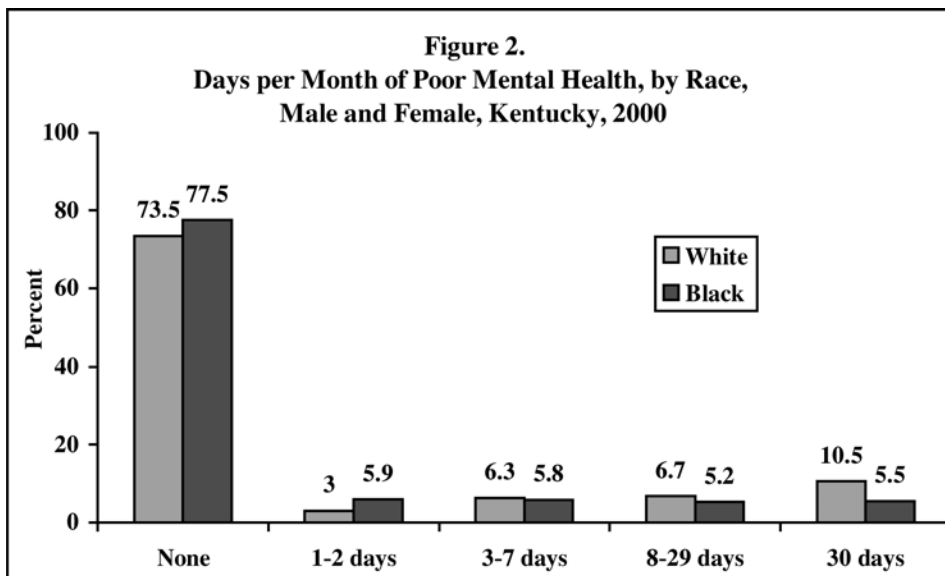
Mental Health

Mental health is a facet of health that evolves throughout a lifetime. Just as each person can do much to promote and maintain overall health regardless of age, each also can do much to promote and strengthen mental health at every stage of life.⁴ One of the best sources to assess mental health among women in Kentucky is the Behavioral Risk Factor Surveillance System (BRFSS) co-sponsored by the CDC and Kentucky Department for Public Health. The BRFSS does not identify actual prevalence rates of diagnosable depression, but it does provide prevalence rates of poor mental health.

According to the BRFSS, nearly 30 percent of women in Kentucky reported three or more poor mental health days in the previous month. When

asked the question, “For how many days during the past 30 days was your mental health not good?”, 12.6 percent of women indicated that all 30 days were not good mental health days, compared to 5.2 percent of women nationally.⁵ Likewise, women in Kentucky report a greater frequency of poor mental health days than men. (Fig. 1)

Self-reported poor mental health rates vary by race. Data for 2000 indicate that white respondents reported more poor mental health days than black respondents. 73.5 percent of white respondents (male and female) reported having no bad mental health days in the previous month compared to 77.5 percent of black respondents. 10.5 percent of white respondents reported that all 30 days were bad mental health days compared to 5.5 percent of blacks. (Fig. 2)



SOURCE: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System (BRFSS), 2000

Poor mental health rates also vary by age. Nearly 25 percent of all respondents (male and female) aged 35 – 54 reported all 30 days as bad mental health days. Likewise, 20 percent of respondents aged 55 and over reported all 30 days as bad mental health days. (Fig. 3)

Other factors, including employment, education and marital status, affect women’s self-reported mental health status. Mental distress was reported more often by women in Kentucky with less than a high school education, as well as among those that were unemployed, never married, or widowed/divorced/separated.⁶ (Fig. 4)

Mental Illness

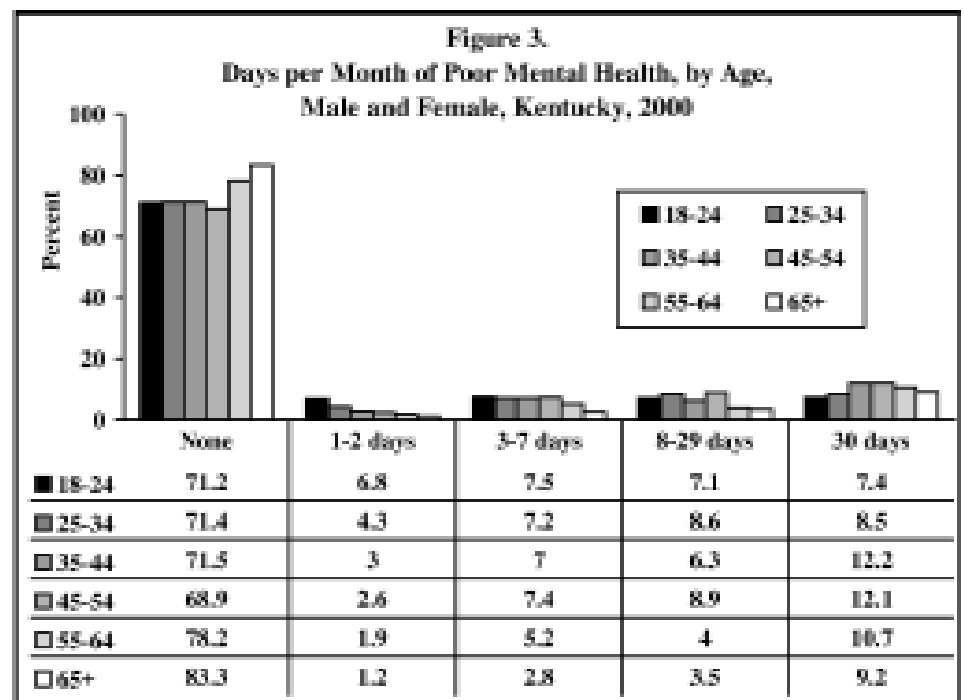
Mental illness is the term that refers collectively to all diagnosable mental disorders. Mental disorders are health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof)

associated with distress and/or impaired functioning.⁷ In the U.S. and other developed countries, mental disorders – including major depression, bipolar disorder, schizophrenia, and obsessive-compulsive disorder – account for four out of ten leading causes of disability.⁸

Mood Disorders - Depression

Depression is a pervasive and impairing illness that affects both men and women, but women experience depression at roughly twice the rate of men.⁹ Left untreated, depression may disrupt work, family, and personal life. Total costs related to depression reach \$43.7 billion each year, with the majority of the costs reflecting lost productivity and excess absenteeism from work.¹⁰

Depressive disorders affect nearly 19 million American adults age 18 and over (or 9.5 percent of the population) in a given year.¹¹ Women appear to be at an increased risk for depression due to biological



SOURCE: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System (BRFSS), 2000

differences such as hormonal changes and genetics. Social reasons may also lead to higher rates of clinical depression among women such as greater stresses from work and family responsibilities, the roles and expectations of women, and even the increased rates of sexual abuse and poverty.¹² (Fig. 5)

According to a national survey issued by The Commonwealth Fund in 1998, two out of five women reported having a high level of depressive symptoms in the past week. Women were more likely than men to report high levels of depression with 39 percent of women reporting

Figure 4.
Prevalence (%) of Mental Distress*
Females Age 18+, Kentucky, 2000
(Refused and Unknown Responses Excluded)

	No Mental Distress (0 days in past month)	Low to Moderate Mental Distress (1-10 days in past month)	Frequent Mental Distress (11-30 days in past month)
Total Female	68.3	12.7	17.8
Race			
White/Non-Hispanic	68.8	12.7	18.5
African American/Non-Hispanic	77.8	12.3	9.9
Age			
18-24	67.4	16.7	15.9
25-34	68.9	14.7	16.4
35-44	62.7	17.6	19.7
45-54	66.8	12.7	20.5
55-64	74.6	18.0	15.5
65-74	81.9	8.8	15.7
75+	79.6	6.4	14.6
Income			
< \$15,000	52.8	17.1	30.0
\$15,000 - \$24,999	71.1	12.4	16.5
\$25,000 - \$49,999	68.9	14.4	17.1
\$50,000+	71.2	18.2	10.6
Employment			
Employed	78.3	14.2	15.5
Unemployed/Unable to Work	42.8	14.6	42.5
Homeemaker	78.2	13.2	8.6
Student	67.8	20.8	11.4
Retired	78.8	5.8	14.4
Education			
< High School	68.3	18.2	25.5
High School Grad or GED	71.8	11.8	17.3
Some College	67.3	14.5	18.2
College Graduate	74.7	14.7	10.7
Marital Status			
Married/Couple Living Together	71.1	12.8	16.1
Widow/Divorced/Separated	68.8	18.4	22.8
Never Married	63.8	18.6	17.6
Insurance Status			
Insured	78.6	12.6	16.8
Uninsured	62.3	17.8	24.2
Health Status			
Excellent/Very Good/Good	78.8	12.8	12.2
Fair/Poor	58.6	11.8	27.5

*Based on responses to the BRFSS Question, "Now thinking about mental health, which includes depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?"

Figure 5.
Symptoms of Depression

- persistent sad, anxious or empty mood;
- loss of interest or pleasure in activities, including sex;
- restlessness, irritability, or excessive crying;
- feelings of guilt, worthlessness, helplessness, hopelessness, pessimism;
- sleeping too much or too little;
- appetite and/or weight loss or overeating and weight gain;
- decreased energy, fatigue, feeling “slowed down”;
- thoughts of death or suicide, or suicide attempts;
- difficulty concentrating, remembering, or making decisions;
- or persistent physical symptoms that do not respond to treatment, such as headaches, digestive disorders, and chronic pain.

SOURCE: National Institute of Mental Health

high levels of depression versus 17 percent of men.¹³

Because depression is often left untreated for numerous reasons, lack of understanding of this disorder, culture and attitudes toward mental illness, and lack of access to services, accurate statistics of its prevalence are hard to acquire. It is important to distinguish between depression and poor mental health because one is clinically diagnosable condition and the other is not. Though it is possible that poor mental health may ultimately lead to depression.

For those that are suffering from a diagnosable mental illness, one of the most significant barriers to treatment is stigma associated with mental illness. Nearly two-thirds of all people with diagnosable mental disorders do not seek treatment.¹⁴ Stigma is identified as bias, distrust, stereotyping, fear, embarrassment, anger and/or avoidance. It is a burden not only for a person with a diagnosable mental illness but for the general public as well. It often prevents people from realizing that mental illness is a treatable disease just as physical illnesses.

Anxiety Disorders

For women suffering from depression, anxiety disorder is often a co-occurring illness.¹⁵ Affecting nearly 19 million Americans, anxiety disorders include panic disorder, obsessive-compulsive disorder (OCD), post-traumatic stress disorder, and phobias.¹⁶ Like depression, women are more likely than men to suffer from an anxiety disorder, with nearly 40 percent of those

suffering from panic attacks, also suffering from depression.¹⁷ (Fig. 6) Panic disorder, post-traumatic stress disorder, and generalized anxiety disorder are twice as prevalent in women as men. However, for obsessive-compulsive disorder and social phobia, the prevalence among men and women is the same.¹⁸

People with panic disorder perceive their own physical and emotional well-being as poor and seek medical help more often than do those in the general population. Studies have reported that between 25 and 60 percent of patients with chest pain who see a physician for possible heart problems suffer instead from panic disorder.¹⁹ Of those suffering from panic disorders, 25 to 30 percent harbor suicidal thoughts at some point. Eighteen percent of people with panic disorder, 12 percent of those with social phobias, and 13 percent of patients with OCD have attempted suicide.

Disorder	Percent Lifetime Prevalence	Percent 12-Month Prevalence
Panic Disorder	5.0	3.2
Agora-phobia (without panic)	7.0	3.8
Social Phobia	15.5	9.1
Simple Phobia	15.7	13.2
General anxiety disorder	6.6	4.3
Any anxiety disorder	30.5	22.6

SOURCE: Kessler, Ronald C., et al, “Lifetime and 12-Month Prevalence of DSM-III-R Psychiatric Disorders in the United States: Results from the U.S. National Comorbidity Survey,” Archives of General Psychiatry, 51 (January 1994)

Adolescent girls with panic disorders have nearly three times the risk of suicide as those without anxiety.²⁰

Anxiety disorders are highly treatable, yet only about one-third of those suffering from an anxiety disorder receive treatment. Despite this, people with an anxiety disorder are three-to-five times more likely to go to the doctor and six times more likely to be hospitalized for psychiatric disorders than non-sufferers.²¹

Postpartum Depression (PPD)

The term postpartum depression describes the range of physical, emotional and behavioral changes new mothers experience following the delivery of their babies. Symptoms can range from mild to severe. Mild postpartum depression, often referred to as “baby blues”, is experienced by 30 to 75 percent of women, with symptoms lasting from four to ten days.²² Postpartum depression is relatively common, with prevalence rate approximately the same as that for major depression in non-pregnant women. Symptoms usually begin in the third trimester of pregnancy and are similar to those for major depression.²³

Roughly 10 percent of pregnancies result in a postpartum depression that lasts months after delivery. The condition is characterized by more intense feelings of sadness, despair, anxiety and irritability. Although it can last up to a year, postpartum depression can be diagnosed and its symptoms alleviated.²⁴

A much more serious condition is postpartum psychosis, which affects

approximately 1 in 500-1000 new mothers.²⁵ These women may completely lose touch with reality and often experience hallucinations and delusions. Intervention with these women should be immediate.

Schizophrenia

Schizophrenia is a serious biological brain disorder which affects how a person thinks, feels and acts. Schizophrenia is not “split personality” or “multiple personalities”. It is not caused by childhood experiences, poor parenting, or lack of willpower, nor are the symptoms identical for each person.²⁶

According to the DSM IV, two or more of the following symptoms must be present during a one-month period to diagnose schizophrenia:

- hallucinations
- delusions
- disorganized speech
- grossly disorganized or catatonic behavior
- negative symptoms - reduction in the range of emotional expression; poverty of speech

In the U.S., about 2.5 million people have schizophrenia, or about one in every hundred people. Onset generally occurs during young adulthood (mid-20s for men, late 20s for women) and may be abrupt or gradual.²⁷ For some women, schizophrenia does not develop until after menopause. This delay is thought to be related to the protective effects of estrogen.²⁸

In fiscal year 2000, 22 percent of women and 43 percent of men receiving services at Kentucky Community Mental Health

Centers were diagnosed with schizophrenia.

MENTAL HEALTH SERVICES

Community Mental Health Centers

In fiscal year 2001, Kentucky Community Mental Health Centers (CMHCs) served approximately 138,000 adults and children with mental health problems of varying degrees.

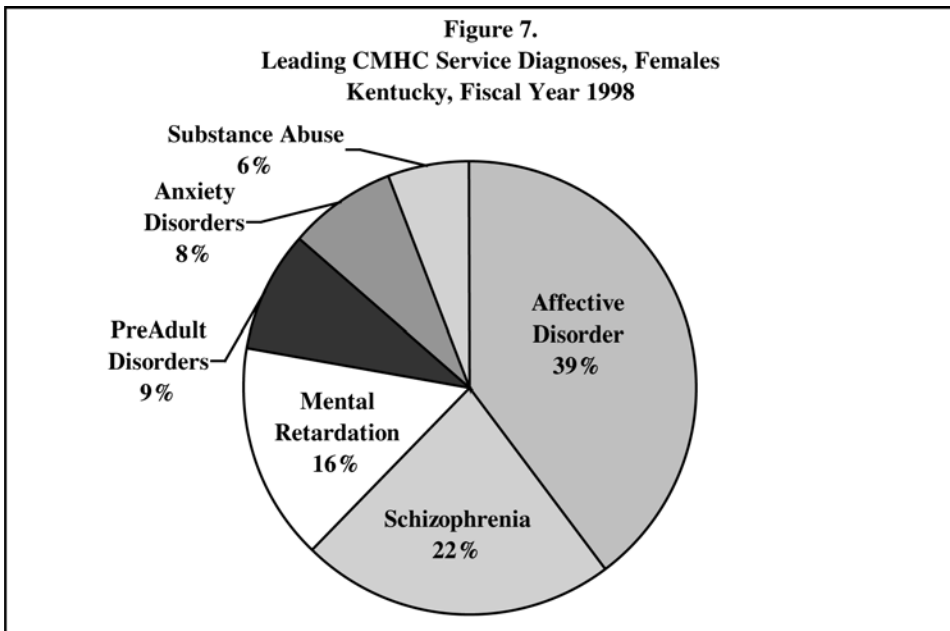
Some patients received services for multiple diagnoses, thus, are counted more than once in the total. There were approximately 2,000 patients receiving multiple services. Of the total services provided, 65,663 were provided to females and 72,485 to males.²⁹

Women treated at CMHCs were more likely than men to be treated for affective disorders (the broad term for the various forms of mood disturbances, including depression), at 41 and 21 percent, respectively. Men were more often treated for schizophrenia and mental retardation than women. (Figs. 7 & 8) A listing of CMHCs in Kentucky is provided in Appendix A.

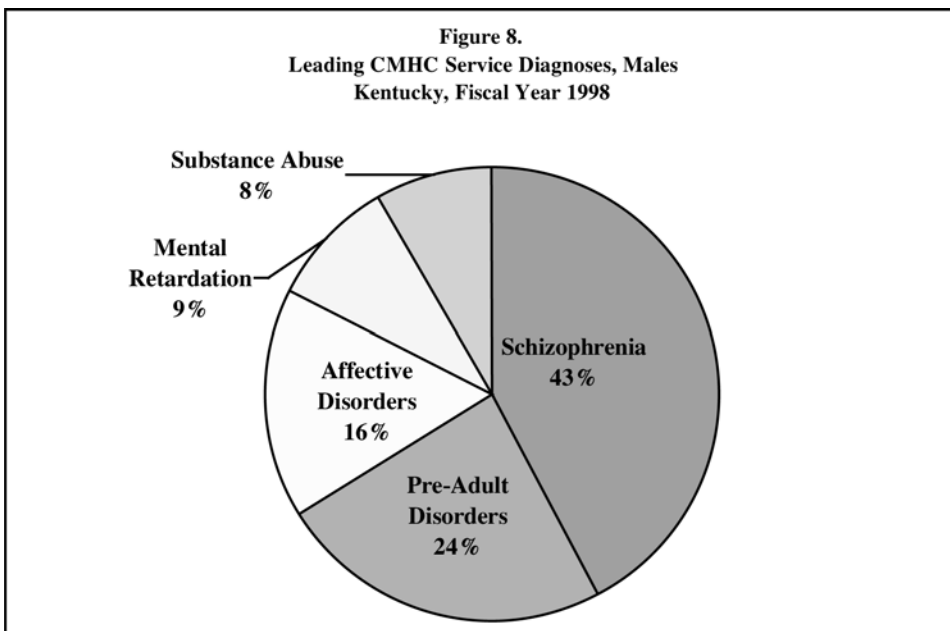
Mental illness issues are cause for a substantial proportion of ambulatory care visits by women, as demonstrated by medication use. According to the National Health Care Survey analyzed by the National Center for Health Statistics, antidepressants are the second most frequently prescribed or provided therapeutic medication among all female ambulatory care visits, second to non-narcotic analgesics (pain medication) and followed by estrogen/progestins.³⁰ (Fig. 9) The mention of central nervous system drugs, (including antidepressants and anti-anxiety drugs) increases with age and is higher among white women than black women.

Hospitalizations – Short Term

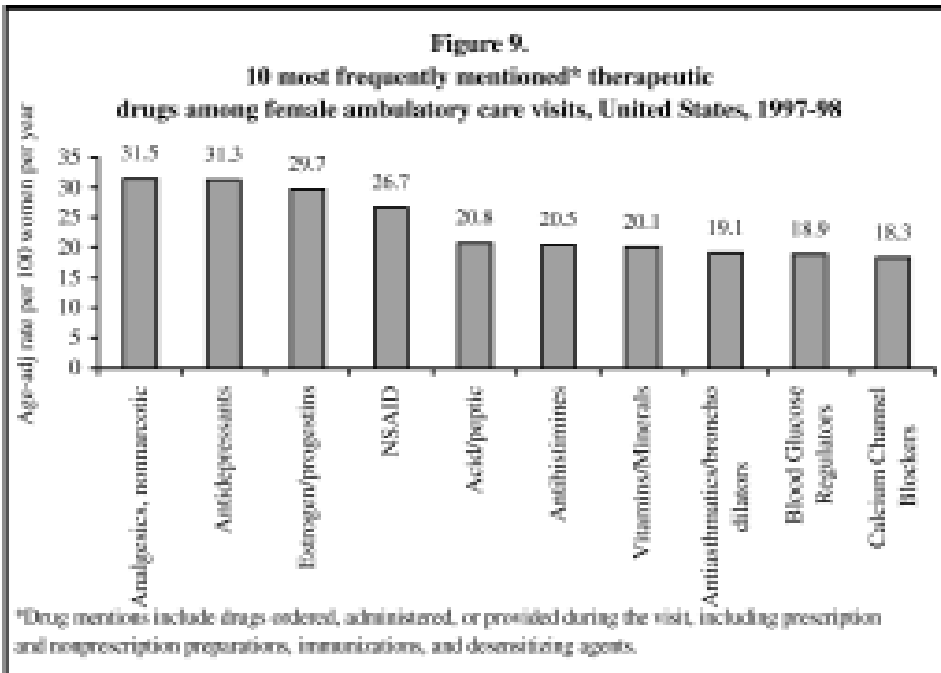
Hospitalization is necessary for patients with severe depression, psychosis, substance abuse, severe hopelessness or limited social support. Patients with suicidal thoughts are also likely



SOURCE: Kentucky Department for Mental Health/Mental Retardation Services, 2001



SOURCE: Kentucky Department for Mental Health/Mental Retardation Services, 2001



SOURCE: Vital and Health Statistics, Series 13, Number 149. *Utilization of Ambulatory Medical Care by Women: United States, 1997-98*. Data from National Health Care Survey, DHHS Publication No. (PHS) 2001-1720

to be hospitalized and clinically managed by a psychiatrist.³¹ According to hospital discharge data (representing 90 percent of expected discharges statewide) collected by the Department for Public Health, 37,409 people were discharged from Kentucky hospitals in 2000 with depression as one of their diagnoses.³² They may have been admitted for something other than depression, but depression was recorded as one of nine possible diagnoses. Of this number, 24,435 were female and 12,974 were male, representing virtually a 2:1 ratio.

Of the hospitalized women diagnosed with depression, 58 percent resided in a rural county versus 42 percent from urban areas. (Fig. 10)

Hospitalizations – Long Term

Kentucky currently has 14 state-supported mental health hospitals providing inpatient services for men and women with mental illness. Most of the beds in

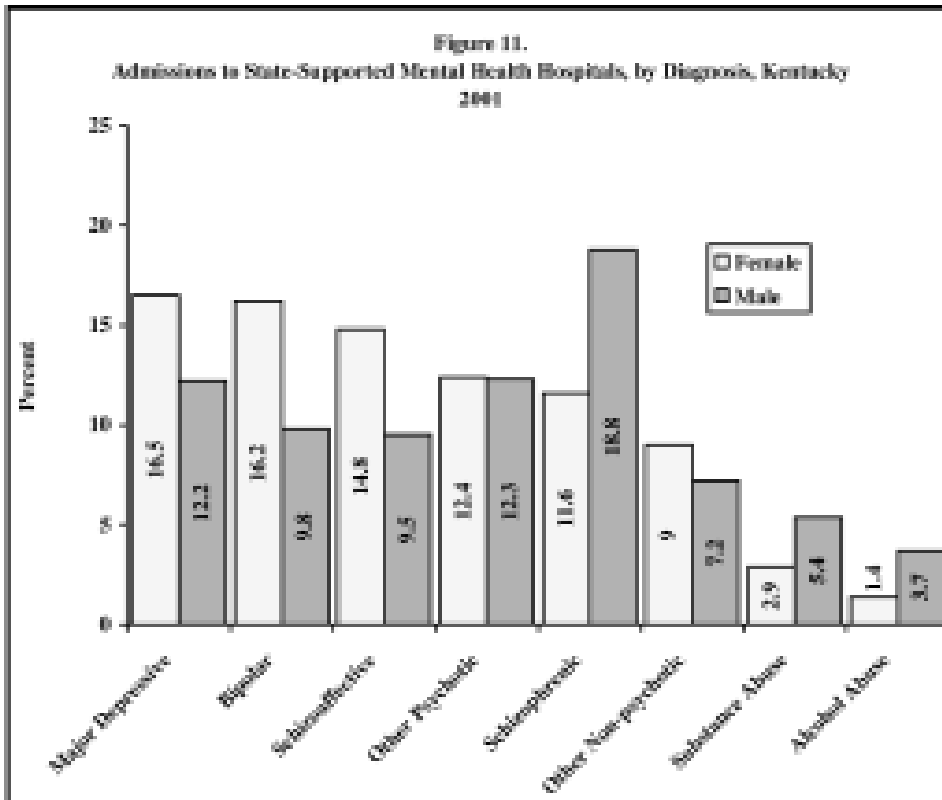
these facilities are utilized for long-term mental health needs for adults. The average length of stay, for clients admitted within the past five years to a state hospital, was 83 days for females and 92 days for males.³³

According to the Research and Data Management Center of the Department for Mental Health and Mental Retardation, 1,714 women and 2,970 men were admitted to the state-supported mental health hospitals in fiscal year 2001. The majority of women were admitted for major depressive

Figure 10.
Hospitalizations Among Women with a Diagnosis of Depression, Kentucky, 2000

	Rural	Urban	Total
Women			
Total	14,214 (58%)	10,221 (42%)	24,435 (100%)
< 15	211	222	433
15-44	5,116	3,756	8,872
45-64	4,427	2,921	7,348
65 +	4,460	3,322	7,782

SOURCE: Kentucky Department for Public Health, Health Policy Development Branch, 2000 Hospital Discharge File



SOURCE: Kentucky Department for Mental Health/Mental Retardation Services, 2001

disorder and bipolar disorder (16.5 and 16.2 percent respectively). The third and fourth leading diagnoses for female admissions were schizoaffective disorder, representing 14.8 percent of new admissions, and schizophrenic disorder, representing 11.6 percent.

The majority of men, 18.8 percent, were admitted for schizophrenic disorder. Major depressive and psychotic disorders accounted for 12.2 percent each with another 9.8 percent of male admissions diagnosed with bipolar disorder. (Fig. 11)

NOTES

¹U.S. Department for Health and Human Services. *Mental Health: A Report of the Surgeon General*. Rockville MD: US DHHS, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, 1999. <http://www.surgeongeneral.gov/library>.

² U.S. Department for Health and Human Services. *Mental Health: A Report of the Surgeon General*. Rockville MD: US DHHS, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, 1999. <http://www.surgeongeneral.gov/library>.

³ Ibid.

⁴ Ibid.

⁵ Kentucky Department for Public Health, 2000 BRFSS data.

⁶ Kentucky Department for Public Health, 2000 BRFSS data.

⁷ U.S. Department for Health and Human Services. *Mental Health: A Report of the Surgeon General*. Rockville MD: US DHHS, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, 1999. <http://www.surgeongeneral.gov/library>.

⁸ National Institute on Mental Health, Publication no. 01-4584. *The Numbers Count, Mental Disorders in America*, January 2001.

⁹ National Institute of Mental Health. "Depression: What Every Woman Should Know, <http://www.nimh.nih.gov/publicat/depwomenknows.cfm>.

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¹² National Mental Health Association, Clinical Depression and Women Fact Sheet: <http://www.nmha.org/ccd/support/factsheet.women.cfm>.

¹³ Collins, Karen Scott, et al. *Health Concerns Across a Woman's Lifespan: The Commonwealth Fund 1998 Survey of Women's Health*, May 1999.

¹⁴ Ibid.

¹⁵ National Institute on Mental Health, Publication no. 01-4584. *The Numbers Count, Mental Disorders in America*, January 2001.

¹⁶ National Institute on Mental Health, Publication no. 01-4584. *The Numbers Count, Mental Disorders in America*, January 2001.

¹⁷ MSN Health with WebMD, *How Is Anxiety Disorder Diagnosed and Treated?*, Internet: http://content.health.msn.com/content/dmk/dmk_article_5461928.

¹⁸ Ibid.

¹⁹ MSN Health with WebMD, *How Serious are Anxiety Disorders*. Internet at http://content.health.msn.com/content/dmk/dmk_article_5461927.

²⁰ MSN Health with WebMD, *How Serious are Anxiety Disorders*. Internet at http://content.health.msn.com/content/dmk/dmk_article_5461927.

²¹ Anxiety Disorders Association of America, on the web at <http://www.adaa.org/AnxietyDisorderInfor/OverviewAnxDis.cfm>.

²² American Family Physician. Bhatia, Subhash C. *Depression in Women: Diagnostic and Treatment Considerations*, July 1999. Internet: http://www.findarticles.com/cf_dls/m3225/1_60/57441684/print.jhtml.

²³ American Family Physician. Bhatia, Subhash C. *Depression in Women: Diagnostic and Treatment Considerations*, July 1999. Internet: http://www.findarticles.com/cf_dls/m3225/1_60/57441684/print.jhtml.

²⁴ <http://www.4woman.gov/owh/pub/factsheets/postpartum.htm>.

²⁵ <http://www.4woman.gov/owh/pub/factsheets/postpartum.htm>.

²⁶ National Advance for the Mentally Ill.

Internet at <http://www.nami.org>.

²⁷ U.S. Department for Health and Human Services. *Mental Health: A Report of the Surgeon General*. Rockville MD: US DHHS, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, 1999. <http://www.surgeongeneral.gov/library>.

²⁸ Ibid.

²⁹ Kentucky Department for Mental Health/ Mental Retardation, Research and Data Management Center.

³⁰ Brett, PhD, Kate M., and Catherine W. Burt, Ed.D, *Utilization of Ambulatory Medical Care by Women, 1997-98*. CDC. National Center for Health Statistics. Vital and Health Statistics, Series 13, No. 149. July 2001.

³¹ American Family Physician. *Depression in Women: Diagnostic and Treatment Considerations*. July 1999.

³² Kentucky Department for Public Health, Health Policy Development Branch.

³³ Ibid.

Substance Abuse Among Women

Substance abuse among women is an issue that is often overlooked as a serious health problem with negative physical and mental health consequences. Women are more inclined to hide their substance abuse for a number of reasons, including shame, stigmatization, or fear of losing their children. Women with substance abuse problems often have more complex reasons for abuse than men and require different forms of treatment. According to the University of Kentucky Institute on Women and Substance Abuse, in 1999, of the estimated 72,000 women in Kentucky who abused alcohol and/or other drugs, only 22 percent received treatment.¹

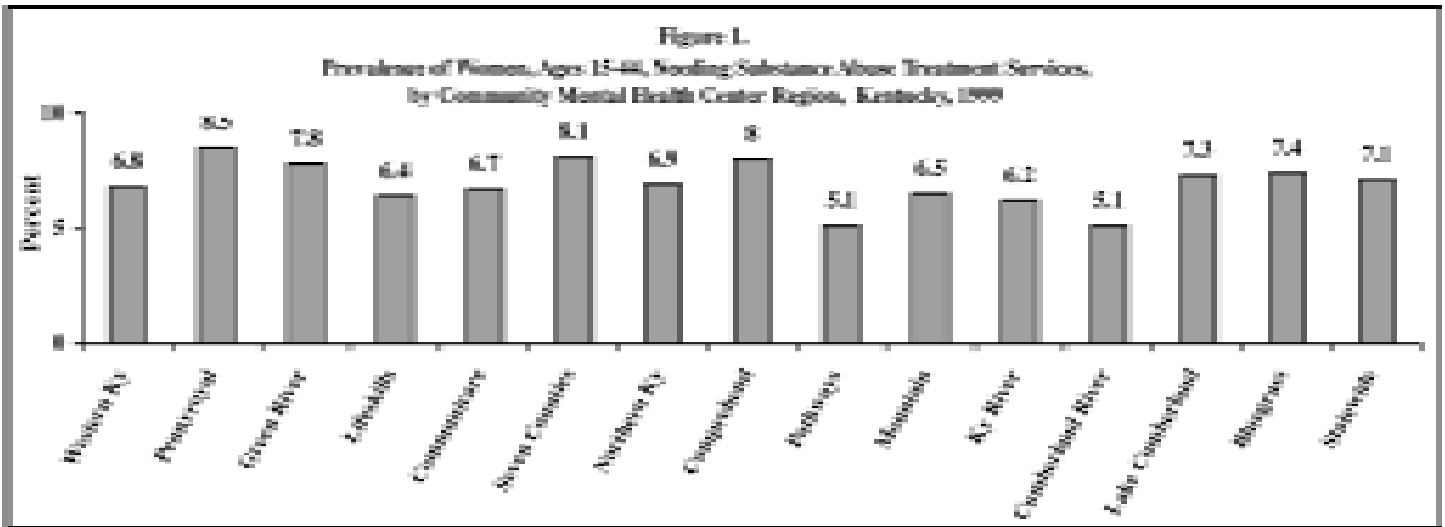
In 1999, the Kentucky Department for Mental Health/Mental Retardation estimated that approximately seven percent of women, aged 15 – 44, were in need of substance abuse treatment services.² This assessment included estimates by Community Mental Health Centers located in districts across the state and found the highest prevalence of women in need of substance abuse treatment in the Pennyroyal district. The lowest prevalence was found in the Pathways and Cumberland River centers.³ (Fig. 1) (See Appendix A for counties in each district)

Studies show women develop substance abuse problems faster than men, after the initia-

tion of substance use. They also suffer more physical problems due to substance abuse.⁴ Common physical ailments related to alcohol abuse include thiamin deficiency, liver disease, and diseases of the pancreas. In addition, women substance abusers often participate in risky behaviors that increase their chances of contracting sexually transmitted diseases (STDs) and HIV.⁵ Likewise, women are often more debilitated by substance abuse than men, due to delayed treatment or lack of treatment altogether.

Not only is substance abuse a health problem, but it is a health problem with negative social consequences. Approximately, 20 percent of welfare recipients nationally have alcohol and drug problems and substance abuse is among the most frequently cited functional impairments preventing welfare recipients from leaving welfare and completing job training.⁶ Substance abuse is a significant factor for many female caregivers involved in the child welfare system. Between one-third and two-thirds of families involved with child welfare have substance abuse problems.⁷ Women who do not successfully complete substance abuse treatment within a designated time frame often risk losing custody of their children.⁸

Women's incarceration due to substance abuse also affects



SOURCE: Kentucky Needs Assessment Project, 1999. Developed from the 1999 Adolescent and Adult Household Survey data and University of Kentucky Center for Drug & Alcohol Research

children's lifestyle. Nationally, the number of women in state prisons for drug offenses increased from 2,400 in 1986 to 23,700 in 1996 and two-thirds of these women have children under the age of 18.⁹ Of the 1,062 women prisoners in Kentucky in 2001, 441 (42 percent) had at least one drug-related offense.¹⁰

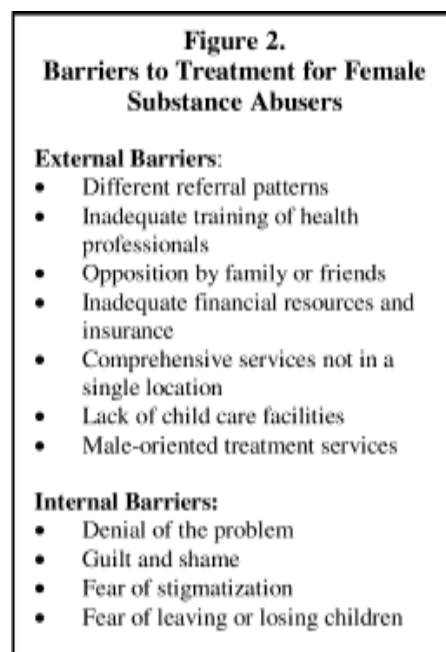
Barriers to Treatment

One of the biggest barriers women face in seeking treatment for substance abuse is the greater disgrace society attaches to women's substance abuse and dependency than to men's. The resulting shame and stigma can lead to the denial of the problem by the women involved, as well as by their families, employers, doctors and religious leaders.¹¹ (Fig. 2) Because of women's frequent utilization of health services, physicians have a great opportunity to detect substance abuse and make the appropriate referrals. However, 94 percent of primary care physicians fail to diagnose substance abuse when presented with early symptoms of alcohol abuse in an adult patient. Only 17 percent of doctors consider themselves "very

prepared" to diagnose illicit drug use.¹²

Despite the fact that alcoholism has been recognized as a disease for decades, we now realize that drug addiction also affects brain chemistry and like alcoholism, is a chronic illness. Even with this knowledge, there continues to be a lack of screening, detection, and referral to treatment that prevents adequate recovery for women.

The issues women bring to substance abuse treatment are



SOURCE: University of Kentucky Center on Women and Substance Abuse

Figure 3.
Women Presenting at Kentucky Health Departments for Pregnancy Testing,
by Substance Abuse Treatment Status, 1997

	Frequency	Was in Treatment	Unable to Get Treatment	In Need of Treatment
KENTUCKY	1,453	1.8%	0.2%	10.1%
AGE				
11-17	206	3.3	0.6	17.1
18-24	694	0.8	0.1	9.8
25-51	546	2.4	0.3	7.9
RACE				
Non-White	199	4.3	0.5	8.4
White	1,294	1.4	0.2	10.3
MARITAL STATUS				
Married	624	1.0	0.0	3.9
Other	211	3.2	0.8	13.5
Single	578	1.9	0.1	15.5
INCOME				
\$0-10,000	570	2.6	0.1	11.1
\$11-20,000	357	0.8	0.5	9.9
\$21,000+	393	0.7	0.0	9.7
PREGNANT				
No	947	1.6	0.4	8.7
Yes	433	2.5	0.0	13.3

SOURCE: Wolfe, James, et al., *Substance Use and Need for Treatment Among Women of Childbearing Age*. Prepared for the Center on Substance Abuse Treatment, University of Kentucky on Drug and Alcohol Research, 1997

often more numerous and complex than men's issues. Compared to the general population, women in treatment show significantly higher rates of:¹³

- Childhood sexual abuse
- Childhood and adult domestic violence
- Medical problems
- Unemployment
- Homelessness
- Mental health problems (e.g. depression and PTSD)
- Primary caretaking responsibilities for children and other family members
- Shame and guilt related to substance abuse

If not addressed, the above issues can be key factors for women's relapse to substance use. Therefore, successful treatment for women substance abusers must address these sensitive issues within an emotionally and physically safe context.

Once women decide to seek treatment for substance abuse, they find that in Kentucky, there is a large gap between the need for treatment and the availability of services, particularly gender-specific and sensitive treatment services. Kentucky

has identified pregnant women as a priority population to receive substance abuse treatment services. However, while the gap for adult women services may be decreasing, it remains significant for non-pregnant women and adolescent females, in particular, ages 12 to 17.¹⁴

Substance Abuse and Pregnancy

Substance abuse among women, especially pregnant women, poses a risk not only to the mother, but also to the developing fetus. The use of alcohol, tobacco, and/or other drugs during pregnancy continues to be a leading preventable cause of mental, physical, and psychological impairments and problems in infants and children.¹⁵ Almost 19 percent of pregnant women use alcohol in Kentucky and 24 percent report smoking during pregnancy.¹⁶ It is important to note that the percent of women in Kentucky who report smoking during pregnancy is double the national average.¹⁷

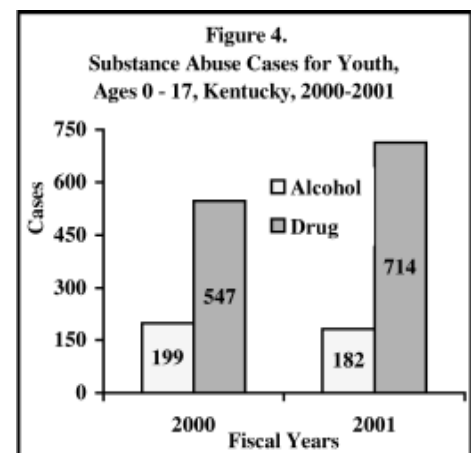
In 1997, a Kentucky study on Substance Use and the Need for Treatment among Women of Child-bearing Age found that approximately 10 percent of all women presenting for pregnancy tests at local health departments across Kentucky were in need of substance abuse treatment. Of these women, those under 18 years of age were most in need of treatment and guidance related to substance use.¹⁸ (Fig. 3) The study further showed that 31 percent of women ages 11 to 17 presenting for pregnancy tests at local health departments used illicit drugs in the past month.¹⁹ Seventeen percent of these

women (ages 11 to 17) reported the need for substance abuse treatment - more than any other age group. An additional 24 percent of this age group reported problems with withdrawal from pain medications, which was almost 4 times as high as those over age twenty-five (at about 6 percent).²⁰

To identify and treat the problem of substance abuse among pregnant women, the Kentucky Division of Substance Abuse, in conjunction with the Kentucky Department for Public Health, has launched a program under the KIDS NOW initiative. The program was designed to increase the number of pregnant women in Kentucky who receive screening, referral, prevention and treatment services for substance use during pregnancy. Also, Kentucky is the only state in the nation currently providing a Medicaid benefit that covers substance abuse prevention, as well as, treatment services for pregnant women and women who are up to 60 days postpartum.²¹

Substance Abuse among Adolescents

Substance abuse is not limited to the adult population. By the end of eighth grade, 37 percent of adolescents have tried an illicit drug, and by twelfth grade, more than half (56 percent) have done so.²² In Kentucky, drug abuse treatment cases for youth up to 17 years old, seen within the Community Mental Health Centers increased from 547 cases in 2000 to 712 cases in 2001. (Fig. 4) Illicit drug use tends to be higher among male adolescents. However, differences in the prevalence of heavy drinking



SOURCE: Kentucky Department for Mental Health/ Mental Retardation and UK Research & Data Management Center, 2000 - 2001

between males and females have been diminishing, and amphetamine use is slightly higher among females.²³

Alcohol is the most commonly used psychoactive substance during adolescence. Its use is associated with serious social consequences such as motor vehicle crashes, injuries, fighting, crime, and even death.²⁴ Heavy, episodic drinking or binge drinking, in which five or more drinks are consumed on one occasion, increases the likelihood of negative outcomes. In 1999 in Kentucky, half of all high school students (48 percent of female students and 52 percent of male students) reported drinking in the previous 30 days. Thirty-seven percent of Kentucky youth reported binge drinking in the prior month and 24 percent reported using marijuana. Another 18 percent reported having sniffed or inhaled intoxicating substances.²⁵ Current drinking and

binge drinking increases significantly between grade 9 and 12 for both male and female students.²⁶

The Oxycontin Epidemic

Substance abuse is not limited to alcohol and illegal drugs. Illicit use of prescription narcotics is a growing social problem gaining more of the public spotlight. Specifically, the illegal use of Oxycontin, a prescription narcotic derived from opium, has reached epidemic proportions nationwide. Eastern Kentucky, in particular, has been hard hit by this dangerous trend. Between 1998 and 2000, the number of clients being treated for an addiction to Oxycontin within Kentucky's community mental health system increased 163 percent.²⁷ In February 2001, Governor Patton announced the formation of a statewide task force to address this severe problem.²⁸

NOTES

¹ Kentucky Coalition for Women and Substance Abuse Services, Briefing Folder, October, 2000.

² Kentucky Department for Mental Health and Mental Retardation Services, *Kentucky Needs Assessment Project*, 1999.

³ Kentucky Department for Mental Health and Mental Retardation Services, *Kentucky Needs Assessment Project*, 1999.

⁴ Alayne White, UK Center on Women and Substance Abuse.

⁵ CSAT, Practical Approaches in the Treatment of Women who Abuse Alcohol and Other Drugs, 1994.

⁶ Welfare Reform, Substance Use, and Mental Health, Rukmalie, Jayakody, Sheldon Danziger, Harold Pollack, *Journal of Health Politics, Policy, and Law*, August 2000.

⁷ Substance Abuse and Child Welfare: Clear Linkages and Promising Responses, Joseph Semidei, Laura Feig Radel, Catherine Nolan, *Child Welfare League of America*, 2001.

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¹² Missed Opportunity: National Survey of Primary Care Physicians and Patients on Substance Abuse (<http://www.casacolumbia.org/publications>).

¹³ Alayne White, UK Center on Women and Substance Abuse.

¹⁴ Alayne White, UK Center on Women and Substance Abuse.

¹⁵ Kentucky Coalition for Women and Substance Abuse Services, Briefing Folder, October, 2000.

¹⁶ Good Samaritan County Health Profile, 1997.

¹⁷ National Vital Statistics Reports, 2001.

¹⁸ Wolf, James, et.al., *Substance Use and Need for Treatment Among Women of Childbearing Age*. Prepared for the Center on Substance Abuse Treatment, University of Kentucky Center on Drug and Alcohol Research, April 1998.

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²⁰ Substance Use and the Need for Treatment Among Women of Child-bearing Age, University of Kentucky, Center on Drug and Alcohol Research, 1997.

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²³ Monitoring the Future: National Survey Results on Drug Use, NIDA, 1999.

²⁴ National Institute on Alcohol Abuse and Alcoholism. Ninth special report to the U.S. Congress on alcohol and health. Secretary of

Health and Human Services. Bethesda, Maryland: National Institutes of Health (NIH Publication No. 97-4017), June 1997.

²⁵ CDC – YBRFSS Risk Behaviors on Adolescent Health, Kentucky Profile, 1999.

²⁶ CDC – YBRFSS Risk Behaviors on Adolescent Health – Alcohol Use, 2000.

²⁷ Community Mental Health Center Client and Event Data, University of Kentucky, Research and Data Management Center, 2001.

²⁸ Governor Patton Announced Oxycontin Task Force (<http://gov.state.ky.us/pressreleases/2001/oxytaskf.htm>).

Violence Against Kentucky Women

Research findings and the experience of the health and justice systems in Kentucky over the past decades have documented the negative physical and mental health outcomes for women victimized by rape, domestic violence and stalking. The evidence compels health and mental health professionals to look beyond the criminal justice label and address the critical needs of victims in clinics and hospitals across Kentucky.

The Incidence of Violence Against Women

Historically, domestic violence and sexual assault have been viewed as a criminal justice or social problem, not as an area of concern for health and mental health professionals. Research and clinical experience of the past decade, however, have highlighted the negative physical and mental health outcomes for women who are victimized by these most intimate types of crimes. If one is to assess the welfare of Kentucky's women and the factors which directly impact their health and mental health status, the crimes of domestic violence, rape, and stalking must be considered.

Crimes of violence against women are, in part, so insidious because of their extensive nature. In the most recent national survey on the topic, the

National Violence Against Women Survey (NVAW) found that approximately 52 percent of women surveyed reported being physically assaulted and almost 18 percent reported being victims of rape or attempted rape at some point during their lifetime.¹ The survey also found that in the 12 months preceding the survey, almost 2 million women were physically assaulted and 302,091 women were victims of forcible rape. The NVAW survey findings also paint a picture of who poses the greatest threat to women, documenting that the majority of violence against women is perpetrated by intimate partners. Specifically, the majority of women responding to the survey said it was an intimate partner who had raped (62 percent), physically assaulted (72 percent), or stalked (60 percent) them after they turned eighteen years of age.^{2,3} (Fig. 1)

Violence Against Women - Crime of Gender

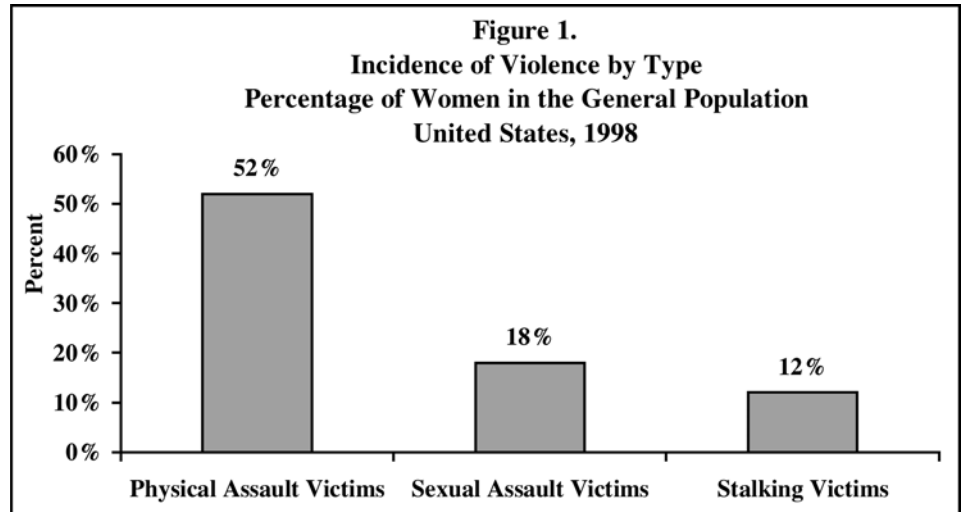
Domestic violence is a crime of violence, yet the literature documents it is also a crime of gender. In 1996, violence by an intimate partner accounted for 21 percent of the violent crime against women compared to 2 percent for men.⁴ The 1996 National Crime Victimization Survey revealed that three out of every four victims of intimate

partner murder were female.⁵ Similarly, among murder victims for every age group, females are much more likely than males to have been murdered by an intimate partner.⁶ The survey also documents gender differences for violence experiences and severity, including:

- *Rate of Violence:* Lifetime rates of physical assault by intimate are higher for women (25%) than men (7.6%);
- *Frequency of Assault:* Of intimate violence victims, women average 6.9 assaults and men average 4.4 assaults;
- *Injury Severity:* Women experience more chronic and injurious violence than do men, with 41.5 percent of women and 19.9 percent of men being injured during most recently experienced physical assault

The Danger of Violence Against Women

At its most extreme, violence against a woman can take her life, making appropriate response to these crimes much more pressing. Studies show that women are more likely to be killed by their male intimate partners than by any other type of perpetrator.^{7, 8, 9} Partner homicides of women are typically preceded by a history of physical and other domestic



SOURCE: Tjaden & Thoennes, 1998

abuse and often involve a recent attempt or completion of separation by the woman from the relationship.^{10, 11, 12} The Bureau of Justice Statistics National Crime Victimization Survey reports the following about domestic violence victims.¹³ (Fig. 2)

The Consequences of Violence Against Women

Domestic violence and sexual assault are directly linked to a number of negative physical and mental health consequences for female victims. The NVAW survey found that women physically assaulted by an intimate had been assaulted an average of almost seven times, and approximately 1 in 3 women sexually and/or physically assaulted since age 18 reported being physically injured during their most recent assault.¹⁴ In a hospital

Figure 2. Facts about Domestic Violence Victims

- Nearly 30 percent of all female homicide victims were killed by their husbands, former husbands or boyfriends;
- Just over three percent of male homicide victims were known to have been killed by their wives, former wives, or girlfriends;
- The rate of intimate-offender attacks on women separated from their husbands was about three times higher than that of divorced women and about 25 times higher than that of married women.

SOURCE: Greenfield, L.A., Rand, M.R., Craven, D., Flaus, P.A., Perkins, C.A., Ringel, C., Warchol, G., Maston, C., & Fox, J.A. (1998). *Violence by intimates: Analysis of data on crimes by current or former spouses, boyfriends, and girlfriends* (NCJ -167237). Washington, D.C.: Department of Justice, Bureau of Justice Statistics

emergency room study, more than one third of women seeking emergency medical care for violence-related injuries had been injured by a current or former spouse.¹⁵

The degree to which women suffer physical health complaints resulting from partner violence is related to the nature of abuse: as the frequency and severity increase, women are more likely to report an array of physical health problems.^{16, 17} Additionally, when asked directly, women often attribute physical health problems to the physical and psychological abuse they suffer at the hands of their partners.¹⁸ Research has identified risk factors for physical injury in rape victims: assaults during which the offender was drinking, having children witness the assault, experiencing previous violence by the same partner, fearing one's life was in danger, and experiencing high levels of emotional abuse, were all related to increased risk of both minor and severe injuries.¹⁹ With evidence of the wide ranging impact of violence on every facet of a women's life, studies have now shown that chronic pain, miscarriage, irritable bowel syndrome, and psychosomatic and somatic complaints have all been associated with victimization.^{20, 21, 22} Research also makes clear the association of domestic or sexual abuse and substance use and abuse for women.^{23, 24, 25, 26, 27}

Within the last decade, child advocates and domestic violence experts have begun to recognize the impact domestic abuse has on children. Research from the Bureau of Justice

Statistics now suggests that children are present in 80 percent of homes where there is violence against a women. The correlation between spouse abuse and the physical or sexual abuse of children in the home is now documented to reach up to 70 percent.²⁸ Abuse of the mother usually precedes violence against the child and a positive correlation exists between the severity of abuse directed at spouses and children.^{29, 30, 31}

Violence Against Women - Mental Health Concern

Domestic violence and rape take their toll, not just on the physical health of a woman, but also on her mental health. When asked what aspect of the violence had the most damaging long-term impact, victims often reported that the psychological abuse had the most crippling effect. Not surprisingly, as a result, depression has been found to be a primary mental health response for women who are victims of battering.^{32, 33} Depression was the strongest indicator of domestic violence for women seeking medical care at a family practice medical center in one study. Additional studies show that as the form and severity of abuse increases, depressive symptoms also increase.^{34, 35} Several studies have also linked stalking victimization to depression, sleeplessness, anxiety, anger, intense stress and symptoms of trauma.^{36, 37, 38} The high incidence of abuse sequelae in mental health populations has lead professionals to recommend screening of clients for victimization history and training for mental health providers.³⁹

In addition to depression, trauma reactions are a common mental health sequelae associated with intimate victimization. A growing body of research indicates that women victimized by rape, stalking, or domestic violence, frequently present symptoms which are characteristic of Post-Traumatic Stress Disorder (PTSD).^{40, 41, 42, 43, 44} The likelihood of developing PTSD has been found to increase when stressors are experienced under conditions of perceived life threat, injury, and a great deal of force, all of which are characteristic of domestic abuse and sexual assault cases.⁴⁵

Violence Against Women - Workplace Concern

Violence occurs in all employment settings and impacts countless employees each year in Kentucky. Although the majority of domestic violence is perpetrated in the secrecy of the home, offenders also stalk, harass, and harm their partners where they work. Sexual offenses also occur in the workplace or are perpetrated by colleagues of public employees. While Kentucky boasts a comprehensive network of resources aimed at protecting victims and holding offenders accountable, these crimes continue to pose a threat for many victims and public employees.

According to the National Victim Center, domestic violence crimes cost America over \$5 billion per year in medical expenditures, employee turnover, and lost productivity and up to 96 percent of employed victims have experienced some type of work

related problem due to domestic violence.^{46, 47} Additionally, up to 85 percent of victims often find themselves restrained from working due to environmental controls placed on them by an offender, including limited access to transportation or sleep deprivation.⁴⁸ In a recent study by the Bureau of Labor Statistics, 30 percent of women who died in the workplace lost their lives to homicide, a number three times greater than the number of men dying by the same means.⁴⁹ Rape has the highest annual tangible and intangible victim cost at \$127 billion per year and each incident has been estimated to cost a victim approximately \$87,000 in lost productivity, medical and mental health care costs, property loss/damage, and quality of life.⁵⁰ Additionally, the National Violence Against Women Survey reported that 26 percent of stalking victims said their victimization caused them to lose time from work.⁵¹



SOURCE: The Governor's Office on Child Abuse and Domestic Violence Services 2001

In order to address the incidence and impact of violence against women in the workplace, in August 2001, the Governor and First Lady of Kentucky implemented an Executive Branch Policy on Domestic Violence and Sexual Assault in the Workplace. (Fig. 3) The policy has three important components:

1. Zero Tolerance for Domestic Violence and Sexual Assault:

The Commonwealth of Kentucky is committed to a workplace in which domestic violence and sexual assault are neither tolerated nor excused. Any employee who misuses state resources to perpetrate domestic violence or sexual assault in any form including physical assault, rape, stalking and threats to harm at or from the workplace will be subject to disciplinary action up to and including dismissal. This includes both face-to-face interaction and the use of workplace resources such as phones, fax machines, e-mail, mail or other means. If the perpetrator’s job position provides access to certain types of identifying or confidential information and said information is used to harm a victim, the employee shall be subject to corrective or disciplinary action.

2. Creating Safety for Victims of Domestic Violence and Sexual Assault:

The Executive Branch is committed to providing a sensitive and safe workplace for victims of sexual assault or domestic violence. Guidelines will be provided to supervisors and employees to aid in preparing responses when a victim discloses abuse and to

ensure access to needed resources for protection and support. Additionally, all reasonable efforts will be made to assist victims who need time off for medical appointments, legal assistance, court appearances, relocation or to make other arrangements for their personal safety. Victims will not be discriminated against with respect to their employment because they are a victim of domestic violence or sexual assault.

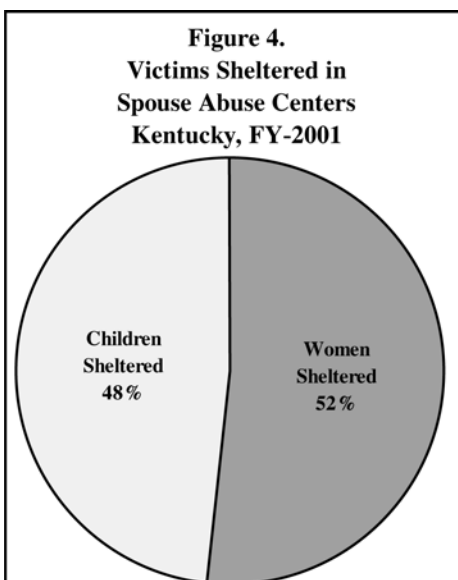
3. Safe and Productive Workplaces for All Employees:

Recognizing the impact of domestic violence and sexual assault on the workplace, the Commonwealth of Kentucky will undertake efforts to raise the awareness of all employees to these crimes. The Commonwealth will post resource information in buildings and on agency web sites related to the Executive Branch policy and resources available for assistance when needed.

Kentucky Data On Rape and Domestic Violence

One of the primary resources for victims of domestic violence across Kentucky is the state’s network of battered women’s shelters. During FY 2001, 2,146 women sought shelter from domestic abuse through one of these programs, bringing with them 2,007 children. An additional, 20,531 women were served through the outreach or non-residential services of these domestic violence programs. (Fig. 4)

A similar advocacy and services network exists for sexual assault victims through



SOURCE: Kentucky Domestic Violence Association

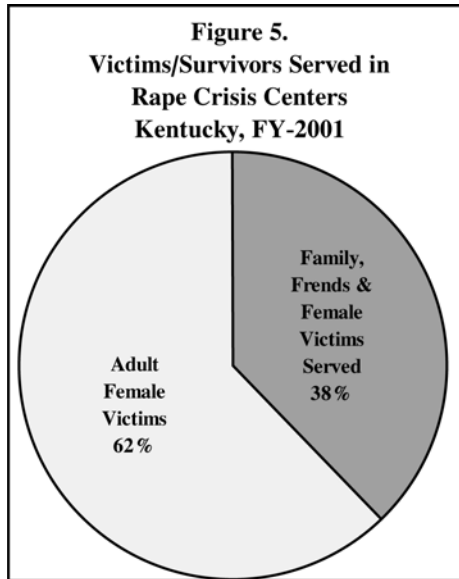
Rape Crisis Centers. During FY 2001, 4,384 adult female victims and survivors were served through Rape Centers. An additional 2,648 family members and friends of victims were served during the same period. (Fig. 5)

In 1984, the Kentucky General Assembly passed the Domestic Violence and Abuse Act in order to afford victims of domestic violence with an additional source of civil protection from violence. During 2001, over 29,000



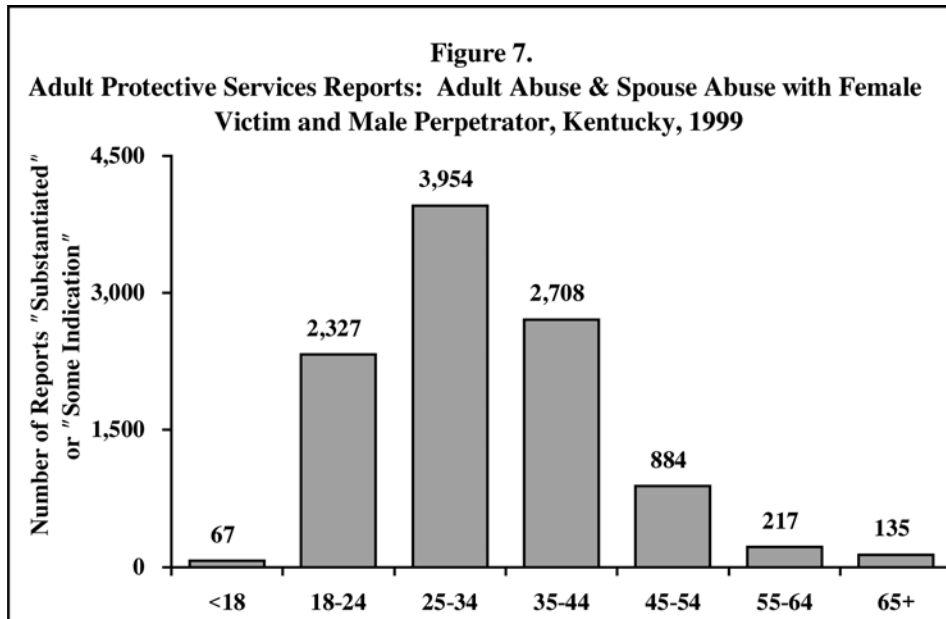
SOURCE: Kentucky Administrative Office of the Courts

petitions for domestic violence orders were issued by Kentucky courts to protect victims and their children. (Fig. 6)



SOURCE: Kentucky Department for Mental Health/Mental Retardation Services

Kentucky law requires anyone who knows or suspects spouse abuse to initiate a report to the Cabinet for Families and Children. Such reports are intended to afford victims and their families an additional resource of protection, and provide an understanding regarding the incidence of this crime in the Commonwealth. In FY 99, over 22,000 reports of adult abuse (including all ages and genders) were made to the Cabinet for Families and Children. Over 10,000 of these



SOURCE: Kentucky Cabinet for Families and Children. Analysis courtesy of the Intimate Partner Violence Surveillance Project, University of Kentucky

**Figure 8.
Sexual and Domestic Violence
Related Assault Provisions
in Kentucky Law**

- A certification program for mental health professionals who provide court-ordered domestic violence offender treatment
- Certification program for nurses who conduct forensic rape exams
- The consideration of domestic violence as custody and visitation decisions are made by courts
- The development of prosecution policies for domestic violence crimes
- Mandatory domestic violence training for criminal justice, health and mental health professionals.

SOURCE: Governor's Office on Child Abuse and Domestic Violence Services, 2001

cases consisted of adult & spouse abuse with a female victim and male perpetrator. (Fig. 7)

The History of Reform in Kentucky

Ensuring that crimes involving violence against women receive fair treatment under the law has not been easy to accomplish nationally or in Kentucky. Over the last 15 years, however, significant reforms have been accomplished. Like all other states, Kentucky implemented a stalking law in the 1990s as a means of protecting domestic violence and sexual assault victims. Additionally, the 1990 General Assembly passed marital rape legislation. Enhanced penalties for repeated domestic violence-related assaults, special conditions of bond upon the release of sexual and domestic violence offenders, arrest for misdemeanor domestic violence assaults without a warrant, and other provisions have been

incorporated into Kentucky law. (Fig. 8)

In 1994, the attempt by every state to address crimes of violence against women was significantly enhanced by passage of the National Violence Against Women Act (VAWA). One of the key tenants of the 1994 Act provides for the full enforcement of domestic violence protective orders across state lines. In 1996, the Kentucky General Assembly passed legislation codifying the provisions of federal law. Kentucky's efforts to implement the full faith and credit provisions of VAWA were also facilitated through a special grant provided by the U.S. Attorney General's Office through which Kentucky served as a model laboratory. The grant, called *Project Interface*, made key progress. In July of 1998, a second full faith and credit grant was awarded to Kentucky, which is currently being reviewed by the U.S. Department of Justice.

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Rural Women's Health

Nationally, one in three women in the United States resides in a rural area.¹ In Kentucky, over one in two women reside in a rural area. With over 80 percent of Kentucky's 120 counties being classified as rural and the majority of Kentucky's women living in rural communities (Fig. 1), it is important that we discuss the unique health challenges facing rural women. (see Appendix D for listing of rural counties)

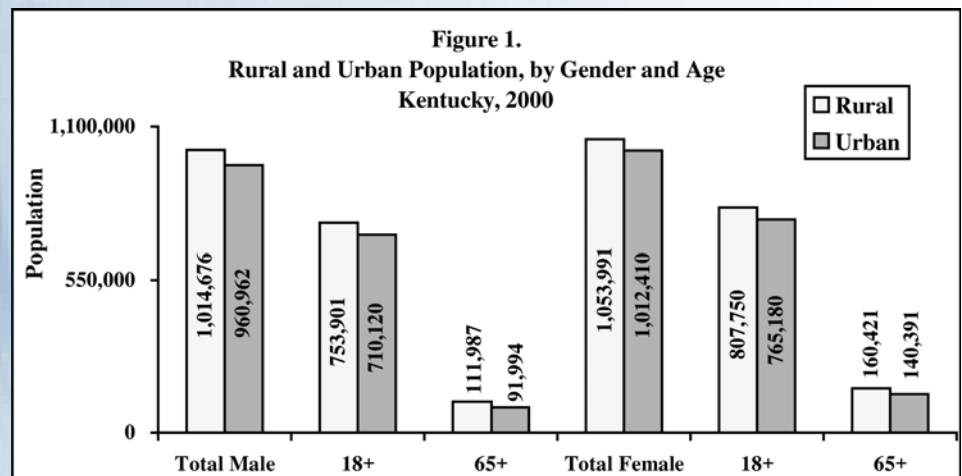
Rural and urban residence is an important variable in determining a woman's health and economic status. Comparing rural and urban women in regard to access to health care, rates of uninsured, behavioral health risks, morbidity, and mortality, helps assess the disparities between these two groups. Kentucky, while rich in its rural heritage, must address the inequities and focus on improving the health status of all its women, particularly the

most vulnerable women residing in rural areas.

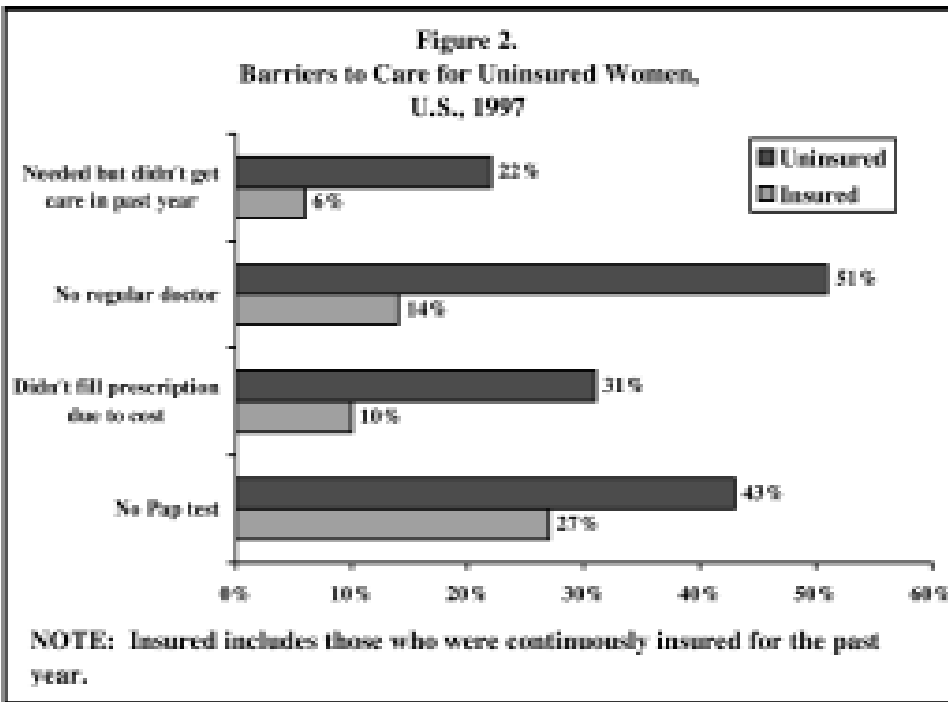
Access to Care

Access to care includes access to, and the affordability of, appropriate health care services. Many times, it refers to access to health insurance, as well as, access to hospitals and trained health care professionals. Access to health insurance coverage is a significant factor in determining a woman's decision to seek regular and preventive health care. Women without insurance often do not seek needed care and will forego costly prescriptions. (Fig. 2) Employer-based health insurance is, by far, the largest source of insurance coverage for Kentucky women between the ages of 19 and 64. (Fig. 3) The second leading insurer of women in Kentucky is Medicaid.

Women, traditionally, have comprised the majority of



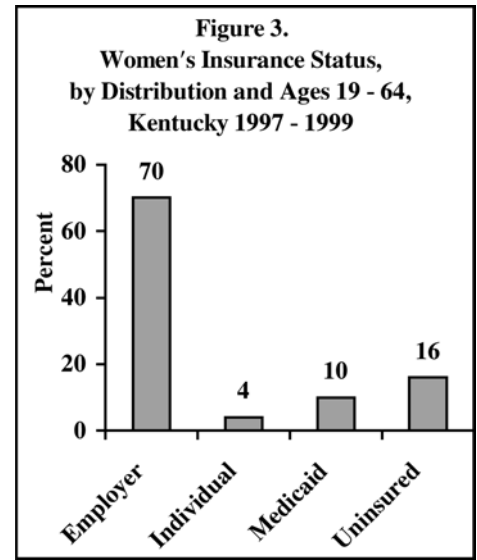
SOURCE: Kentucky Population and Housing Data, 2000 Census



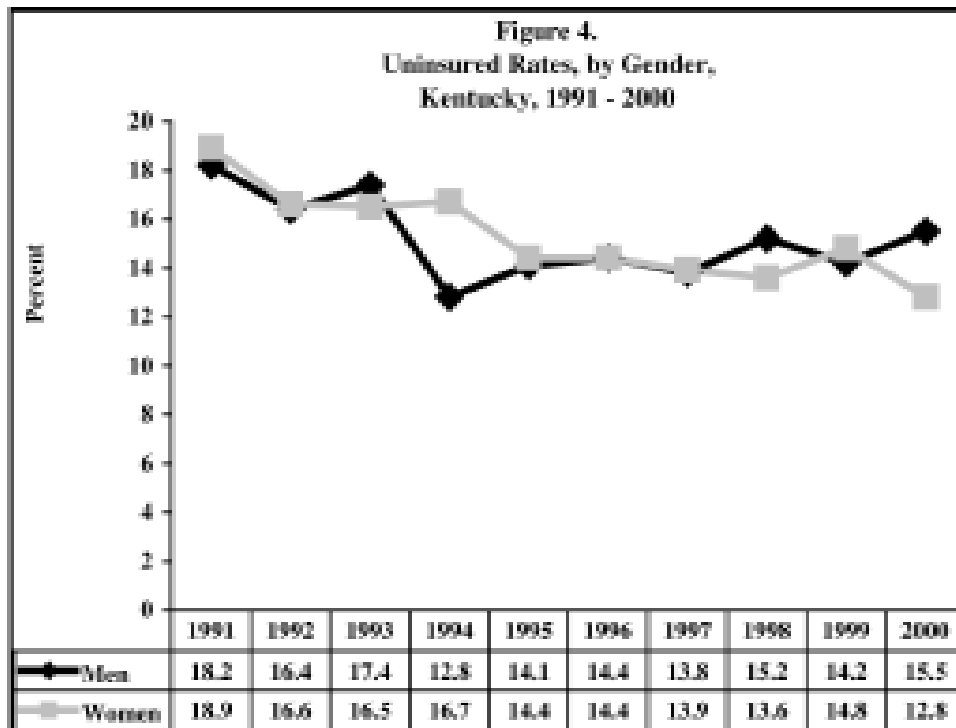
SOURCE: Centers for Disease Control and Prevention, BRFSS, 2000

public funding for health care (primarily through the Medicaid program), thus they have lower rates of uninsurance than men. For Kentucky, the CDC reports that the overall rate of uninsured women and men has been declining since the early 1990s, having dropped from 19 percent in 1991 to 13 percent in 2000. (Fig. 4) According to Kentucky BRFSS data,

insurance coverage among Kentuckians varied significantly by region, with a greater prevalence of lack of health care coverage in Eastern Kentucky, which is predominately rural. The Kentucky River district had the highest rate with 26.6 percent of the population lacking insurance coverage, versus a low of 7.4 percent in North Central Kentucky.² (Fig. 5)

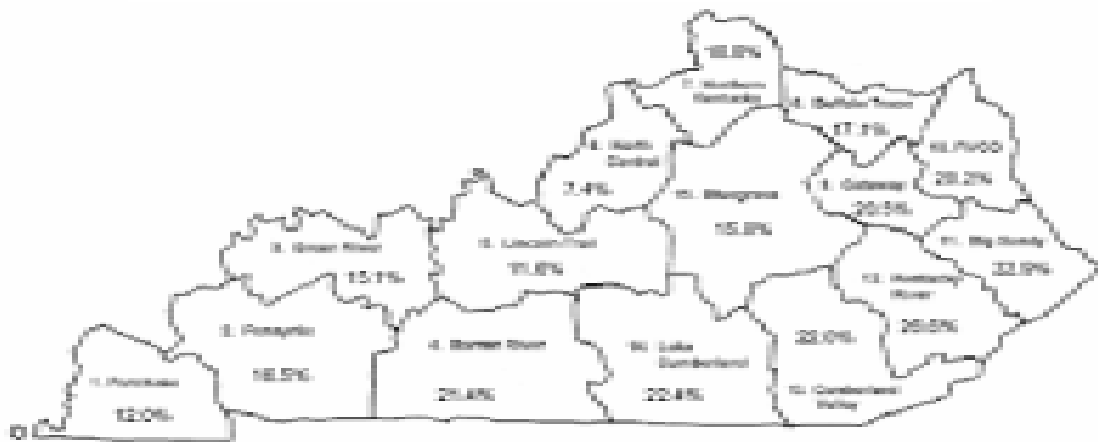


SOURCE: Kaiser Family Foundation, State Health Facts Online, "Distribution of Women 19-64 by Insurance Status, 1997 - 1999"



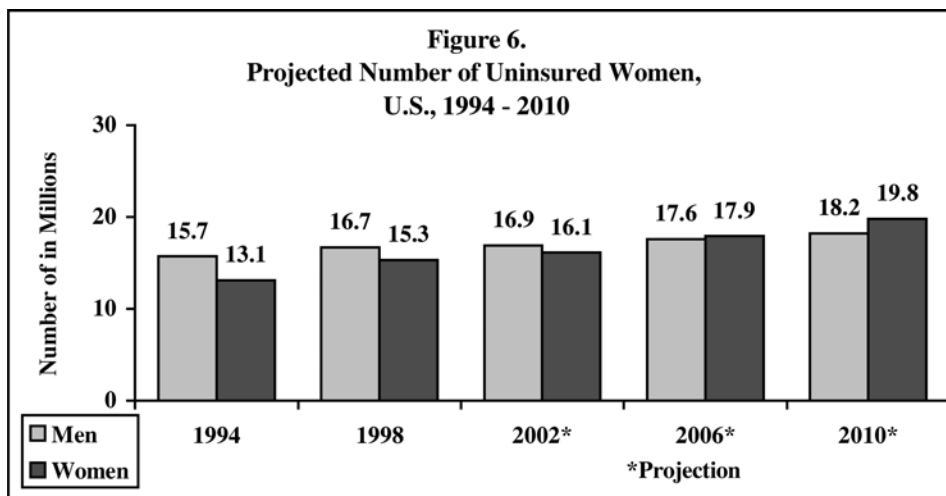
SOURCE: Centers for Disease Control and Prevention, BRFSS, 2000

Figure 5.
Prevalence of Lack of Healthcare Coverage, Adult Men and Women,
Kentucky Behavioral Risk Factor Surveillance System
Area Development District Averages, 1997-1999



SOURCE: Kentucky Department for Public Health, "Kentucky Health Behavior Trends: 1997 - 1999"

Figure 6.
Projected Number of Uninsured Women,
U.S., 1994 - 2010

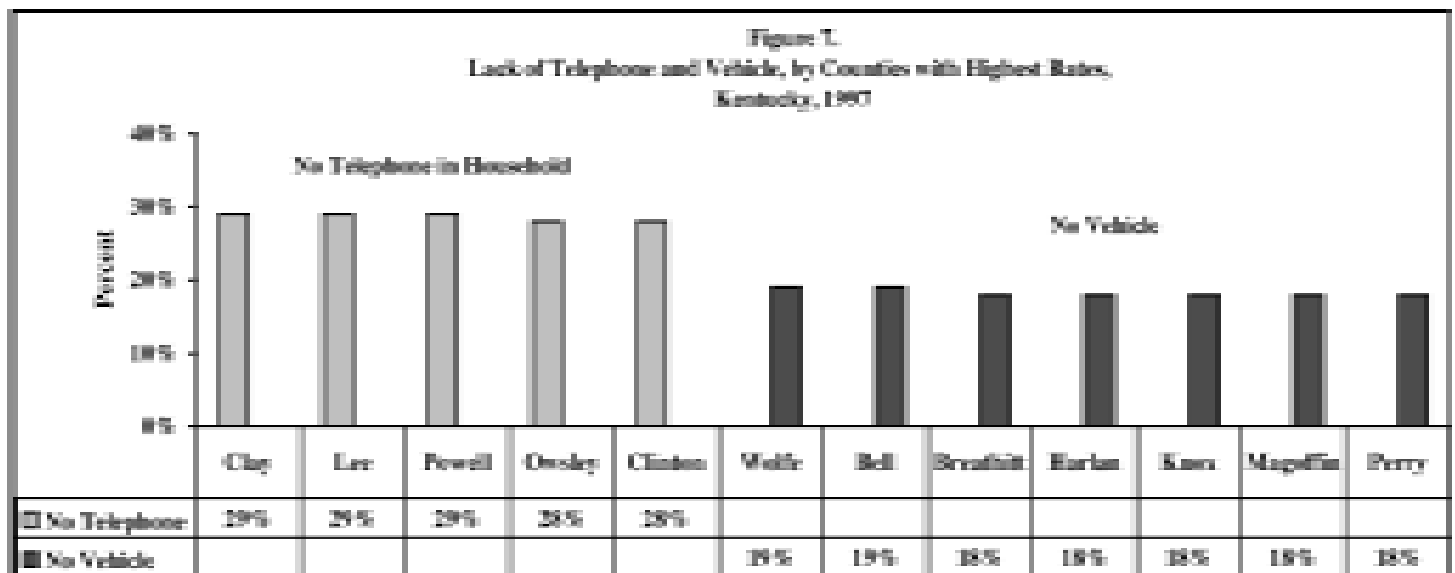


SOURCE: Commonwealth Fund Task Force on the Future of Health Insurance Analysis of March Current Population Survey from 1995 - 2000

Nationally, the pattern of insurance coverage is changing. According to The Commonwealth Fund, should coverage trends continue, the number of uninsured women may actually surpass the number of uninsured men in less than five years.³ (Fig. 6)

For many women in rural Kentucky, access also includes having transportation to the appropriate health care provider, a telephone to call and make an appointment and having adequate child care arrangements. A study con-

Figure 7.
Lack of Telephone and Vehicle, by Counties with Highest Rates,
Kentucky, 1997



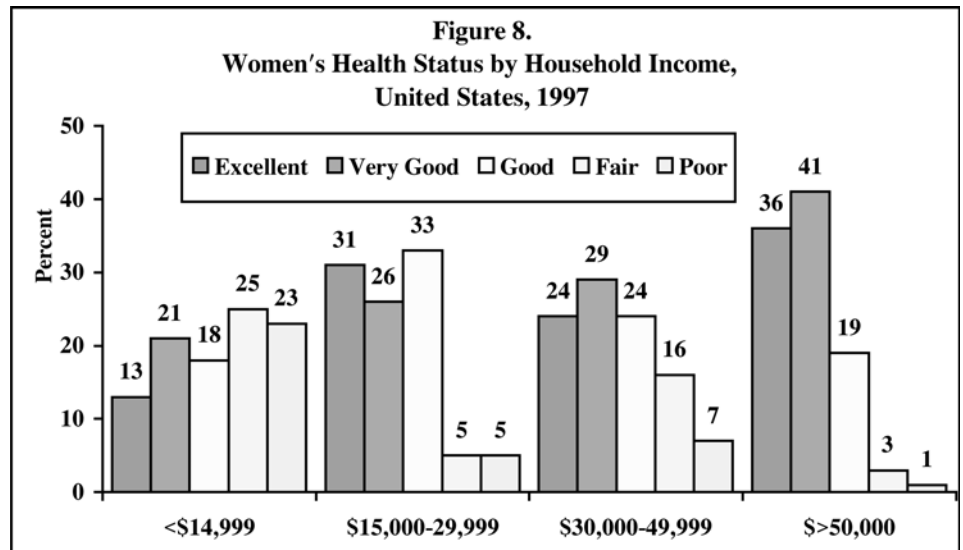
SOURCE: University of Kentucky Chandler Medical Center, Center for Rural Health, Funded by the Good Samaritan Foundation, Based on 1997 County Health Profiles

ducted in 1997, by the University of Kentucky Center for Rural Health, found that in some rural counties, approximately 29 percent of households had no telephone and 19 percent had no vehicle. (Fig. 7)

Socioeconomic Status of Rural Women

While rural residents must often deal with geographical barriers to health care, they also tend to consist disproportionately of elderly people, people with lower incomes and more poverty, low educational levels and higher rates of uninsured, all factors that correlate with a poorer health status. These factors also influence the socioeconomic status (SES) of women in rural regions of the state. SES, which refers to an individual's or family's relative economic and social ranking,⁴ is a powerful predictor of health status throughout the lifespan. Women are more likely than men to be of lower SES.⁵

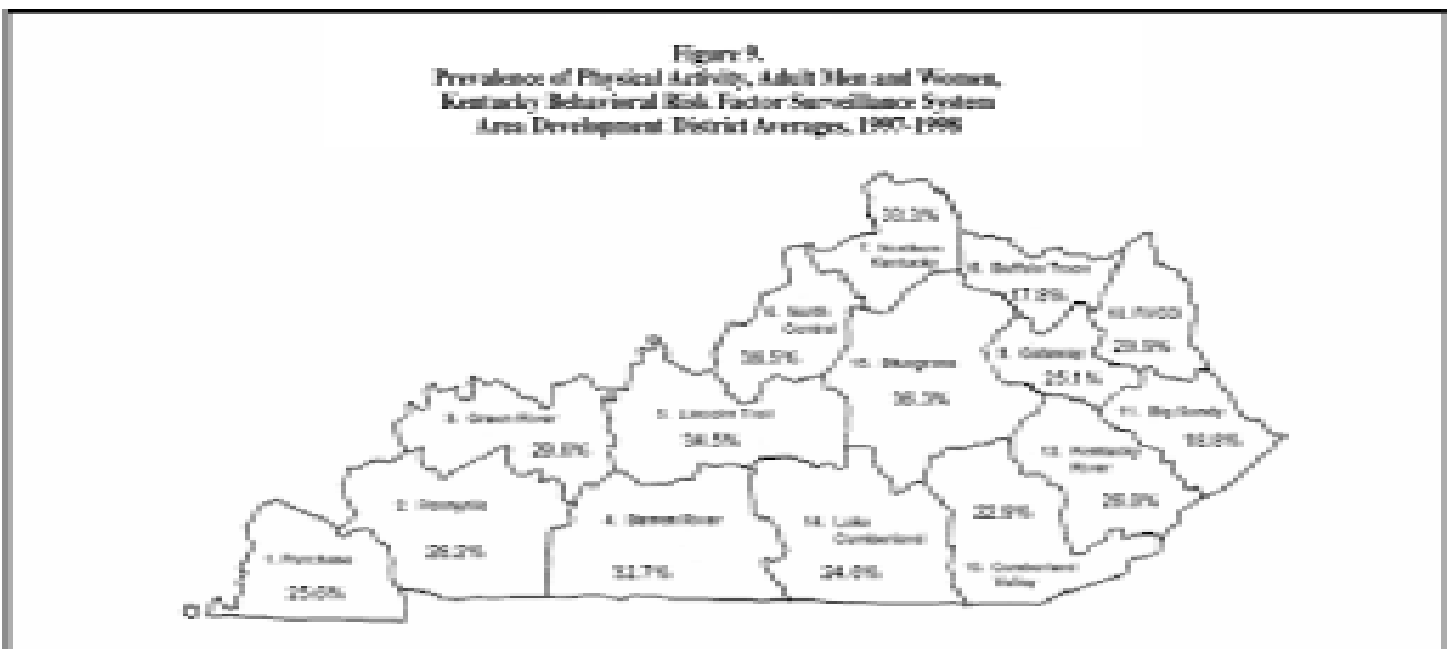
Kentucky women in rural areas are especially challenged



SOURCE: University of Kentucky, Center for Health Services Management and Research Policy Brief, "Kentucky Women's Health: Data from the 1997 Kentucky Health Survey," November 1998, Vol. 1/Issue 2

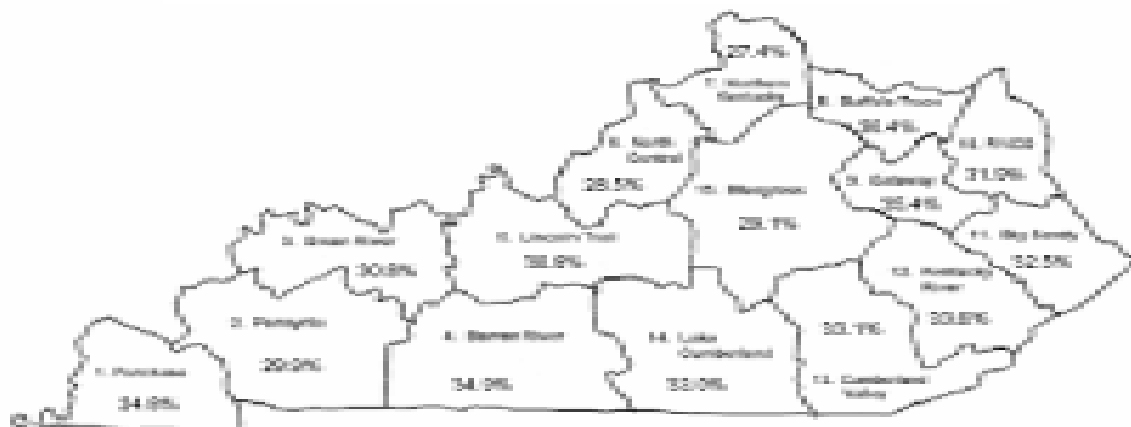
by their lack of access to high-wage earning employment. The majority of women with household incomes less than \$15,000 annually report having fair to poor health. Conversely, the majority of women in Kentucky with annual household incomes of greater than \$50,000, report their health status as very good to excellent. (Fig. 8)

A key indicator to a low SES is living at or below federally designated poverty levels. More women and children in rural Kentucky live at or below



SOURCE: Kentucky Department for Public Health, "Kentucky Health Behavior Trends: 1997 - 1999"

Figure 10.
Prevalence of Current Smokers, Adult Men and Women,
Kentucky Behavioral Risk Factor Surveillance System
Area Development District Averages, 1997-1999



SOURCE: Kentucky Department for Public Health, "Kentucky Health Behavior Trends: 1997 - 1999"

poverty, particularly in the East and Southeastern regions of the state. Overall, Kentucky ranked eighth nationally in 1996 for the percent of children living at or below poverty, at a rate of 25.5 percent.⁶

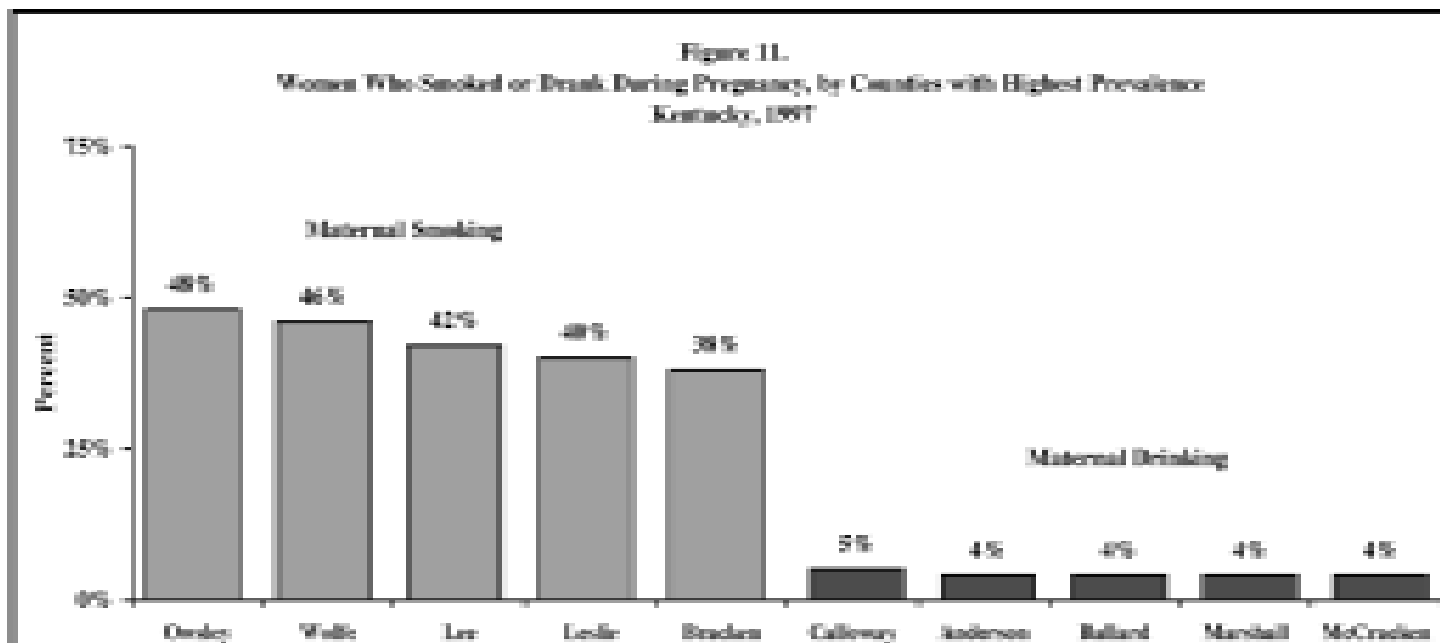
Low-income women (those with family incomes below 200 percent of poverty) are disadvantaged in their access to health insurance coverage. They are much less likely than higher-income women to have job-based coverage, more likely to be uninsured and more

reliant on public sources of coverage.⁷

Behavioral Risk Factors in Rural Kentucky

While insurance status affects one's access to regular and preventive health care services, it does not necessarily improve one's behavioral risks affecting health status, such as smoking, sedentary lifestyle and poor nutrition. These negative behavioral risk factors tend to be more prevalent in rural portions of the state

Figure 11.
Women Who Smoked or Drank During Pregnancy, by Counties with Highest Prevalence
Kentucky, 1997



SOURCE: University of Kentucky Chandler Medical Center, Center for Rural Health, Funded by the Good Samaritan Foundation, Based on 1997 County Health Profiles

than urban. Rates of physical activity are lowest in the East and Southeast portions of the state, versus the highest rates in Central and Northern Kentucky.⁸ (Fig. 9) Smoking, the number one preventable cause of death, is high in all counties in Kentucky, yet it is more prevalent in rural South and Eastern Kentucky.⁹ (Fig. 10)

Smoking during pregnancy is another behavioral risk factor that affects not only the health of the mother, but also the developing fetus. With overall smoking rates highest in the most rural regions of Kentucky, it is no surprise that smoking during pregnancy is also highest in these regions. The county with the highest reported prevalence of maternal smoking was Owlsey, with nearly half of all pregnant women smoking in 1997. Drinking during pregnancy, though less prevalent, is also a significant risk factor for

both mother and baby. Calloway county in Western Kentucky had the highest reported prevalence of maternal drinking at five percent. (Fig. 11)

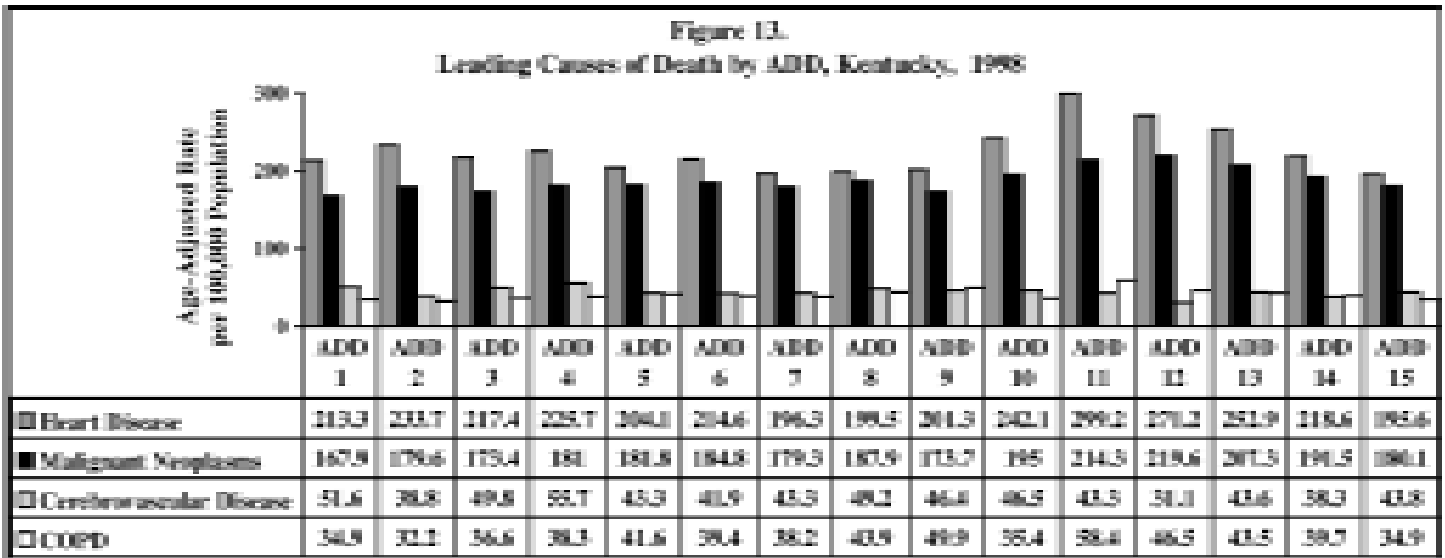
Chronic Disease in Rural Kentucky

Negative behavioral risk factors contribute to increased morbidity and mortality rates for chronic diseases, particularly in rural areas of the state where negative behavioral risk factors are highest. Hospitalizations are one measure of morbidity in which we can compare rural and urban utilization. Excluding obstetric care admissions, the three leading causes for hospitalizations (as defined by Diagnostic Related Groups-DRG) for all women in Kentucky in 2000 was heart failure and shock, COPD, and pneumonia. (Fig. 12)

Figure 12:
Top Ten DRG's for Females, by Rural/Urban, Kentucky, 2000

Clinical - DRG (Ranked by DRG Number)	Service Area		Grand Total
	Rural Counties Total Cases	Urban Counties Total Cases	
088 - Chronic Obstructive Pulmonary Disease	6,967 (11.8%)	3,095 (7.6%)	9,598 (9.9%)
089 - Simple Pneumonia & Pleurisy, Age > 17 with complications	3,957 (10.7%)	2,984 (7.7%)	6,941 (9.2%)
127 - Heart Failure & Shock	6,134 (11.0%)	3,541 (8.7%)	9,672 (10.0%)
149 - Chest Pain	2,957 (5.3%)	2,326 (5.7%)	5,283 (5.4%)
182 - Epilepsy, GI, Miscellaneous Digestive Disease, Age > 17 with complications	3,648 (6.9%)	2,404 (5.9%)	6,244 (6.5%)
289 - Major Joint/Link Reattachment Procedure, lower extremity	2,368 (4.2%)	2,121 (5.2%)	4,489 (4.6%)
589 - Uteral Adhes Procedure for non-malignant without complications	4,677 (8.4%)	3,466 (8.5%)	8,143 (8.4%)
571 - Cesarean Section without complications	4,954 (8.9%)	4,125 (10.1%)	9,079 (9.4%)
573 - Vaginal Delivery without complicated diagnoses	14,816 (25.0%)	13,401 (31.8%)	27,417 (28.3%)
438 - Psychoses	4,583 (8.2%)	3,401 (8.7%)	7,984 (8.2%)
Total Cases	55,927 (100%)	40,862 (100%)	96,789 (100%)

SOURCE: Kentucky Department for Public Health, Health Policy Development Branch, 2000 Hospital Discharge File

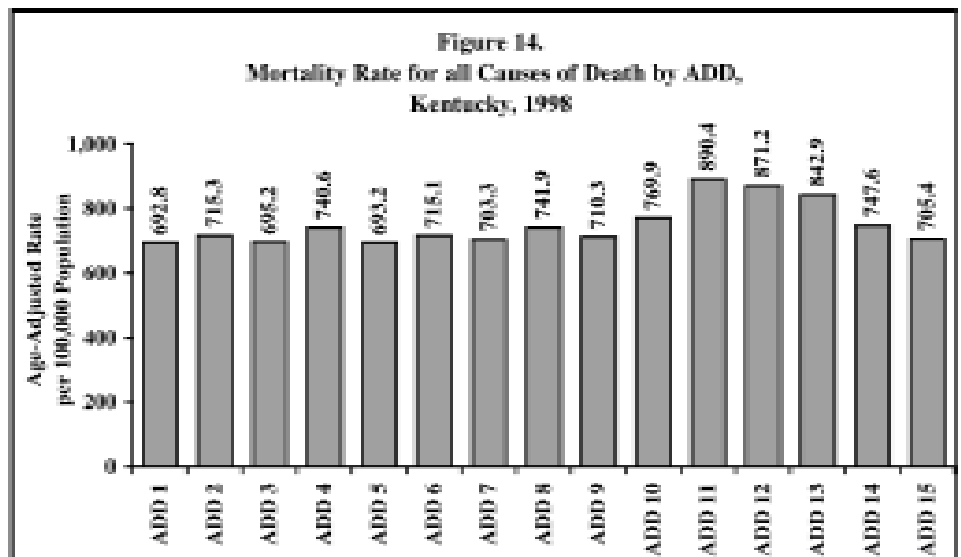


SOURCE: Kentucky Department for Public Health, Health Data and Surveillance Branch, 1998 Kentucky Annual Vital Statistics Report
*ADD listing included in Appendix D

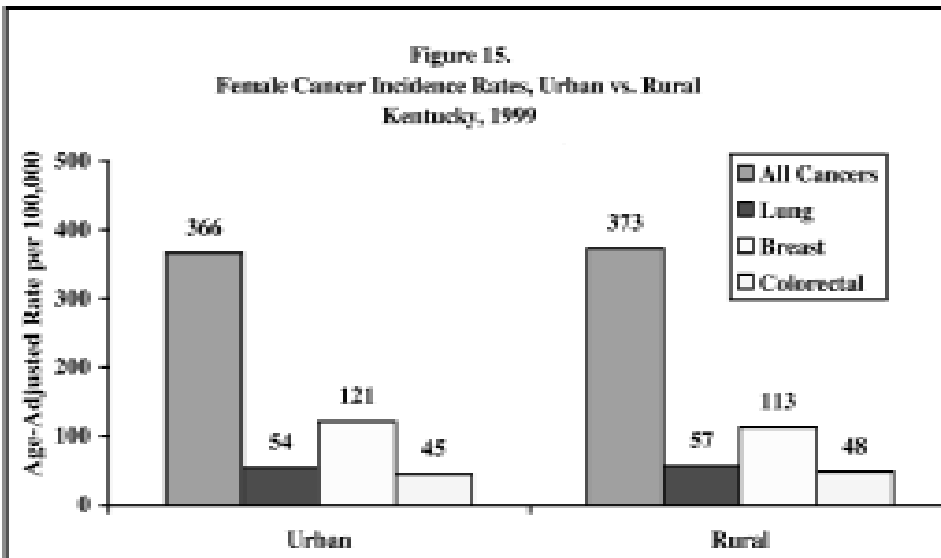
While the percentage of hospitalizations by most DRGs was consistent among both rural and urban women, accounting for approximately the same percentage of total hospitalizations for each group, a disparity existed between rural and urban women hospitalized for COPD, pneumonia, and heart failure. In 2000, 11.6 percent of rural women versus 7.6 percent of urban women were hospitalized for COPD and 10.7 and 7.3 percent of rural and urban women respectively, were hospitalized for pneumonia. Heart failure and

shock accounted for 11 percent of rural women's hospitalizations and 8.7 percent of urban women's. Not surprisingly, these conditions are highly correlated to behavioral risk factors, such as smoking and sedentary lifestyle, which tend to be more prevalent among rural women.

Another discrepancy was found among hospitalizations for a vaginal delivery without complications. Fewer rural women are hospitalized with this diagnosis than their urban counterpart (25 versus 38 percent, respectively).



Source: Kentucky Department for Public Health, Health Data and Surveillance Branch, 1998 Kentucky Annual Vital Statistics Report
*ADD listing included in Appendix D



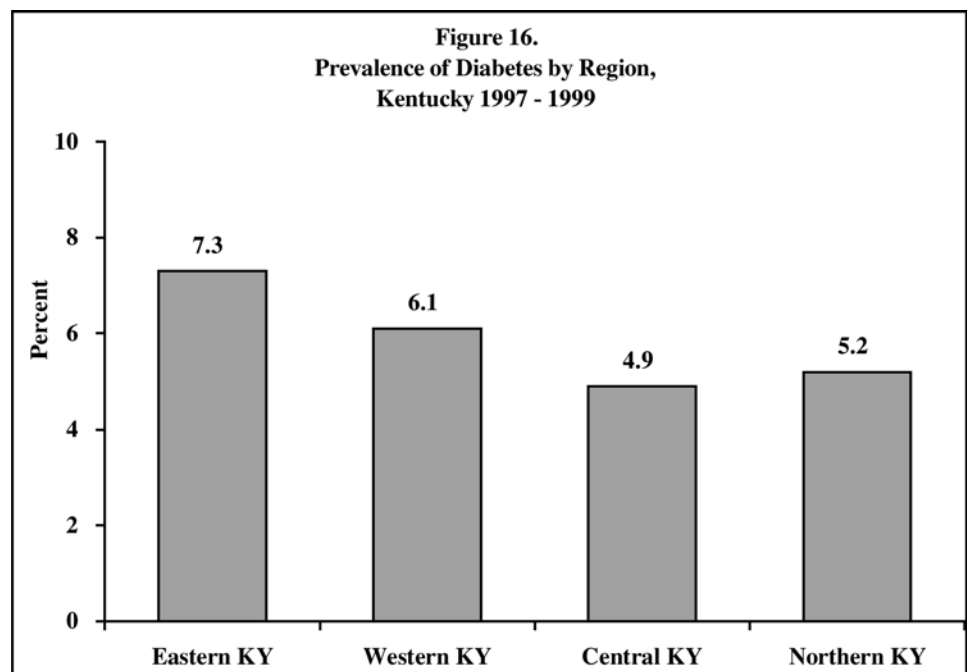
SOURCE: Kentucky Cancer Registry, 1999

Rural residents (both men and women) tend to suffer disproportionately from chronic diseases such as heart disease, cancer and diabetes. In 1998, ADDs 11, 12 and 13, in rural Eastern Kentucky had the highest reported rates of death due to heart disease and cancer than all other districts in the state. (Fig. 13) (Refer to Appendix D for ADD listing) Mortality rates for all causes were also highest in these ADDs for 1998. The highest mortality rate was in ADD 11 at 890.4 deaths per 100,000 population. The lowest overall mortality rate was for ADD 1 in far Western Kentucky at 692.8 deaths per 100,000 population.¹⁰ (Fig. 14)

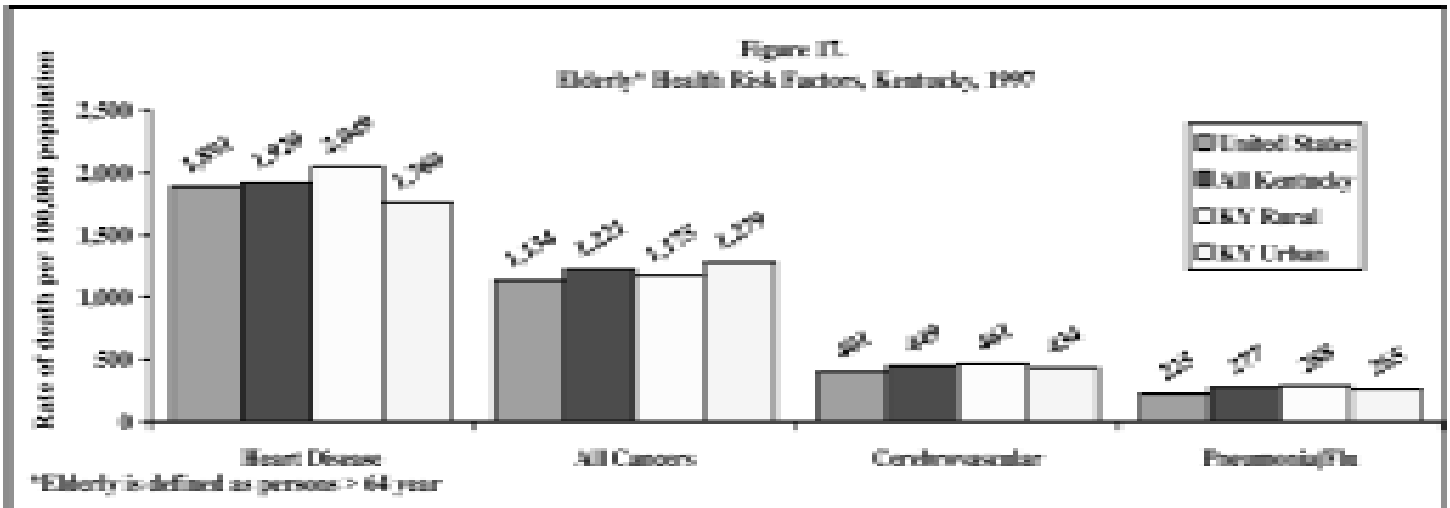
Female cancer incidence is also higher in rural Kentucky than urban. (Fig. 15) Rural Kentucky has an overall cancer rate of 373 cases per 100,000 population in 1999, versus 366 for urban Kentucky.¹¹ Lung cancer, the leading cancer killer, was also higher in rural areas than urban, with an incidence of 57 cases per 100,000 population in rural Kentucky versus 54 in urban Kentucky. Breast cancer is the only leading female cancer that is more prevalent in

urban Kentucky than rural, with an urban incidence rate of 121 cases per 100,000 versus 113 for rural Kentucky.

Diabetes rates in Kentucky are also highest in the more rural areas of the state. Eastern Kentucky had the highest diabetes prevalence rate at 7.3 percent (averaged from 1997 – 1999), versus the lowest rate of 4.9 percent in Central Kentucky, which is predominately urban. (Fig. 16)



SOURCE: Centers for Disease Control and Prevention, Kentucky Behavioral Risk Factor Surveillance System (BRFSS), 1997 - 1999

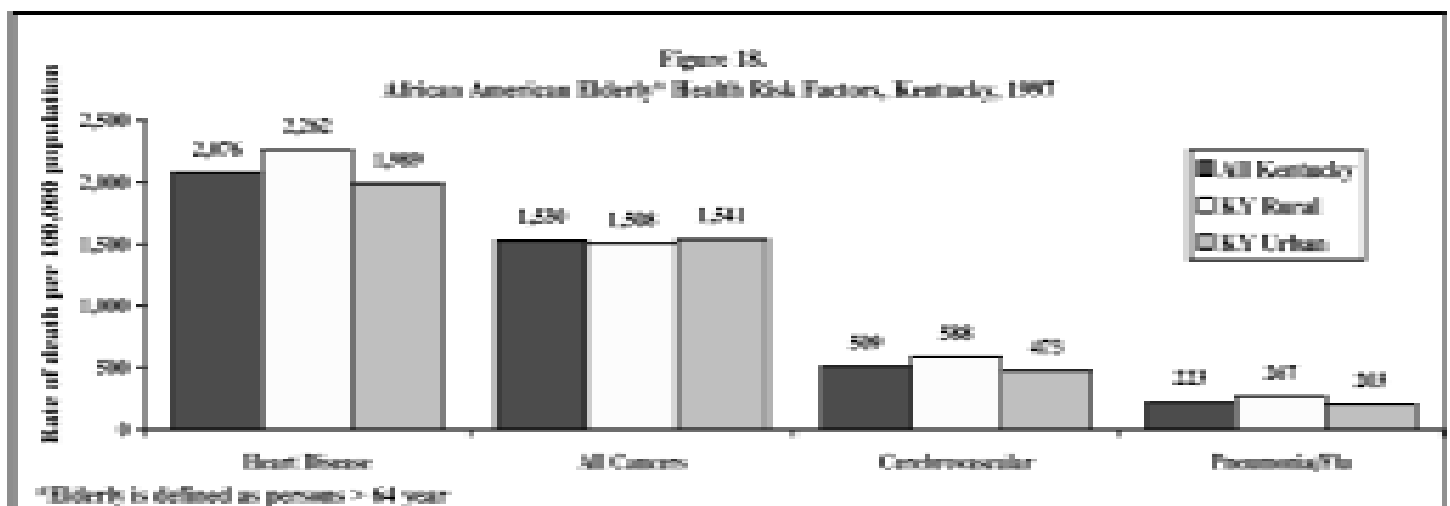


SOURCE: University of Kentucky Chandler Medical Center, Center for Rural Health, Funded by the Good Samaritan Foundation, Based on 1997 County Health Profiles

Elderly Health Risks: Rural and Urban

The elderly are a vulnerable population in general, but elderly in rural areas tend to suffer more from certain health risks than their urban counterparts. Heart disease, which is higher in rural Kentucky overall, is also higher among rural elderly than the elderly statewide, in urban areas, and in the U.S. overall. The elderly in rural Kentucky also suffer more from cerebrovascular disease and pneumonia/flu.¹² (Fig. 17) This is particularly true among the minority elderly residing in

rural areas. Their risks for selected diseases is higher than the elderly population overall. (Fig. 18)



SOURCE: University of Kentucky Chandler Medical Center, Center for Rural Health, Funded by the Good Samaritan Foundation, Based on 1997 County Health Profiles

NOTES

¹ American Psychological Association Report *“Executive Summary of the Behavioral Health Care Needs of Rural Women”*, (<http://www.apa.org/rural/ruralwomen.pdf>).

² “Kentucky Health Behavior Trends: 1997 – 1999”, Kentucky Department for Public Health, Surveillance and Health Data Branch.

³ Commonwealth Fund Task Force on the Future of Health Insurance, Analysis of March Current Population Survey from 1995 - 2000.

⁴ Gale Encyclopedia of Childhood and Adolescence, *Socioeconomic Status (SES)*, http://www.findarticles.com/cf_dls/g2602/0004/2602000491/p1/article.html.

⁵ Marianne Legato, M.D., *“The Changing Position of Women in the Medical Marketplace,”* Columbia University Health Care Forum: The Future Health Care Consumer, Françoise Simon and Lothar Krinke.

⁶ US Dept of Commerce, Bureau of the Census, *Poverty in the United States: 1996*. September 1997: 60-198.

⁷ *“Falling Through the Cracks: Health Insurance Coverage of Low-Income Women,”* The Kaiser Family Foundation, February 2001.

⁸ Kentucky Health Behavior Trends: 1997 – 1999”, Kentucky Department for Public Health, Surveillance and Health Data Branch.

⁹ Ibid.

¹⁰ Kentucky Department for Public Health, *1998 Kentucky Annual Vital Statistics Report*.

¹¹ Kentucky Cancer Registry, *1999 Kentucky Cancer Incidence Report*.

¹² University of Kentucky Chandler Medical Center, Center for Rural Health, Funded by the Good Samaritan Foundation, Based on *1997 County Health Profiles*.

AIDS Among Kentucky Women

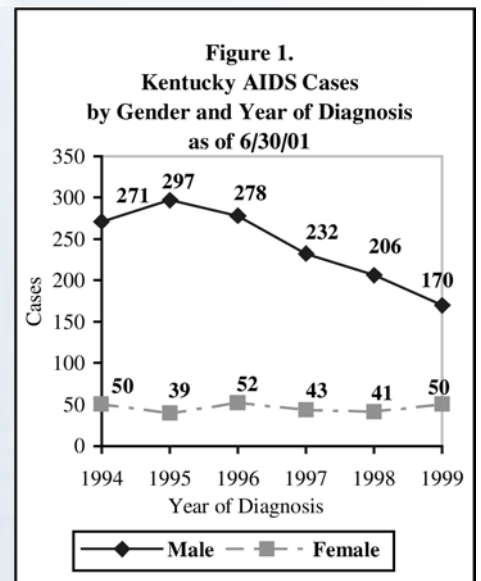
Acquired Immune Deficiency Syndrome (AIDS) is the most severe phase of infection with the Human Immunodeficiency Virus (HIV). People infected with HIV have AIDS when they have certain opportunistic infections or when their CD4+ cell count drops below 200. AIDS remains a serious public health problem in Kentucky. As of June 30, 2001, there have been 3,481 Kentuckians reported with AIDS of which 1,774 are still living. The total number of females reported with AIDS in Kentucky is 458 and of these 275 are still living.

WOMEN AND THE EPIDEMIC

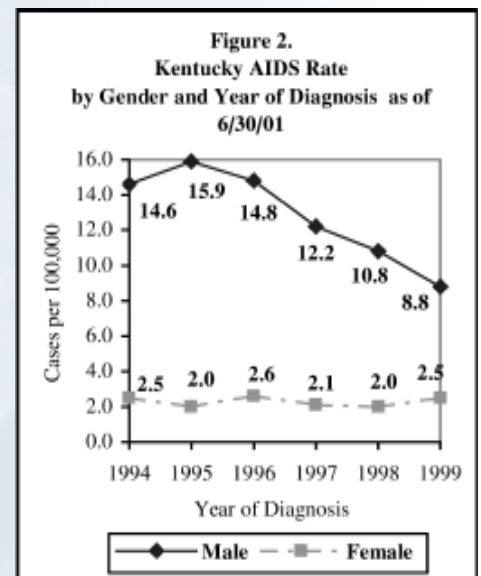
Advances in antiretroviral therapies and treatments for opportunistic infections, which were introduced in 1996, have reduced AIDS incidence and deaths among Kentuckians. Women in Kentucky, however, have not benefited at the same rate as men. While the number of new AIDS cases diagnosed among males decreased 42 percent from 297 cases in 1995 to 170 cases in 1999, the number of new AIDS cases diagnosed among females remained relatively constant throughout the same time period. (Fig. 1) Similarly, a slower decline is observed in the estimated number of AIDS deaths among women compared to men. Estimated AIDS deaths among

Kentucky males declined 71 percent from 1995 to 1999 while only declining 33 percent among Kentucky females during the same time period.

The average male AIDS rate is approximately 6 times higher than the average female



SOURCE: Department for Public Health – HIV/AIDS Branch

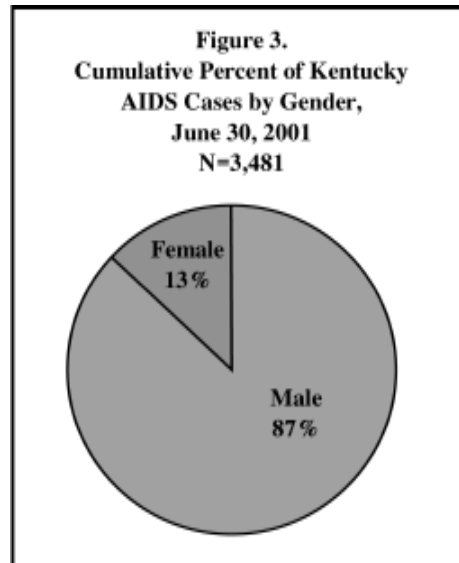


SOURCE: Department for Public Health – HIV/AIDS Branch

rate. However, the percentage of female AIDS cases has increased in recent years. (Fig. 2) Approximately 87 percent of all Kentucky AIDS cases reported are male. (Fig. 3)

Women account for a growing number of newly diagnosed AIDS cases each year. The proportion of AIDS cases among women has increased from 6 percent in 1985 to 23 percent in 1999. (Fig. 4)

Compared to other states, Kentucky ranked 33rd in the number of female AIDS cases reported per 100,000 population, with an incidence rate of 2.4 per 100,000 for the year 2000. (Fig. 5)



SOURCE: Department for Public Health – HIV/AIDS Branch

AGE

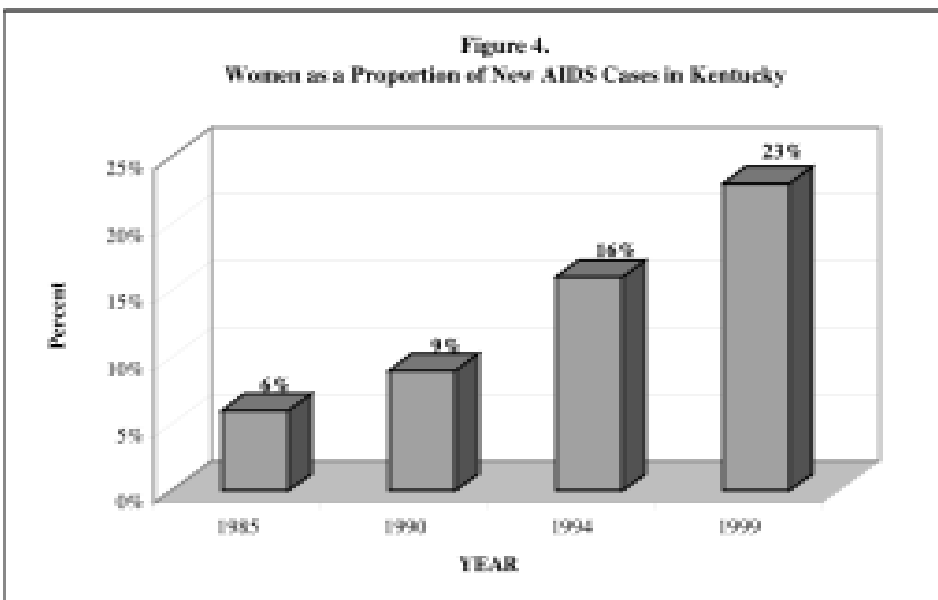
The majority of female AIDS cases in Kentucky, 44 percent, are diagnosed in their thirties. The median time from HIV infection to

Figure 5.
Female AIDS Rate per 100,000
A Comparison of Kentucky to Other States
Year of Report 2000

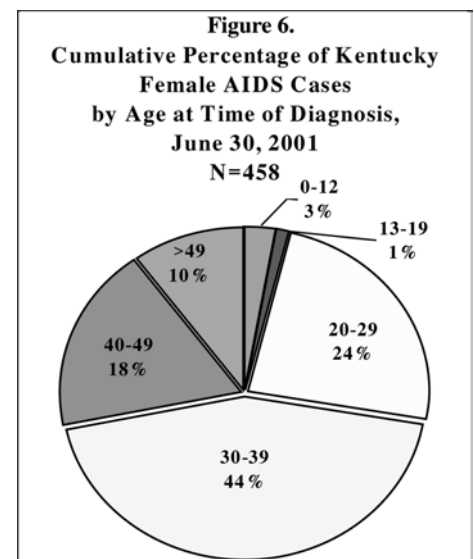
Rank	State Name	Rate
1	District of Columbia	87.8
2	New York	23.4
3	Florida	21.3
4	Maryland	20.2
5	Delaware	19.4
*	*	*
*	*	*
33	Kentucky	2.4

U.S. Rate = 8.7

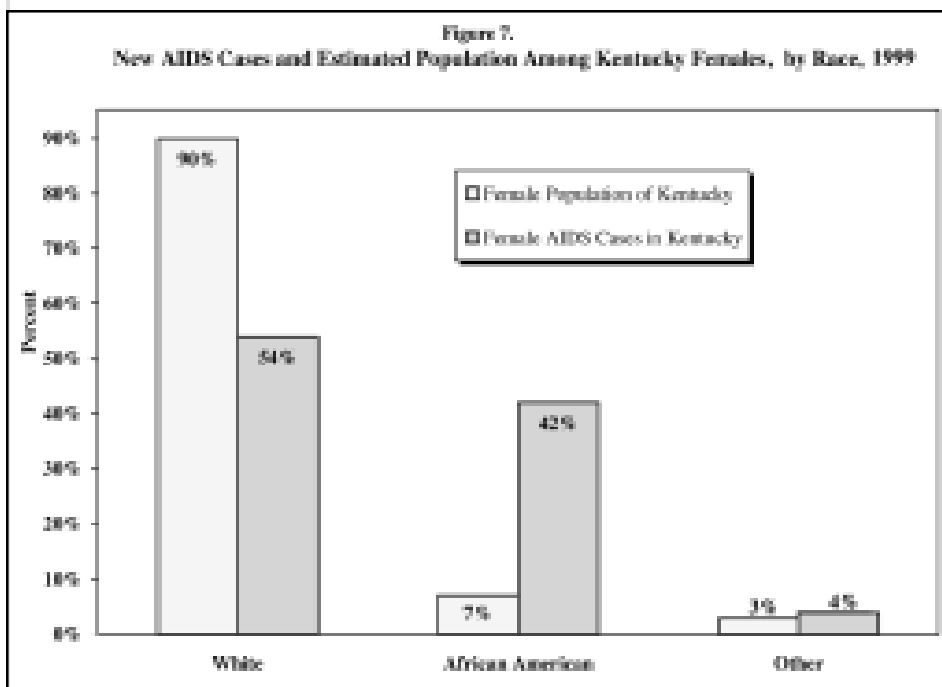
SOURCE: CDC, HIV/AIDS Surveillance Report, Year-End Edition, 2000, (No. 2):12



SOURCE: Department for Public Health – HIV/AIDS Branch



SOURCE: Department for Public Health – HIV/AIDS Branch

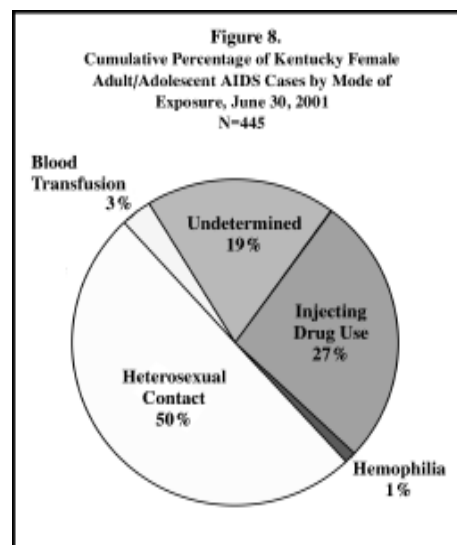


SOURCE: Department for Public Health – HIV/AIDS Branch

AIDS progression is ten years so many of these cases may have become HIV infected in their twenties. The next highest percentage of female AIDS cases is among adults in their twenties at 24 percent, followed by adults in their forties at 18 percent. (Fig. 6)

RACE

The majority of female AIDS cases in Kentucky, 52 percent, are White



SOURCE: Department for Public Health – HIV/AIDS Branch

however, African-American women have been disproportionately affected by the AIDS epidemic in Kentucky. For example, in 1999 African Americans comprised 7 percent of the total female population in Kentucky yet accounted for 42 percent of the newly diagnosed AIDS cases among all women in that year. (Fig. 7) This disparity is most clearly seen in the AIDS case rate. In 1999 the AIDS case rate for African-American women in Kentucky was 13.9 per 100,000 population compared to a case rate of 0.8 per 100,000 population for women of White and other Non-White races. The AIDS rate for African-American women is approximately 17 times higher than that for women of White and other Non-White races.

MODE OF EXPOSURE

HIV is transmitted to women by three primary routes: sexual, parenteral (blood-borne) and perinatal (from mother to child). HIV cannot be transmitted through casual contact such as hugging or shaking hands, surface contact such as using public restrooms, or from insect bites.

Sexual Transmission

HIV is transmitted more efficiently from men to women than from women to men during sexual intercourse. Having another sexually transmitted disease (STD) can increase susceptibility to HIV infection. Among adult/adolescent Kentucky women with AIDS, sexual transmission constitutes 50 percent of reported cases as of June 30, 2001. (Fig. 8)

Parenteral Transmission

Parenteral transmission of HIV has occurred in recipients of blood and blood products through transfusions and transplants and in injecting drug users (IDU) through the sharing of needles. The number of Kentucky AIDS cases who contracted the disease through blood, blood products, and transplants has declined since 1992 due to improved screening of blood products which was initiated in 1985. The second highest mode of exposure percentage for Kentucky women reported with AIDS is IDU at 27 percent. (Fig. 8)

Perinatal Transmission

Perinatal transmission of AIDS from mother to child can occur during pregnancy, during labor and delivery, and from ingesting infected breast milk. Kentucky has had very few AIDS cases reported resulting from perinatal transmission. The greatest number of perinatal AIDS cases, 5, were diagnosed in 1996. There has been a decline in perinatal AIDS cases with only four cases having been diagnosed since 1996.

The Centers for Disease Control and Prevention, the American Academy of Pediatrics, and the Kentucky Medical Association currently support HIV testing for pregnant women. Early detection among pregnant women is important because administering treatment to the mother during pregnancy and delivery and to the child through six weeks after birth reduces the risk of HIV transmission from the mother to the infant by two-thirds.

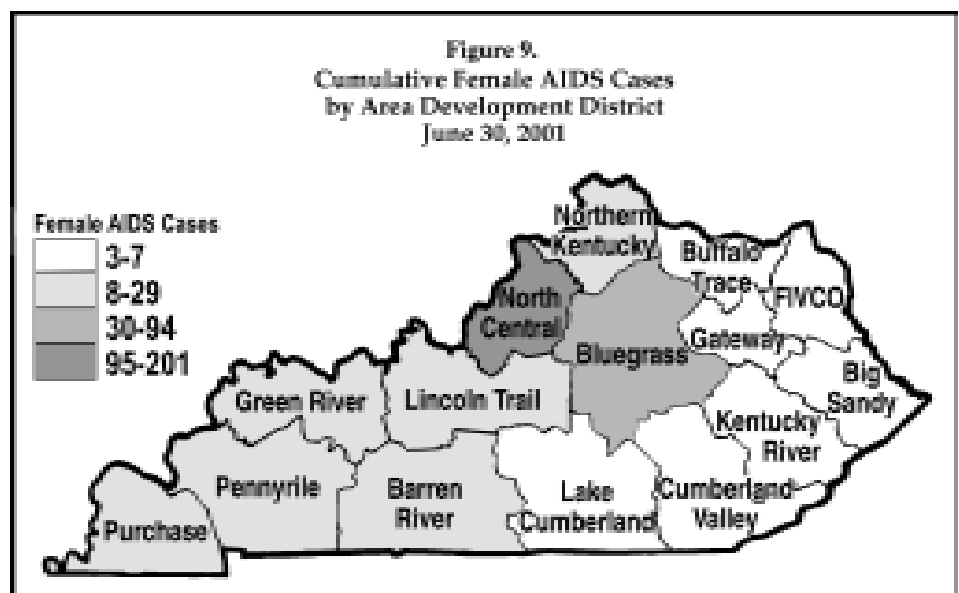
DISTRIBUTION

The impact of the AIDS epidemic among females in Kentucky is not uniformly distributed across the state. The majority of female AIDS cases, 44 percent, reported that the North Central Area Development District (ADD), which includes Louisville, was their ADD of residence at time of diagnosis. The next highest percentage, 21 percent, resided in the Bluegrass ADD, which includes Lexington, followed by Northern Kentucky at 6 percent. (Fig. 9)

CONCLUSION

In Kentucky, females represent 13 percent of the total AIDS cases reported and 16 percent of living AIDS cases. While the AIDS incidence rate for Kentucky has been declining in recent years, the incidence rate for females in the state has remained stable. Targeted prevention efforts for females especially African American females must continue. These initiatives must target women at risk for

HIV infection and must continue to encourage HIV testing among all pregnant women in order to reduce further the number of children infected with HIV through perinatal transmission.



SOURCE: Department for Public Health – HIV/AIDS Branch

Health Issues Facing the Aging Woman

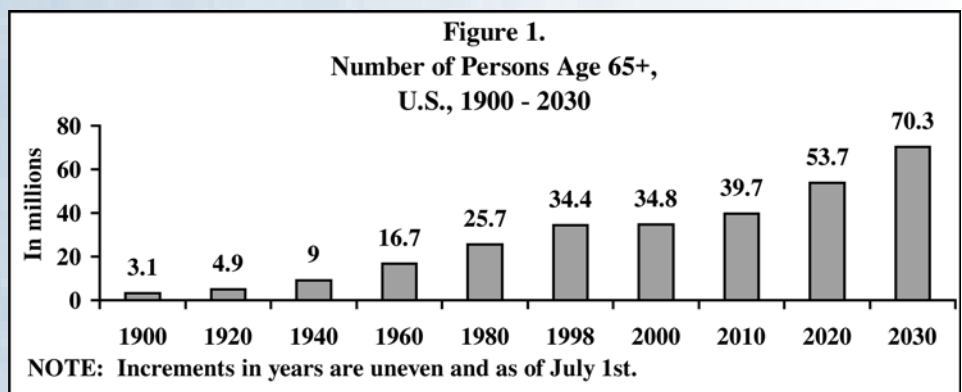
The U.S. population is aging, a phenomenon that has important and wide-ranging consequences for both social and health policy.¹ While the elderly population grows, women will be particularly affected due to the greater proportion of elderly women than men. Currently, women in the U.S. constitute 59 percent of the population over age 65 and 71 percent of the population over age 85. It is estimated that in 30 years, the 65 plus population will double and one in four American women will be over the age of 65. (Fig. 1)

As with national trends, the aging phenomenon is also occurring in Kentucky. 2000 census data indicate that 12.5 percent of Kentucky's population is 65 years of age or older. Of this population, women make up the majority at 57.8 percent. The ratio of women to men increases significantly as they grow older. In Kentucky, 73 percent of persons 85 and older are women.²

The mature and older population in Kentucky is the fastest growing segment of the total population. While Kentuckians aged 45 and over grew a modest 0.7 percent from 1980 to 1990, their rate of growth jumped to 9.6 percent from 1990 to 2000. Looking at specific age groups within this population provides a better indication of where the growth is occurring. During the 80s, the largest population growth among the 45 and up population occurred among those aged 75 and over. While this age group continued increasing as a proportion of the total population, the 45 - 54 year age group (otherwise known as "babyboomers") increased by 46.2 percent between 1990 and 2000, which is by far, the largest increase among the mature and elderly population. (Fig. 2)

Menopause

With the average female lifespan increasing from age 48 in the early 1900s to 79 by 2000, women can expect to live at



SOURCE: U.S. Census Bureau

least one-third of their lives postmenopausal. Menopause generally occurs in women between the ages of 50 to 55, sometimes earlier. Menopause has three stages: perimenopause, menopause, and postmenopause.

Perimenopause begins two to five years before menopause when the ovaries begin to produce less estrogen. During this time, menstrual cycles may become irregular, or flow may change. About 75 percent of women experience hot flashes, night sweats, vaginal dryness, and/or mood swings during perimenopause.³ (Fig. 3)

The onset of menopause is characterized by the body's continuing reduction in its production of estrogen, until finally, the menstrual cycles stop altogether. If a woman does not get a period for 6 or more months, she is probably in menopause. Postmenopause, the one to five years following menopause, is the time the body begins to experience the more damaging effects associated with estrogen loss, such as increased risk for certain diseases, including osteoporosis and heart disease.

Cardiovascular Disease Among Postmenopausal Women

Hear disease is more prevalent among postmenopausal women than younger women, and is the leading cause of

Figure 2.
Mature and Older Adult Population of Kentucky by Age 1980, 1990, & 2000

Age	1980	%	1990	%	2000	%	% Change 1980-1990	% Change 1990-2000
45-54	354,252	9.7	380,872	10.3	556,932	13.8	7.5	46.2
55-64	332,106	9.1	322,562	8.7	372,595	9.2	-2.9	15.5
65-74	248,988	6.8	267,390	7.3	273,943	6.8	7.4	2.5
75-84	125,804	3.4	151,960	4.1	172,589	4.3	20.8	13.6
85+	35,036	1.0	45,718	1.2	58,261	1.4	30.5	27.4

SOURCE: Kentucky State Data Center, 2000 Census

death among women in Kentucky and the U.S. In fact, cardiovascular disease alone outnumbers the next 16 causes of death to women combined. One in nine women aged 45 to 65 develops heart disease; this rises to one in three women after age 65.⁴ After age 50, women develop and die from heart disease at a rate equal to men.⁵ In 1999, more women than men died from heart disease in Kentucky: 7,284 female deaths versus 6,873 male deaths. The crude rate of death for women in Kentucky in 1999 was 312.9 deaths per 1,000 women, while the rate for men was 310.1. More women than men die from heart disease primarily because there are more elderly women than men. When adjusting for age, the rate of death for heart disease is higher for men than women, however the gap narrows as women age.⁶ (Fig. 4)

Another significant change that often occurs as we age is a gradual decrease in bone density. After menopause, bone loss accelerates because of the

Figure 3.
Consequences of Estrogen Loss

Symptoms (early)	Physical Changes (inter-mediate)	Diseases (later)
Hot flashes	Vaginal atrophy	Osteoporosis
Insomnia	Stress (urinary) incontinence	Cardiovascular disease
Irritability	Skin atrophy	Dementia of the Alzheimer's type
Mood Disturbances		Cancers

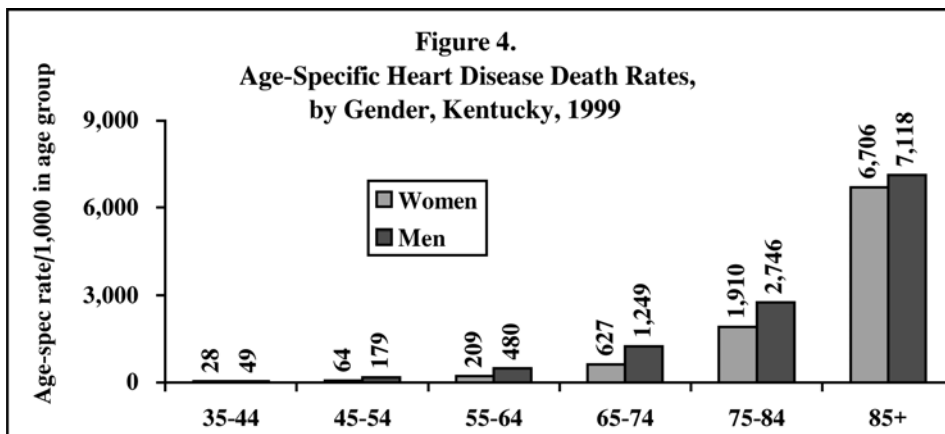
SOURCE: *Confronting Aging and Disease: Aging of Women*

decline in estrogen, which accounts for the increased number of older women affected by osteoporosis. Osteoporosis refers to the condition where the loss of bone mass and strength takes place at a very high rate, resulting in a significant increase in the risk of bone fractures.⁷

Four out of five victims of osteoporosis are women who often are not diagnosed until after a fracture occurs.⁸ Osteoporosis is responsible for 70 percent of the fractures that occur in older adults. More than 12 percent of women over 60 years of age sustain a hip fracture; 15 to 20 percent of these women die as a result of their injury.⁹

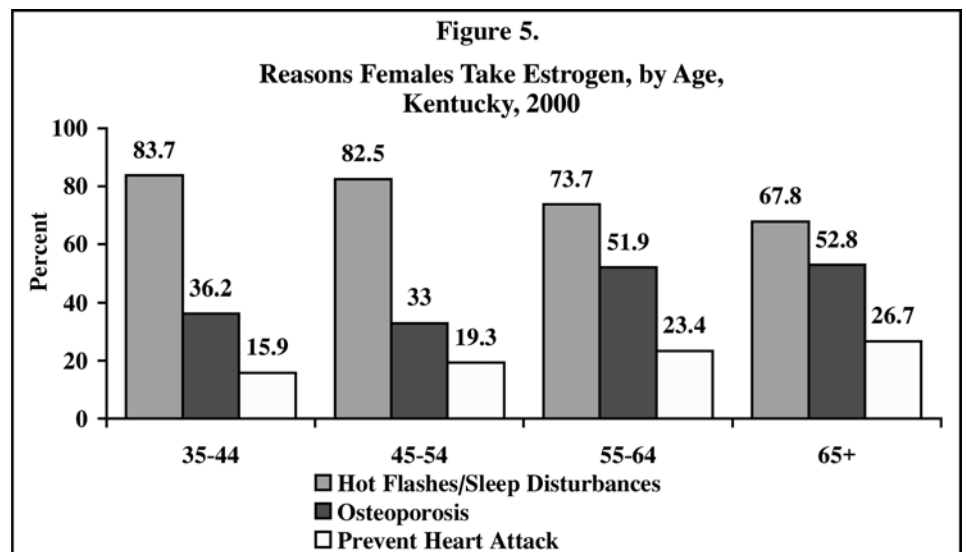
Hormone Replacement Therapy

Replacing estrogen in the postmenopausal woman has been proven effective in the treatment of not only the non-threatening physical symptoms of menopause, but also to protect some women who are at risk for more serious conditions such as heart disease and osteoporosis. Hormone Replacement Therapy (HRT) has been documented for several decades to be an effective remedy for the hot flashes and sleep disturbances that often accompany menopause. While HRT was initially used to reduce the minor discomforts, studies have provided evidence that it may prevent or reduce some of the negative long-term health effects of menopause.¹⁰ (Fig. 5)



Source: Kentucky Department for Public Health, Surveillance and Health Data Branch, 1999 Death Certificate File.

According to the 2000 BRFSS, approximately 61 percent of Kentucky women aged 35 and over, who have had a hysterectomy, or are menopausal or postmenopausal, said their doctor had discussed the benefits and risks of estrogen with them. The majority of Kentucky women over age 35 that have had a hysterectomy or



SOURCE: Kentucky BRFSS, 2000

are menopausal or postmenopausal, or are taking HRT (Fig. 6).

Although HRT has potential benefits for many menopausal and postmenopausal women, it can also have drawbacks. Concerns about HRT center on the increased risk of uterine cancer and breast cancer, especially after long-term use (more than 10 years).¹¹

Women with a family or personal history of breast cancer may be at increased risk of cancer when taking HRT. Though breast cancer is often perceived as a younger woman's issue, the majority of breast cancers are diagnosed in women over the age of 50, making increased age one of the primary risk factors.¹² (Fig. 7)

HRT may also not be appropriate for women with a family or personal history of ovarian cancer. Ovarian cancer affects fewer women than many other cancers, however, the difficulty in detecting the cancer in the early stages makes it harder to treat and more deadly. Age is also a risk factor for ovarian cancer with half of all ovarian cancer cases occurring in women over the age of 65.¹³

Alzheimer's Disease and Dementia

Alzheimer's disease is a degenerative brain disease that usually begins gradually, causing a person to forget recent events or familiar tasks. How rapidly it advances varies from person to person, but the brain disease eventually causes confusion, personality and behavior changes, and impaired judgment. (Fig. 8)

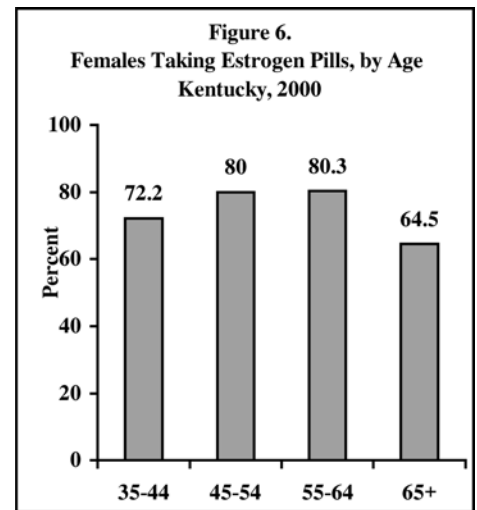
Communication becomes difficult as the affected person struggles to find words, finish thoughts, or follow directions. Eventually, most people with Alzheimer's disease become unable to care for themselves.¹⁴

One in 10 people over the age of 65 and almost half of those over the age of 85 have Alzheimer's disease. According to the National Alliance for the Mentally Ill, four million Americans have Alzheimer's disease and unless a cure or prevention is found, that number will jump to 14 million by the year 2050. Worldwide, it is estimated that 22 million individuals will develop Alzheimer's disease by the year 2025.

Alzheimer's disease touches many people's lives, young or old. In a national survey, 19 million Americans said they have a family member with Alzheimer's disease, and 37 million said they knew someone with the disease.¹⁵

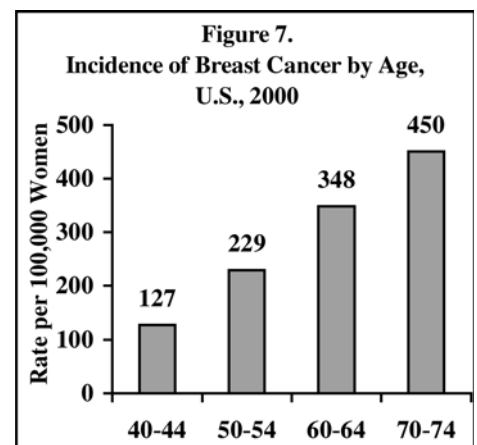
Kentucky has several state-wide programs aimed at relieving some of the burden associated with Alzheimer's disease. Adult Day and Alzheimer's Respite programs, long-term care ombudsman programs, the state health insurance information and assistance program (SHIP), and the personal care attendant program are administered by the Kentucky Office of Aging Services through the Area Agencies on Aging and the aging network.

Dementia, one of the most commonly identified symptoms of Alzheimer's, is a disorder that impairs the vascular or neurologic structures of the

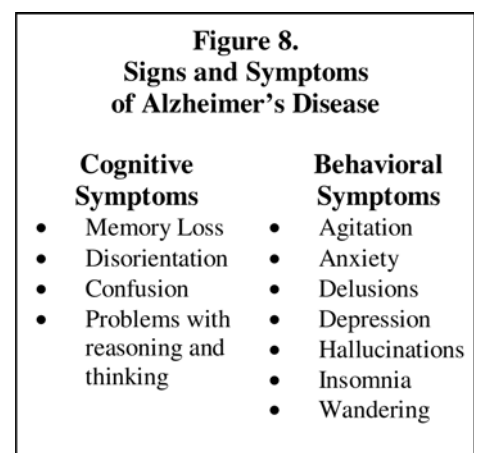


SOURCE: Kentucky BRFSS, 2000

* Women over age 35 that have had a hysterectomy or are menopausal or postmenopausal, or are taking HRT



SOURCE: Genetic Health, *Breast and Ovarian Cancer: Nongenetic Risk Factors*, September 5, 2000



SOURCE: Alzheimer's Association, *People with Alzheimer's Disease Frequently Asked Questions*

brain. Short-term memory loss, confusion, and the inability to think problems through or complete tasks without step-by-step instructions characterize dementia.¹⁶ A few causes of dementia are treatable, including normal pressure hydrocephalus, brain tumors, and dementia due to metabolic causes. However, many of the disorders associated with dementia, such as Alzheimer's, are progressive, irreversible, degenerative conditions.¹⁷

Dementia is a medical, social, and economic problem. It is becoming increasingly significant as the number of elderly continue to rise. Dementia is rare before the age of 65, but the risk increases with advanced age. The chances of being affected are fewer than 1 in 1,000 under the age of 65, 4 to 5 in 100 over the age of 65, and 1 in 5 over the age of 80.¹⁸

Rheumatic Diseases

An estimated 40 million people in the United States have arthritis or other rheumatic conditions. By the year 2020, this number is expected to reach 59 million. Rheumatic diseases are the leading cause of disability

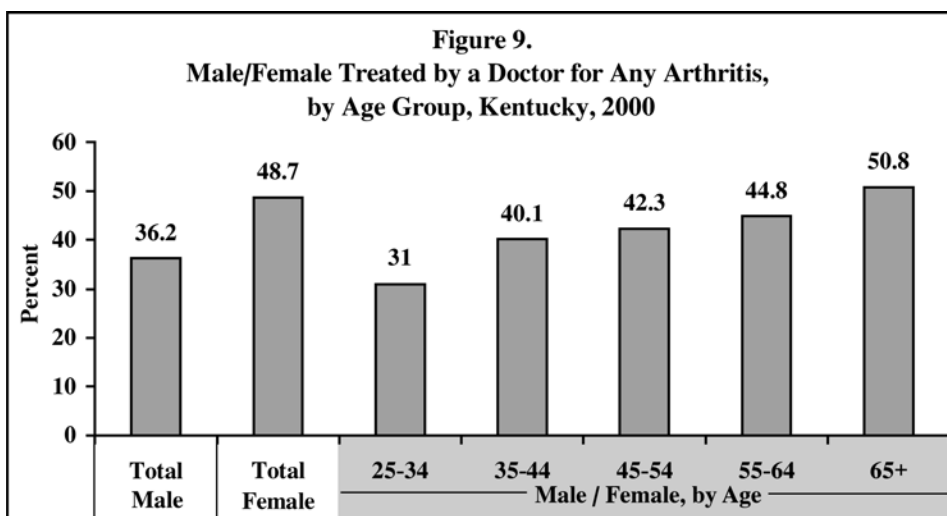
among adults aged 65 and older, yet affects people of all races and ages. Many of these conditions affect women more than men. For example, rheumatoid arthritis occurs two to three times more often in women than in men. Scleroderma is more common in women than in men. Nine out of 10 people who have lupus are women, with African-American women three times more likely than Caucasian women to have the disease.¹⁹

For women and men in Kentucky who have been told by a doctor that they have arthritis, more women than men receive treatment, particularly as they age.²⁰ (Fig. 9)

Hearing and Vision Loss

Age-related hearing loss (presbycusis) is a common phenomenon among the aging. At least 25 percent of individuals over the age of 65 report problems with hearing. Hearing loss is a common and potentially disabling problem in older adults. While approximately one-quarter of the elderly complain of hearing problems; at least one-third have significant hearing impairment on audiological testing. Hearing loss may impair physical and social function, and is associated with cognitive deficits, mood disturbances and behavioral disorders.²¹

By the age of 65, approximately one in three persons has some form of vision reducing eye disease. The most common causes of vision loss among the elderly are age-related macular degeneration, glaucoma, cataract and diabetic retinopathy. Age-related



SOURCE: Kentucky BRFSS, 2000

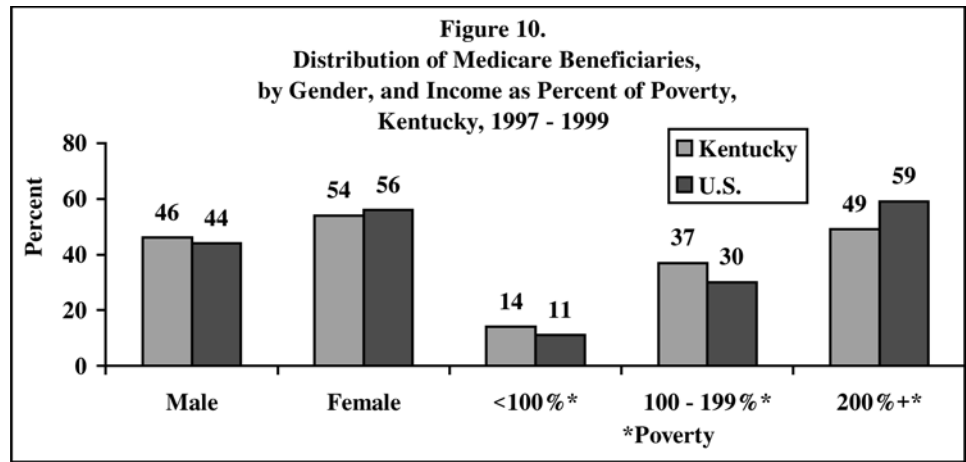
macular degeneration is characterized by the loss of central vision. Glaucoma may result in optic nerve damage and visual field loss. Because this condition may initially be asymptomatic, regular screening examinations are recommended for elderly patients.

Cataract is a common cause of vision impairment among the elderly, but surgery is often effective in restoring vision. Diabetic retinopathy may be observed in the elderly at the time of diagnosis or during the first few years of diabetes. Patients should undergo eye examinations with dilation when diabetes is diagnosed and annually thereafter.²²

Health Care Access and Services

As the mature and elderly population continues to grow over the next 20 to 30 years, Kentucky's health care delivery system will be challenged to provide adequate health services and programs. Likewise, the needs of this population will drive important policy decisions regarding the distribution and use of public resources.

An influential factor in the health of the elderly is having access to and being able to afford the cost of healthcare. The federal Medicare program provides health insurance coverage for nearly one in five adult women in the United States (19%), primarily those ages 65 and older.²³ Given women's longer life span, they rely on Medicare for more years than men and are disproportionately represented among beneficiaries aged 85 and older.²⁴ Nationally, women



SOURCE: Henry J. Kaiser Foundation, State Health Facts Online: Kentucky: Medicare. www.kff.org

account for more than 57 percent of the total Medicare population and 71 percent of Medicare beneficiaries over 85.²⁵

In Kentucky, 16 percent (615,436) of the total population were enrolled in Medicare (1999 data). Of those receiving Medicare benefits, 86 percent were the elderly over age 65 and 54 percent were females.²⁶ (Fig. 10)

While Medicare provides coverage for basic acute care services, it has high cost-sharing requirements and does not cover outpatient prescription drugs. Many Medicare beneficiaries have supplemental insurance to help alleviate the out of pocket expenses, 60 percent for both men and women.²⁷ However, with seven out of 10 Medicare beneficiaries with incomes below the poverty level being women, many cannot afford the cost of supplemental insurance and are faced with high out of pocket expenses for uncovered services. In Kentucky, 51 percent of all Medicare beneficiaries are low-income, living below 200 percent of the federal poverty level.²⁸

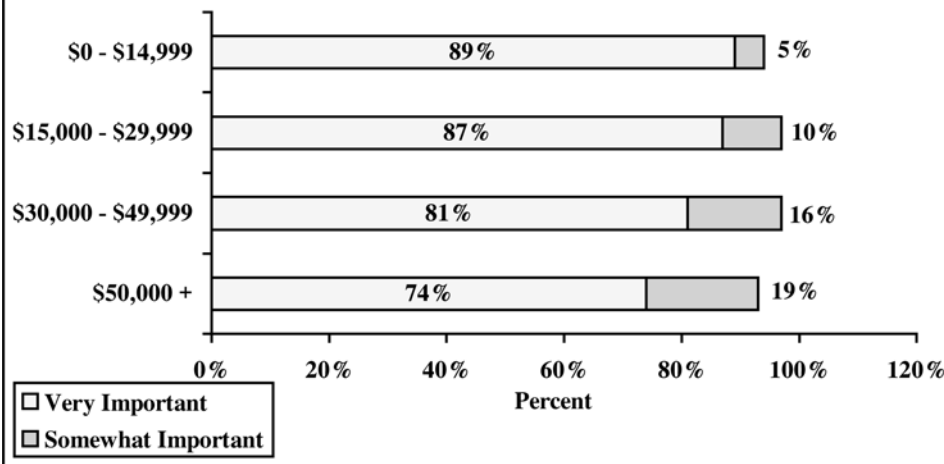
One of the major out-of-pocket expenses facing seniors

Figure 11.
Estimated Medical Expenses for
Kentucky Retirees, by Income, 2000

Income Category	Monthly Median Expenses	Median Annual Expenses	Median Annual Expenses As % of Income
\$0 - \$14,999	\$237	\$2,844	28 - 38%
\$15,000 - \$29,999	\$300	\$3,600	14 - 18%
\$30,000 - \$49,999	\$200	\$2,400	06 - 08%
\$50,000 +	\$200	\$2,400	2.6 - 3.4%

SOURCE: Kentucky Long-Term Policy Research Center, UK Sanders-Brown Center on Aging, and UK Survey Research Center, *Policy Notes*, August 2001

Figure 12.
Percent of Kentuckians who say government support for prescription drug coverage is very or somewhat important, by income and age 45+, 2000



SOURCE: Kentucky Long-Term Policy Research Center, UK Sanders-Brown Center on Aging, and UK Survey Research Center, *Policy Notes*, August 2001

today is the cost of prescription medication. Medicare does not pay for prescription drugs and as a result, many elderly go without the medicines they need. A 1999 RAND Corporation study found that insurance alone cut the portion of household income spent on prescription drugs in half. On average, the study found lower income seniors shouldered a cost burden three times higher than that of middle-income seniors and 10 times that of higher-income seniors. Those with one or more chronic conditions had burdens three times greater than those without them.²⁹

Kentucky seniors face the same challenges as the elderly

nationwide. Surveys in Kentucky indicate that almost three-quarters of Kentucky retirees with an annual income of \$15,000 or less say they cannot afford all of their medical expenses, which account for 28 - 38 percent of their total income. (Fig. 11) Of Kentucky retirees with an annual income of \$50,000 or more a year, one-third say that they cannot afford all of their medical expenses. Overall, more than half (52%) of retirees in Kentucky report not being able to afford all of their medical expenses.³⁰ Like wise, the majority of Kentuckians aged 45 and over, particularly those among lower income groups, say government support for perscription drug coverage is very or somewhat important. (Fig. 12)

Of female Medicare beneficiaries nationally, 17 percent have incomes below the federal poverty level compared to 11 percent of men.³¹ Given women's disproportionately low incomes and greater need for long-term care, female Medicare beneficiaries are more likely than males to rely on Medicaid (the joint federal/state health program) to fill in Medicare's gaps.³²

Medicaid provides two very important benefits to qualifying elderly: outpatient prescription drug coverage and long-term care services. Because women spend approximately 22 percent of their incomes on healthcare versus 17 percent for men,³³ these benefits provide a safety net for poor women. The financial burden for out-of-pocket healthcare costs is highest for poor women without Medicaid. Nationally,

nearly 10 million women with incomes below twice the poverty level, are not on Medicaid. These women are spending over half of their incomes on medical care.³⁴

Medicaid also covers long-term care services to eligible recipients residing in a licensed, certified nursing facility. In 1998, 11 percent of Kentucky's Medicaid enrollment were elderly with spending for this group representing 24 percent of all Medicaid spending.³⁵ The majority of this spending is for long-term care for the elderly. In fact, Medicaid was the primary payor source for over 71 percent of nursing facility beds in 1999. Private pay followed at 16.5 percent, with Medicare paying for 9.5 percent. (Fig. 13)

Long-Term Care/Nursing Home Utilization

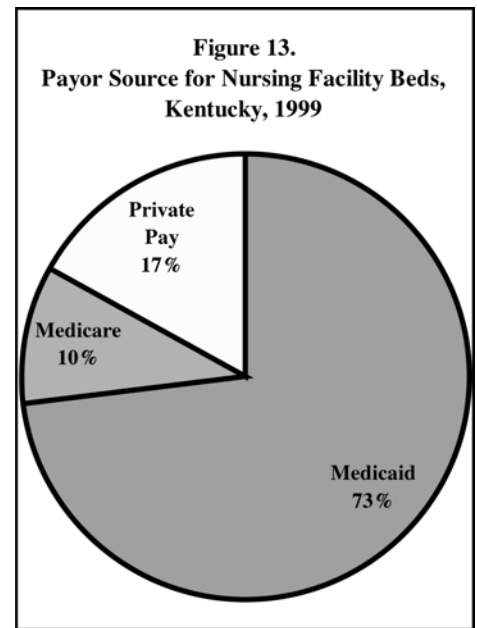
Women, because of their longer life span, are likelier than men to live with functional impairments necessitating a need for long-term care. Nationally, two-thirds of all Medicare beneficiaries who receive home health services and three-fourths of all nursing home residents are female.³⁶

Long-term care is necessary when a chronic condition, trauma, or illness limits their ability to carry out basic self-care tasks, often called activities of daily living (ADLs), or household chores, known as instrumental activities of daily living (IADLs). An estimated 12.8 million Americans of all ages need assistance from others to carry out everyday activities. Most, but not all, persons in need of long-term

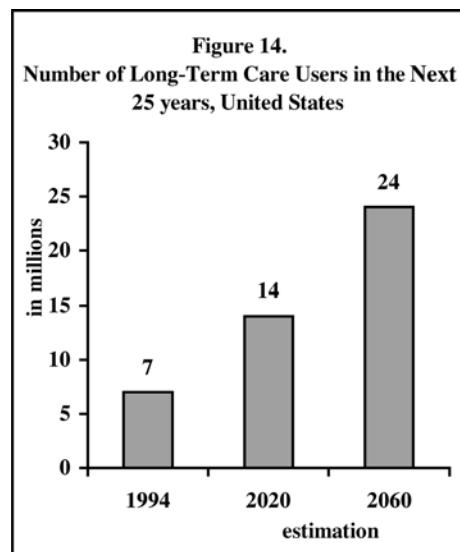
care are elderly. Approximately 57 percent are persons aged 65 and older; 40 percent are working-age adults aged 18 to 64; and 3 percent are children under age 18.³⁷

The 21st century will be marked by a dramatic increase in the size of the older population as the large baby boom generation ages. It is estimated that the number of older persons needing long-term care may as much as double over the next 25 years.³⁸ (Fig. 14)

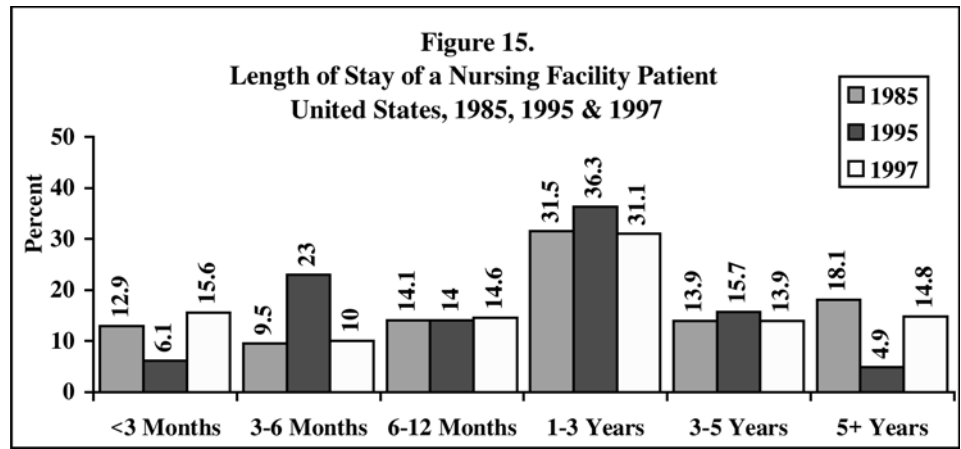
Nationally, nursing home stays were shorter in 1997 than a decade earlier, perhaps reflecting more use of home health care or the use of nursing homes for short-term rehabilitation.³⁹ (Fig. 15) The average length-of-stay (admission to discharge) for nursing facility patients is 870 days (2.38 years). This figure is higher for female patients at 907 days (2.48 years). The number of days spent in a nursing facility appears to increase with age. Persons aged 65 to 74 spend approximately 857 days in a nursing facility while persons over the age of 85 have been in the facility an average of 932



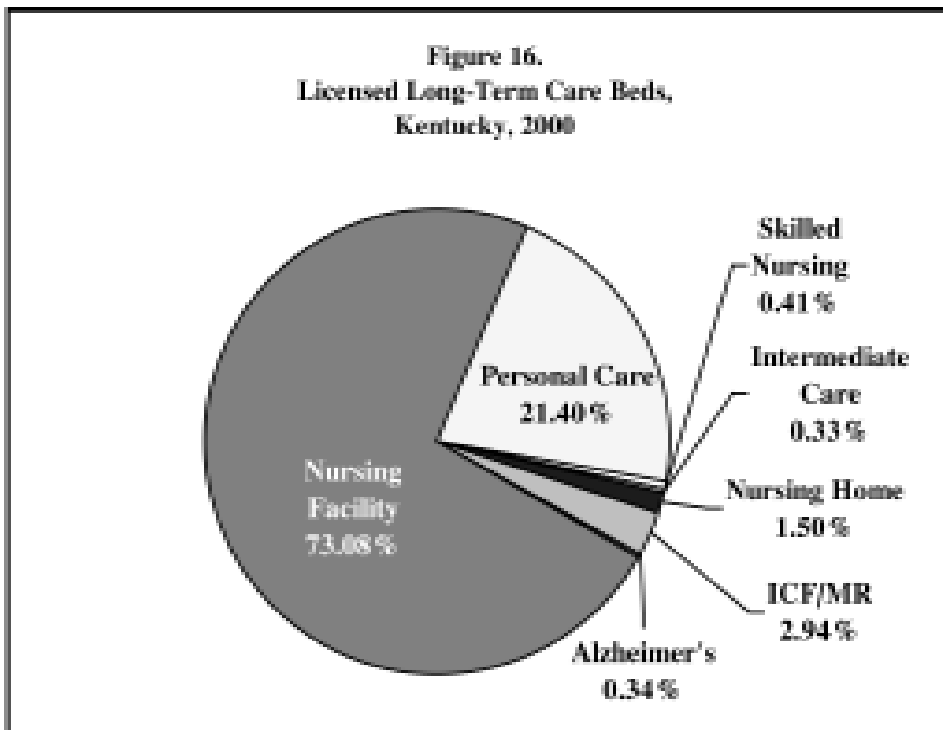
SOURCE: Kentucky Department for Public Health, Health Policy Development Branch, 1999 *Kentucky Long Term Care Report*



SOURCE: U.S. General Accounting Office, *Long-Term Care: Diverse, Growing Population Includes Millions of Americans of All Ages*, (GAO/HEHS-95-26), November 7, 1994



SOURCE: National Center for Health Statistics, National Nursing Home Survey: 1985, 1995, and 1997



SOURCE: Kentucky Department for Public Health, Health Policy Development Branch, 2000 Kentucky Long Term Care Report

days (2.55 years). Single persons (widowed, divorced, or never married) are likely to spend significantly more days in a nursing facility than their married counterparts.⁴⁰

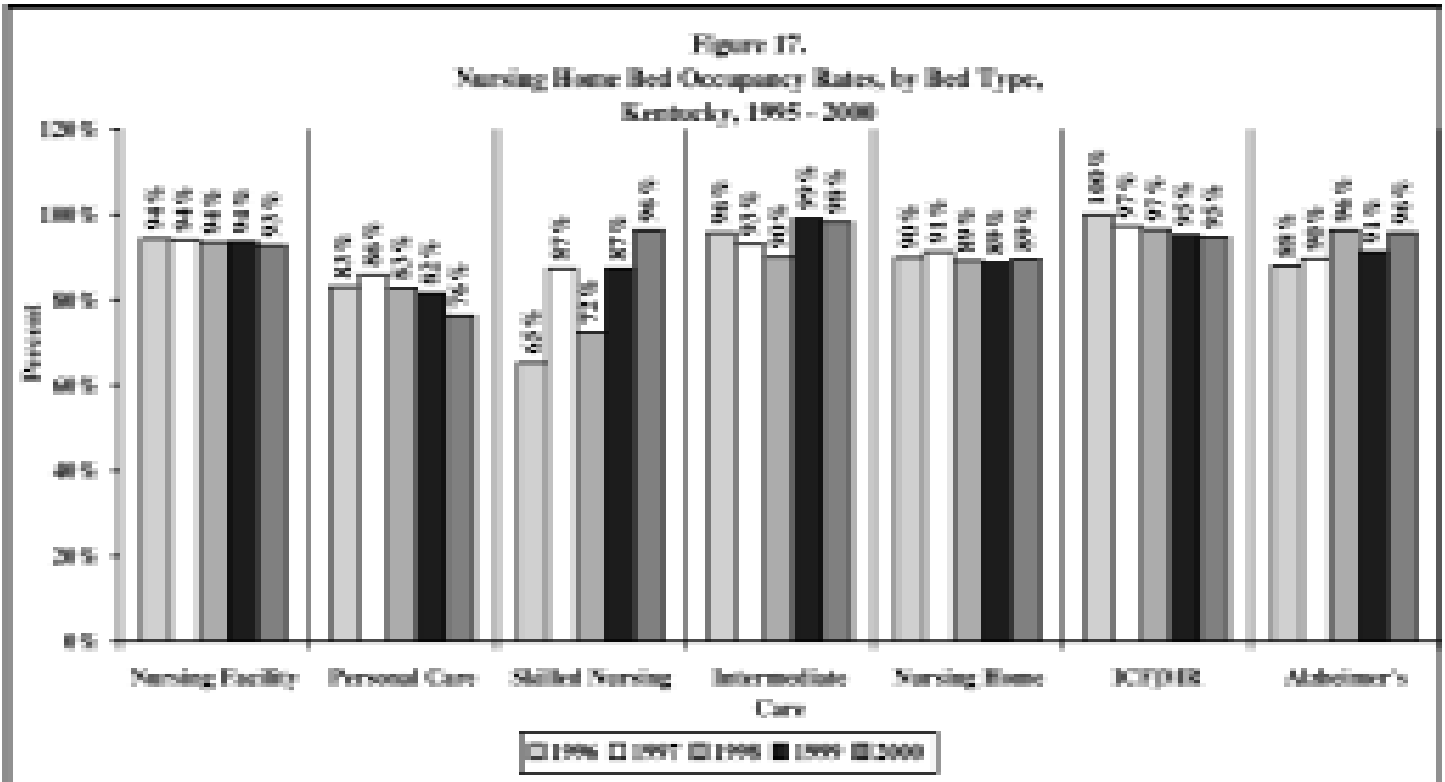
In 2000, Kentucky had 25,553 licensed nursing home beds. Most of these beds, 73 percent, are licensed as nursing facility (NF) beds. Personal care beds make up the second largest category with 21.4 percent. (Fig. 16)

In Kentucky, nursing home occupancy rates have fluctuated over the past six years, yet remain consistently high. (Fig. 17) Looking at occupancy rates by region, most areas of the state experienced a decline in occupancy since 1995, while only three regions, FIVCO, Lake Cumberland and Bluegrass saw increases. (Fig. 18)

For the elderly not needing the level of care provided by nursing homes and other institutions, Kentucky offers a Homecare Program. Homecare is a social service rather than a medical service, where no doctor's order is necessary. In-home services offered by this program include patient assessment, case management, escort services, home-delivered meals, homemaker, chore, home repair and home management services, personal care, and respite care.

Caregiver Issues

Over the next decade approximately 47 million baby boomers in North America will be facing the role of caregiver to a parent, relative or elderly friend. At the same time countless thousands of seniors face the dilemma of



SOURCE: Kentucky Department for Public Health, Health Policy Development Branch, 1995 - 2000 Kentucky Long Term Care Reports

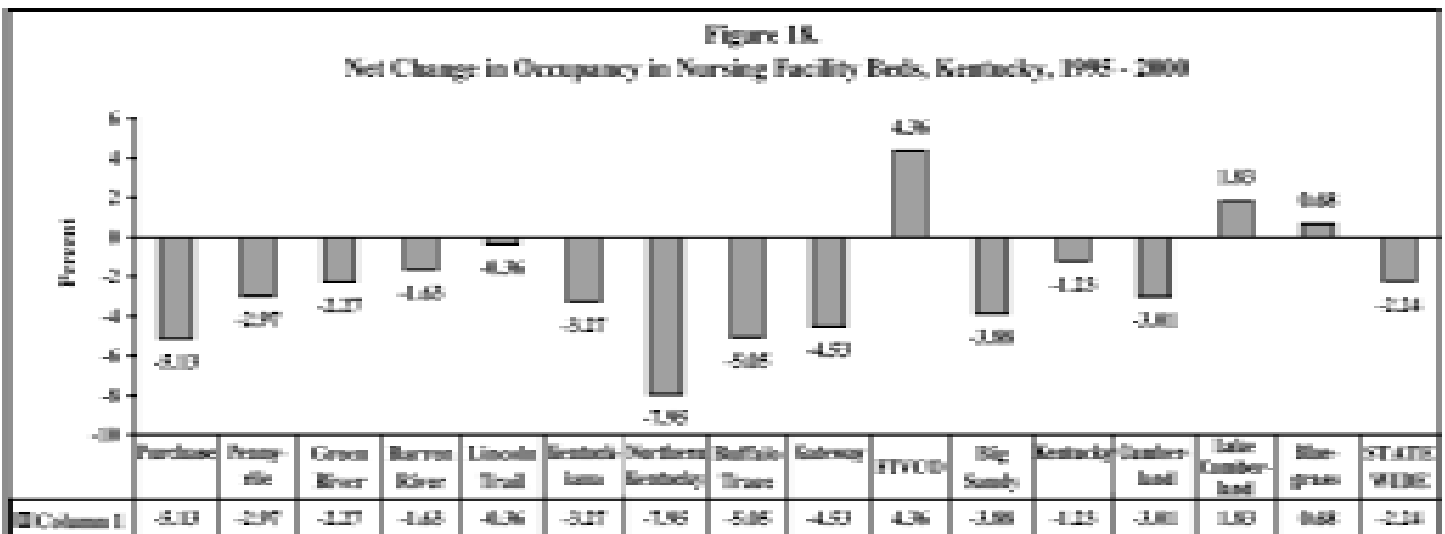
caring for a chronically ill spouse.⁴¹

The typical caregiver in this country is a married woman in her mid-forties who works full-time, is a high school graduate, and has an annual household income of \$35,000. (Fig. 19)

Asian and Hispanic caregivers are younger than whites, with average ages of 39 and 40, respectively, compared with 47

for whites. More than one-third of Asian and Hispanic caregivers are under 35, compared with just over one in five white caregivers. More than 73 percent of the caregivers are female and 27 percent are male.⁴²

While there are numerous reasons for a person needing caregiving, aging is the most commonly cited purpose.



SOURCE: Kentucky Department for Public Health, Health Policy Development Branch, 1995 - 2000 Kentucky Long Term Care Reports

Functional impairments such as mobility problems and dementia are also commonly cited. (Fig. 20)

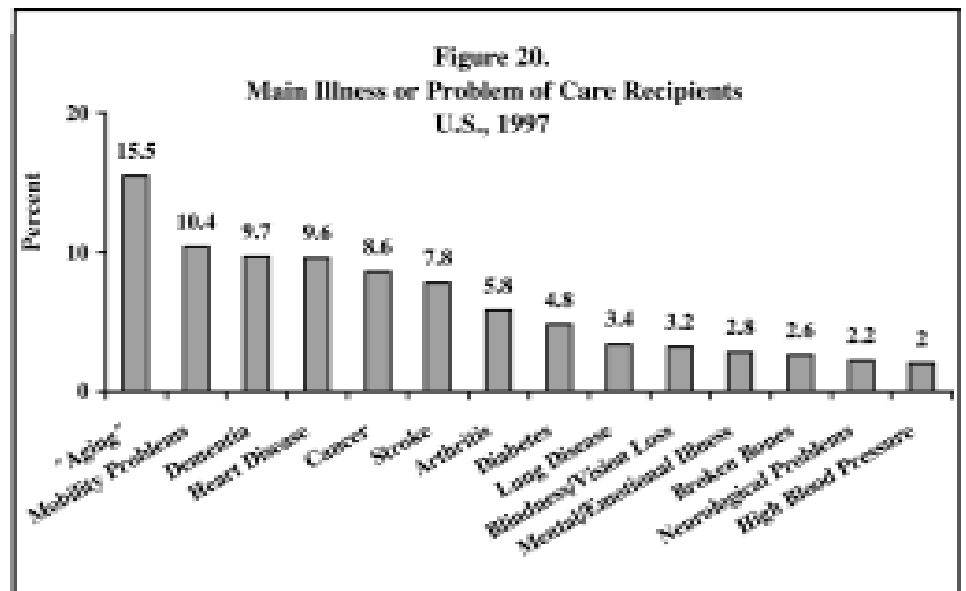
Another phenomenon occurring among the mature and elderly population is grandparenting, or grandparents raising grandchildren. According to the 2000 census, nearly 5.5 million children live with grandparents. In three-fourths of the families with grandparents and grandchildren, a grandparent maintains the household. These grandparents are not always seniors, but many of them fit into this category. Of the grandparents who are 65 years of age and older, 15 percent are women; 21 percent are men.⁴³

Kentucky is in the process of developing a program to coordinate a system of support for family caregivers of older adults and grandparents caring for children under the age of 18. For more information on this program, contact the Kentucky Office of Aging Services.

**Figure 19.
Caregiver Profile**

	White	Black	Hispanic	Asian
Gender				
Female	73.5	76.8	67.4	52.3
Male	26.5	23.2	32.6	47.7
Age of Caregiver				
< 35	26.5	23.5	37.1	38.6
35-49	38.0	44.4	37.5	43.6
50-64	26.8	22.5	21.2	14.4
65 or Older	13.6	9.5	4.2	3.4
Mean (years)	47	43	40	39
Marital Status				
Married or living with partner	67.8	50.9	63.8	64.4
Single, never married	11.1	19.3	18.2	26.1
Separated or divorced	12.1	19.0	15.7	6.0
Widowed	8.3	9.8	2.0	3.0
Children <18 years of age in Household				
Yes	38.8	51.0	58.3	51.1
No	61.2	49.4	41.7	48.1
Educational Attainment				
< High School	8.2	16.3	11.1	2.3
High School Graduate	36.0	32.0	35.2	18.2
Some College	22.2	26.8	26.7	17.0
College Graduate	20.4	15.4	18.2	39.0
Graduate School	8.8	5.6	6.5	20.8
Technical School	3.5	3.3	2.3	1.9
Current Employment				
Full Time	51.0	55.6	51.8	63.3
Part Time	12.7	10.5	13.4	14.0
Retired	17.0	13.7	6.8	4.2
Not Employed	18.9	20.3	28.0	18.2
Household Income				
< \$15,000	11.7	29.1	21.1	8.3
\$15,000 - \$24,900	17.3	24.8	22.5	11.0
\$25,000 - \$29,900	9.5	9.8	7.8	8.0
\$30,000 - \$39,900	14.0	12.4	16.3	13.3
\$40,000 - \$49,900	10.4	7.8	11.1	14.0
\$50,000 - \$74,900	14.4	9.5	10.4	15.5
\$75,000 or higher	12.1	3.0	6.2	19.7
Median	\$33,000	\$22,500	\$27,500	\$45,000

SOURCE: *Family Caregiving in the U.S. findings from a National Survey*, The National Alliance for Caregiving and The American Association of Retired Persons, June 1997



SOURCE: *Family Caregiving in the U.S. findings from a National Survey*, The National Alliance for Caregiving and The American Association of Retired Persons, June 1997

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Appendices

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Community Mental Health/Mental Retardation Centers (CMHMRCs)

Region	Region Name	County
1	Four Rivers Behavioral Health P.O. Box 7287 1530 Lone Oak Road Paducah, KY 42002-7287	Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, Livingston, Marshall, and McCracken.
2	Pennyroyal Regional MH/MR P.O. Box 614 1507 South Main Street Hopkinsville, KY 42241-0614	Caldwell, Christian, Crittenden, Hopkins, Lyon, Muhlenberg, Todd, and Trigg.
3	River Valley Behavioral Health Cigar Factory Complex 1100 Walnut Street Owensboro, KY 42302	Daviess, Hancock, Henderson, McLean, Ohio, Union, and Webster.
4	Life Skills, Inc. P.O. Box 6499 922 State Street, 1 st Floor Bowling Green, KY 42102	Allen, Barren, Butler, Edmonson, Hart, Logan, Metcalfe, Monroe, Simpson, and Warren.
5	Communicare, Inc. 1311 North Dixie Avenue Elizabethtown, KY 42701	Breckinridge, Grayson, Hardin, Larue, Marion, Meade, Nelson, and Washington.
6	Seven Counties Services 101 West Muhammad Ali Blvd Louisville, KY 40202	Bullitt, Henry, Jefferson, Oldham, Shelby, Spencer, and Trimble.
7	North Key Community Care P.O. Box 2680 Covington, KY 41012	Boone, Campbell, Carroll, Gallatin, Grant, Kenton, Owen, and Pendleton.
8	Comprehend, Inc. 611 Forest Avenue Maysville, KY 41056	Bracken, Fleming, Lewis, Mason, and Robertson.
10	Pathways, Inc. P.O. Box 790 Ashland, KY 41105-0790	Bath, Boyd, Carter, Elliott, Greenup, Lawrence, Menifee, Montgomery, Morgan, and Rowan.
11	Mountain Comp. Care Center 150 South Front Avenue Prestonsburg, KY 41653-5340	Floyd, Johnson, Magoffin, Martin, and Pike.
12	KY River Community Care P.O. Box 794 Jackson, KY 41339	Breathitt, Knott, Lee, Leslie, Letcher, Owsley, Perry, and Wolfe.
13	Cumberland River Comp. Care American Greeting Card Road P.O. Box 568 Corbin, KY 40702	Bell, Clay, Harlan, Jackson, Knox, Laurel, Rockcastle, and Whitley.
14	Adanta 259 Parkers Mill Road Somerset, KY 42501	Adair, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Russell, Taylor, and Wayne.
15	Bluegrass Regional MH/MR P.O. Box 11428 Lexington, KY 40575	Anderson, Bourbon, Boyle, Clark, Estill, Fayette, Franklin, Garrard, Harrison, Jessamine, Lincoln, Madison, Mercer, Nicholas, Powell, Scott, and Woodford.

SOURCE: Kentucky Cabinet for Health Services, Department of Mental Health/Mental Retardation

APPENDIX B

Kentucky Area Development Districts (ADDs)

ADD	ADD Name	County
1	Purchase	Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, McCracken, and Marshall.
2	Pennyrile	Caldwell, Christian, Crittenden, Hopkins, Livingston, Lyon, Muhlenberg, Todd, and Trigg.
3	Green River	Daviess, Hancock, Henderson, McLean, Ohio, Union, and Webster.
4	Barren River	Allen, Barren, Butler, Edmonson, Hart, Logan, Metcalfe, Monroe, Simpson, and Warren.
5	Lincoln Trail	Breckinridge, Grayson, Hardin, Larue, Marion, Meade, Nelson, and Washington.
6	Kentuckiana	Bullitt, Henry, Jefferson, Oldham, Shelby, Spencer, and Trimble.
7	Northern Kentucky	Boone, Campbell, Carroll, Gallatin, Grant, Kenton, Owen, and Pendleton.
8	Buffalo Trace	Bracken, Fleming, Lewis, Mason, and Robertson.
9	Gateway	Bath, Menifee, Montgomery, Morgan, and Rowan.
10	FIVCO	Boyd, Carter, Elliott, Greenup, and Lawrence.
11	Big Sandy	Floyd, Johnson, Magoffin, Martin, and Pike.
12	Kentucky River	Breathitt, Knott, Lee, Leslie, Letcher, Owsley, Perry, and Wolfe.
13	Cumberland Valley	Bell, Clay, Harlan, Jackson, Knox, Laurel, Rockcastle, and Whitley.
14	Lake Cumberland	Adair, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Russell, Taylor, and Wayne.
15	Bluegrass	Anderson, Bourbon, Boyle, Clark, Estill, Fayette, Franklin, Garrard, Harrison, Jessamine, Lincoln, Madison, Mercer, Nicholas, Powell, Scott, and Woodford.

SOURCE: Cabinet for Health Services, Department of Public Health

Kentucky's District Health Departments - 2001

Adair County Center 801 Westlake Drive Columbia, KY 42728 (270) 384-2286	Breckinridge County Home Health Highway 60 P.O. Box 456 Hardinsburg, KY 40143
Ashland-Boyd County Center 2916 Holt Street P.O. Box 4180 Ashland, KY 41105-4180 (606) 324-7181	Butler County Center 104 North Warren Street P.O. Box 99 Morgantown, KY 42261-0099 (270) 526-3221
Ashland-Boyd County Center Cannonsburg Division 1320 Wolohan Drive Ashland, KY 41105 (606) 928-0948	Caldwell County Health Department 310 Hawthorne Street P.O. Box 327 Princeton, KY 42445 (270) 365-6571
Ballard County Center U.S. Highway 60 P.O. Box 357 LaCenter, KY 42056 (270) 665-5432	Calloway County Center 701 Olive Street P.O. Box 1115 Murray, KY 42071 (270) 753-3381
Barren County Center 318 West Washington P.O. Box 1464 Glasgow, KY 42142-1464 (270) 651-8321	Campbell County Health Center 12 East Fifth Street Newport, KY 41071 (859) 431-1704
Bath County Center 56 Treadway P.O. Box 537 Owingsville, KY 40360 (606) 674-2731	Carlisle County Center East Court Center P.O. Box 96 Bardwell, KY 42023 (270) 628-5431
Bell County Center 310 Cherry Street Pineville, KY 40977 (606) 337-7046	Carroll County Center 401 Eleventh Street Carrollton, KY 41008 (502) 732-6641
Bell County Center Branch Office 111 21 st Street P.O. Box 160 Middlesboro, KY 40965 (606) 248-2862	Carter County Center U.S. 60 East P.O. Box 919 Grayson, KY 41143 (606) 474-5100

SOURCE: Kentucky Department of Public Health

Kentucky's District Health Departments - 2001

Boone County Health Center Clinical/Home Visiting 7505 Burlington Pike Florence, KY 41042 (859) 525-1770	Carter Center – West Hitchins Avenue P.O. Box 728 Olive Hill, KY 41164 (606) 286-6000
Casey County Center 199 Adams Street P.O. Box 778 Liberty, KY 42539 (606) 787-6911	Fulton County Center – West 402 Troy Street Hickman, KY 42050 (270) 236-2825
Clay County Center 100 South Court Street Manchester, KY 40962 (606) 598-2425	Gallatin County Center 204 Franklin Street P.O. Box 315 Warsaw, KY 41095 (859) 567-2844
Clinton County Center 201 Twin Lakes Medical Center Albany, KY 42602 (606) 387-5711	Grant County Center Clinical/Environmental 234 Barnes Road Williamstown, KY 41097 (859) 824-5074
Crittenden County Health Department 402 Walker Street P.O. Box 392 Marion, KY 42064 (270) 965-5215	Graves County Center 100 East Lochridge Mayfield, KY 42066 (270) 247-3553
Cumberland County Center 133 Lower River Street P.O. Box 412 Burkesville, KY 42717 (270) 864-2206	Grayson County Center 124 East White Oak Street Leitchfield, KY 42754 (270) 259-3141
Cumberland Valley District Branch Office 316 North Hill Street London, KY 40741 (606) 864-4764	Green County Center 220 Industrial Park P.O. Box 177 Greensburg, KY 42743 (270) 932-4341
Edmonson County Center 221 Mammoth Cave Road Brownsville, KY 42210 (270) 597-2194	Hancock County Center 175 Harrison Street P.O. Box 275 Hawesville, KY 42348 (270) 927-8803

SOURCE: Kentucky Department of Public Health

Kentucky's District Health Departments - 2001

Elliott County Center Main Street P.O. Box 762 Sandy Hook, KY 41171 (606) 738-5205	Hardin County Center 580-C Westport Road Elizabethtown, KY 42701 (270) 765-6196
Fulton County Center – East 350 Browder Street Fulton, KY 42041 (270) 472-1982	Harlan County Center 402 East Clover Street Harlan, KY 40831 (606) 573-4820
Harlan County Center Tri-Cities Branch Office 200 Church Street P.O. Box 790 Lynch, KY 40855 (606) 848-2244	Knott County Center 880 West Main Street P.O. Box 530 Hindman, KY 41822 (606) 785-3144
Harrison County Center 416 East Pleasant Street Cynthiana, KY 41031 (859) 234-2842	Larue County Center 215 East Main Street Hodgenville, KY 42748 (270) 358-3844
Hart County Center 505 Fairground Road P.O. Box 65 Munfordville, KY 42765 (270) 524-2511	Larue County Home Health 60 Shawnee Drive Hodgenville, KY 42748 (270) 358-3155
Henderson County Center 472 Klutey Park Plaza Henderson, KY 42420 (270) 826-3951	Lawrence County Center 1080 Meadowbrook Lane Route #2 Louisa, KY 41230 (606) 638-4389
Henry County Center 125 North Property Road P.O. Box 449 New Castle, KY 40050 (502) 845-2882	Lee County Health Center 57 Main Street Beattyville, KY 41311
Hickman County Center 370 South Washington Street Clinton, KY 42031 (270) 653-6110	Lee County Health Center Center Street P.O. Box 587 Beattyville, KY 41311 (606) 464-2492

SOURCE: Kentucky Department of Public Health

Kentucky's District Health Departments - 2001

Jackson County Center Highway 421 South P.O. Box 250 McKee, KY 40447 (606) 287-8421	Leslie County Center 78 Maple Street P.O. Box 787 Hyden, KY 41748 (606) 672-2393
Kenton County – Dressman Health Center 634 Scott Street Covington, KY 41011 (859) 431-3345	Leslie County Health Center 100 Hurts Creek Shopping Center Highway 80 Hyden, KY 41749 (606) 672-7175
Kenton County Health Education Center 2388 Grandview Drive Covington, KY 41017-1633 (859) 578-7660	Letcher County Center 6 Broadway Street Whitesburg, KY 41858 (606) 633-2948
Livingston County Health Department 124 State Street P.O. Box 218 Smithland, KY 42081 (270) 928-2193	Menifee County Center U.S. 460 East P.O. Box 106 Frenchburg, KY 40322 (606) 768-2151
Logan County Center 151 South Franklin Street Russellville, KY 42276 (270) 726-8341	Metcalf County Center 615 West Stockton Street P.O. Box 30 Edmonton, KY 42129 (270) 432-3214
Lyon County Health Department 211 Fairview Avenue P.O. Box 96 Eddyville, KY 42038 (270) 388-9763	Morgan County Center 493 Riverside Drive West Liberty, KY 41472 (606) 743-3744
Marion County Center 516 North Spalding Lebanon, KY 40033 (270) 692-3393	Nelson County Center 325 South Third Street Bardstown, KY 40004 (502) 348-3222
Mason County Center 120 West Third Street P.O. Box 266 Maysville, KY 41056 (606) 564-9447	Nicholas County Center 2320 Concrete Road Carlisle, KY 40311 (859) 289-2188

Kentucky's District Health Departments – 2001

<p>McCracken County Center 916 Kentucky Avenue P.O. Box 2597 Paducah, KY 42002-2597 (270) 444-9631</p>	<p>North Central District Home Health 124 Court Street P.O. Box 358 New Castle, KY 40050 (502) 845-2761</p>
<p>McCreary County Center South Fork Center P.O. Box 208 Whitley City, KY 42653 (606) 376-2412</p>	<p>Ohio County Center 1336 Clay Street Hartford, KY 42347 (270) 298-3663</p>
<p>McLean County Center 310 West Seventh Street Calhoun, KY 42327 (270) 273-3062</p>	<p>Owen County Center 1005 Highway 22 East Owenton, KY 40359 (502) 484-5736</p>
<p>Meade County Center 520 Fairway Drive Brandenburg, KY 40108 (270) 422-3988</p>	<p>Owensboro – Daviess County Center 1600 Breckinridge Owensboro, KY 42302 (270) 686-7744</p>
<p>Owsley County Center Highway 28 P.O. Box 220 Booneville, KY 41314 (606) 593-5181</p>	<p>Rowan County Center 555 West Sun Street Morehead, KY 40351 (606) 784-8954</p>
<p>Owsley County Health Center North Court Square Booneville, KY 41314 (606) 593-7082</p>	<p>Russell County Center 69 Herriford Curve Road P.O. Box 378 Jamestown, KY 42629 (270) 343-2181</p>
<p>Pendleton County Center Route #1, Box 208 Falmouth, KY 41040 (859) 654-6985</p>	<p>Scott County Center 198 East Washington Street Georgetown, KY 40324 (502) 863-3971</p>
<p>Perry County Health Center 239 Lovern Street Hazard, KY 41701 (606) 436-2196</p>	<p>Shelby County Center 419 Washington Street Shelbyville, KY 40065 (502) 633-1231</p>
<p>Perry County Pre-Natal Health Center 200 Medical Center Drive Suite 3-D Hazard, KY 41701</p>	<p>Simpson County Center 1131 South College Street Franklin, KY 42134 (270) 586-8261</p>

SOURCE: Kentucky Department of Public Health

Kentucky's District Health Departments - 2001

Pulaski County Center 45 Roberts Street Somerset, KY 42503 (606) 679-4416	Spencer County Center 18 Main Street P.O. Box 175 Taylorsville, KY 40071 (502) 477-8146
Radcliff Clinic Health Center 1463 North Wilson Road Radcliff, KY 40160 (270) 352-2526	Taylor County Center 407 East First Street Campbellsville, KY 42718 (270) 465-4191
Robertson County Center 107 McDowell Street P.O. Box 72 Mt. Olivet, KY 41064 (606) 724-5222	Trigg County Health Department 196 Main Street P.O. Box 191 Cadiz, KY 42211 (270) 522-8121
Rockcastle County Center 120 Richmond Street P.O. Box 840 Mt. Vernon, KY 40456 (606) 256-2242	Trimble County Center 138 Miller Lane P.O. Box 250 Bedford, KY 40006 (502) 225-7701
Union County Center 218 West McElroy P.O. Box 88 Morganfield, KY 42437 (270) 389-1230	Webster County Center 80 Clayton Avenue P.O. Box 109 Dixon, KY 42409 (270) 639-9315
Warren County Center Primary Care Center P.O. Box 1157 Bowling Green, KY 42102-1157 (270) 781-2490	Wolfe County Center Highway 15 West P.O. Box 98 Campton, KY 41301 (606) 668-3185
Washington County Center 302 East Main Street Springfield, KY 40069 (859) 336-3980	Wolfe County Health Center 555 Old Highway 15 West Campton, KY 41301 (606) 668-3333
Wayne County Center 533 Albany Road Monticello, KY 42633-1085 (606) 348-9349	

Kentucky's Independent Health Departments - 2001

<p>Allen County Health Department 207 East Locust P.O. Box 129 Scottsville, KY 42164 (270) 237-4423</p>	<p>Breathitt County Health Department 359 Broadway P.O. Box 730 Jackson, KY 41339 (606) 666-5274</p>
<p>Anderson County Health Department 208 South Main Street Lawrenceburg, KY 40342 (502) 839-4551</p>	<p>Breckinridge County Health Department 2nd & Courthouse Square P.O. Box 456 Hardinsburg, KY 40143 (270) 756-5121</p>
<p>Bourbon County Health Department 341 East Main Street Paris, KY 40361 (859) 987-1915</p>	<p>Bullitt County Health Department 181 Lees Valley Road P.O. box 278 Shepherdsville, KY 40165 (502) 543-2415</p>
<p>Boyle County Health Department 448 South Third Street P.O. Box 398 Danville, KY 40423-0398 (859) 236-2053</p>	<p>Christian County Health Department 1700 Canton Street P.O. Box 647 Hopkinsville, KY 42240 (270) 887-4160</p>
<p>Bracken County Health Department 429 Frankfort Street P.O. Box 117 Brooksville, KY 41004 (606) 735-2157</p>	<p>Clark County Health Department 400 Professional Avenue Winchester, KY 40391 (859) 744-4482</p>
<p>Estill County Health Department 365 River Drive P.O. Box 115 Irvine, KY 40336 (606) 723-5181</p>	<p>Jessamine County Health Department 215 East Maple Street Nicholasville, KY 40356-1203 (859) 885-4149</p>
<p>Lexington-Fayette County Health Dept. 650 Newtown Pike Lexington, KY 40508 (859) 252-2371</p>	<p>Johnson County Health Department 630 James S. Trimble Boulevard Paintsville, KY 41240 (606) 789-2590</p>
<p>Fleming County Health Department Rural Route #4, Box 288-H Windsor Court Square Flemingsburg, KY 41041 (606) 845-6511</p>	<p>Knox County Health Department Liberty Street P.O. Box 1689 Barbourville, KY 40906-0897 (606) 546-3486</p>

SOURCE: Kentucky Department of Public Health

Kentucky's Independent Health Departments – 2001

Floyd County Health Department 144 North Front Avenue Prestonsburg, KY 41653 (606) 886-2788	Laurel County Health Department 310 West Third Street London, KY 40741 (606) 864-5187
Franklin County Health Department 100 Glenss Creek Road Frankfort, KY 40601 (502) 564-7647	Lewis County Health Department 905 Fairlane Drive P.O. Box 219 Vanceburg, KY 41179 (606) 796-2632
Garrard County Health Department 89 Farra Drive Lancaster, KY 40444 (859) 792-2153	Lincoln County Health Department 44 Health Way P.O. Box 165 Stanford, KY 40484 (606) 365-3106
Greenup County Health Department U.S. 23 P.O. Box 377 Greenup, KY 41144 (606) 473-9838	Madison County Health Department P.O. Box 1208 Richmond, KY 40476-1208 (859) 623-7312
Hopkins County Health Department 412 North Kentucky Avenue P.O. Box 1266 Madisonville, KY 42431 (270) 821-5242	Magoffin County Health Department 723 Parkway Drive Salyersville, KY 41465 (606) 349-6212
Jefferson County Health Department 400 East Gray Street P.O. Box 1704 Louisville, KY 40202 (502) 574-6530	Marshall County Health Department 307 East Twelfth Street Benton, KY 42025 (270) 527-5824
Martin County Health Department Main Street P.O. Box 346 Inez, KY 41224 (606) 298-7752	Powell County Health Department 376 North Main Street P.O. Box 460 Stanton, KY 40380 (606) 663-4360
Mercer County Health Department 900 North College Street Harrodsburg, KY 40330 (859) 734-4522	Todd County Health Department 205 McReynolds P.O. box 305 Elkton, KY 42220 (270) 265-2362

SOURCE: Kentucky Department of Public Health

Kentucky's Independent Health Departments - 2001

<p>Monroe County Health Department 452 East Fourth Street P.O. Box 247 Tompkinsville, KY 42167 (270) 487-6782</p>	<p>Whitley County Health Department 114 North Second Street Williamsburg, KY 40769 (606) 549-3380</p>
<p>Montgomery County Health Department 117 Civic Center Mt. Sterling, KY 40353 (859) 498-3808</p>	<p>Whitley County Health Department Corbin Branch Cumberland Falls Highway U.S. 25 West, Junction 727 P.O. Box 1221 Corbin, KY 40701 (606) 528-5613</p>
<p>Muhlenberg County Health Department 105 Legion Drive P.O. Box 148 Central City, KY 42330 (270) 754-3200</p>	<p>Whitley County Health Department Prenatal Clinic Baptist Regional Medical Center 2 Trillium Way, Suite 210 Corbin, KY 40701 (606) 523-8670</p>
<p>Oldham County Health Department 700 West Jefferson Street LaGrange, KY 40031 (502) 222-3516</p>	<p>Woodford County Health Department 229 North Main Street Versailles, KY 40383 (859) 873-4541</p>
<p>Pike County Health Department 119 River Drive Pikeville, KY 41501 (606) 437-5500</p>	

Rural/Urban Counties in Kentucky		
<u>County</u>	<u>Region</u>	<u>Rural/Urban</u>
Adair	14	Rural
Allen	4	Rural
Anderson	15	Rural
Ballard	1	Rural
Barren	4	Rural
Bath	9	Rural
Bell	13	Rural
Boone	7	Urban
Bourbon	15	Urban
Boyd	10	Urban
Boyle	15	Rural
Bracken	8	Rural
Breathitt	12	Rural
Breckinridge	5	Rural
Bullitt	6	Urban
Butler	4	Rural
Caldwell	2	Rural
Calloway	1	Rural
Campbell	7	Urban
Carlisle	1	Rural
Carroll	7	Rural
Carter	10	Urban
Casey	14	Rural
Christian	2	Urban
Clark	15	Urban
Clay	13	Rural
Clinton	14	Rural
Crittenden	2	Rural
Cumberland	14	Rural
Daviess	3	Urban
Edmonson	4	Rural
Elliott	10	Rural
Estill	15	Rural
Fayette	15	Urban
Fleming	8	Rural
Floyd	11	Rural
Franklin	15	Rural
Fulton	1	Rural
Gallatin	7	Urban
Garrard	15	Rural

SOURCE: University of Kentucky Center for Excellence

Rural/Urban Counties in Kentucky		
<u>County</u>	<u>Region</u>	<u>Rural/Urban</u>
Grant	7	Urban
Graves	1	Rural
Grayson	5	Rural
Green	14	Rural
Greenup	10	Urban
Hancock	3	Rural
Hardin	5	Rural
Harlan	13	Rural
Harrison	15	Rural
Hart	4	Rural
Henderson	3	Urban
Henry	6	Rural
Hickman	1	Rural
Hopkins	2	Rural
Jackson	13	Rural
Jefferson	6	Urban
Jessamine	15	Urban
Johnson	11	Rural
Kenton	7	Urban
Knott	12	Rural
Knox	13	Rural
Larue	5	Rural
Laurel	13	Rural
Lawrence	10	Rural
Lee	12	Rural
Leslie	12	Rural
Letcher	12	Rural
Lewis	8	Rural
Lincoln	15	Rural
Livingston	2	Rural
Logan	4	Rural
Lyon	2	Rural
Madison	15	Urban
Magoffin	11	Rural
Marion	5	Rural
Marshall	1	Rural
Martin	11	Rural
Mason	8	Rural
McCracken	1	Rural
McCreary	14	Rural

SOURCE: University of Kentucky Center for Excellence

Rural/Urban Counties in Kentucky		
<u>County</u>	<u>Region</u>	<u>Rural/Urban</u>
McLean	3	Rural
Meade	5	Rural
Menifee	9	Rural
Mercer	15	Rural
Metcalfe	4	Rural
Monroe	4	Rural
Montgomery	9	Rural
Morgan	9	Rural
Muhlenberg	2	Rural
Nelson	5	Rural
Nicholas	15	Rural
Ohio	3	Rural
Oldham	6	Urban
Owen	7	Rural
Owsley	12	Rural
Pendleton	7	Urban
Perry	12	Rural
Pike	11	Rural
Powell	15	Rural
Pulaski	14	Rural
Robertson	8	Rural
Rockcastle	13	Rural
Rowan	9	Rural
Russell	14	Rural
Scott	15	Urban
Shelby	6	Rural
Simpson	4	Rural
Spencer	6	Rural
Taylor	14	Rural
Todd	2	Rural
Trigg	2	Rural
Trimble	6	Rural
Union	3	Rural
Warren	4	Rural
Washington	5	Rural
Wayne	14	Rural
Webster	3	Rural
Whitley	13	Rural
Wolfe	12	Rural
Woodford	15	Urban

SOURCE: University of Kentucky Center for Excellence

Area Agencies on Aging

Barren River Area Agency on Aging 177 Graham Avenue Bowling Green, KY 42102 (800) 598-2381	Kentucky River Area Agency on Aging 917 Perry Park Road Hazard, KY 41701 (606) 436-3158
Big Sandy Area Agency on Aging 100 Resource Drive Prestonsburg, KY 41653 (800) 737-2723	KIPDA Area Agency on Aging 11520 Commonwealth Drive Louisville, KY 40299 (502) 266-6084
Bluegrass Area Agency on Aging 699 Perimeter Drive Lexington, KY 40517 (800) 648-6056	Lake Cumberland Area Agency on Aging P.O. Box 1570, Lakeway Drive Russell Springs, KY 42642 (800) 264-7093
Buffalo Trace Area Agency on Aging 327 West Second Street Maysville, KY 41056 (800) 998-4347	Lincoln Trail Area Agency on Aging 613 College Street Road Elizabethtown, KY 42702 (800) 264-0393
Cumberland Valley Area Agency on Aging 342 Old Whitley Road London, KY 40743 (606) 864-7391	Northern Kentucky Area Agency on Aging 22 Spiral Drive Florence, KY 41042 (859) 283-1885
FIVCO Area Agency on Aging 3000 Louisa Street Catlettsburg, KY 41129 (800) 499-5191	Pennyrile Area Agency on Aging 300 Hammond Drive Hopkinsville, KY 42040 (800) 928-7233
Gateway Area Agency on Aging P.O. Box 1070 Owingsville, KY 40360 (606) 674-6355	Purchase Area Agency on Aging 1002 Medical Drive Mayfield, KY 42066 (800) 251-6110
Green River Area Agency on Aging 3860 U.S. Highway 60 West Owensboro, KY 42302 (800) 928-9093	Long-Term Care Ombudsman Office of Aging Services 275 East Main Street Frankfort, KY 40621 (800) 372-2991

SOURCE: Kentucky Cabinet for Health Services, Office of Aging Services

**PROFILE OF DEMOGRAPHIC CHARACTERISTICS
Kentucky, 2000**

County	Total Population	Population by Age													Median Age
		Under 5 Years	5 - 9 Years	10 - 14 Years	15 - 19 Years	20 - 24 Years	25 - 34 Years	35 - 44 Years	45 - 54 Years	55 - 59 Years	60 - 64 Years	65 - 74 Years	75 - 84 Years	85+ Years	
Kentucky	4,041,769	265,901	279,258	279,481	289,004	283,032	568,108	642,665	556,932	204,483	168,112	273,943	172,589	58,261	35.9
Adair	17,244	1,047	1,109	1,164	1,361	1,223	2,240	2,544	2,267	893	883	1,360	853	300	36.9
Allen	17,800	1,172	1,309	1,310	1,317	1,069	2,391	2,677	2,332	938	848	1,349	821	267	36.2
Anderson	19,111	1,429	1,490	1,423	1,135	1,023	2,875	3,318	2,641	952	753	1,111	693	268	35.5
Ballard	8,286	501	507	568	523	438	1,046	1,252	1,178	513	416	694	486	164	39.6
Barren	38,033	2,432	2,614	2,566	2,587	2,113	5,001	5,964	5,171	2,095	1,783	3,010	1,925	772	38.0
Bath	11,085	733	760	743	721	677	1,483	1,712	1,549	569	516	860	527	235	37.4
Bell	30,060	1,826	1,979	2,188	2,169	1,875	4,055	4,563	4,191	1,677	1,408	2,213	1,439	477	37.0
Boone	85,991	6,849	7,143	6,786	6,082	5,081	13,308	15,483	11,681	3,853	2,784	4,178	2,117	646	33.4
Bourbon	19,360	1,249	1,360	1,421	1,303	1,077	2,452	3,082	2,837	1,039	909	1,391	903	337	37.6
Boyd	49,752	2,726	2,955	3,107	3,338	2,856	6,457	7,813	7,380	2,791	2,571	4,345	2,676	737	39.7
Boyle	27,697	1,545	1,864	1,781	1,995	2,143	3,678	4,243	3,923	1,465	1,166	2,047	1,372	475	36.9
Bracken	8,279	550	575	626	581	482	1,110	1,331	1,092	432	383	618	386	113	36.8
Breathitt	16,100	940	1,155	1,171	1,328	1,122	2,102	2,558	2,310	837	720	1,075	567	215	35.9
Breckinridge	18,648	1,182	1,231	1,375	1,349	1,033	2,178	2,802	2,789	1,078	979	1,530	832	290	38.5
Bullitt	61,236	4,439	4,808	4,619	4,436	3,596	9,230	10,783	8,822	3,356	2,355	3,094	1,345	353	34.5
Butler	13,010	817	863	988	1,002	850	1,731	2,065	1,700	735	588	895	585	191	36.3
Caldwell	13,060	716	826	849	851	599	1,576	1,860	1,927	811	697	1,210	853	285	41.2
Calloway	34,177	1,676	1,714	1,872	3,038	4,868	4,122	4,295	4,111	1,838	1,519	2,497	1,906	721	34.5
Campbell	88,616	6,128	6,215	6,539	6,505	6,055	12,599	14,504	11,491	3,988	3,427	5,974	3,945	1,246	35.2
Carlisle	5,351	358	401	259	674	740	750	289	251	512	316	150	39.5	4,100	1,975
Carrroll	10,155	694	762	637	1,422	1,612	1,405	561	392	714	415	137	35.9	7,585	3,774
Carter	26,889	1,800	2,058	1,972	3,632	4,017	3,632	1,494	1,264	1,913	1,084	377	35.8	20,306	9,802
Casey	15,447	1,115	1,071	847	2,005	2,236	2,148	902	763	1,289	762	286	37.8	11,661	5,607
Christian	72,265	4,762	5,143	8,840	12,749	9,024	6,736	2,570	2,256	3,766	2,405	882	27.9	51,806	26,850

Source: U.S. Census Bureau, Census 2000

**PROFILE OF DEMOGRAPHIC CHARACTERISTICS
Kentucky, 2000**

County	Total Population	Population by Age													
		Under 5 Years	5 - 9 Years	10 - 14 Years	15 - 19 Years	20 - 24 Years	25 - 34 Years	35 - 44 Years	45 - 54 Years	55 - 59 Years	60 - 64 Years	65 - 74 Years	75 - 84 Years	85+ Years	
Clark	33,144	2,309	2,200	1,926	4,678	5,368	4,861	1,766	1,441	2,284	1,430	411	36.8	24,921	
Clay	24,556	1,846	1,919	1,590	3,938	4,062	3,284	1,192	1,050	1,444	799	286	34.6	18,324	
Clinton	9,634	594	603	609	1,225	1,443	1,327	618	556	793	495	160	39.0	7,450	
Crittenden	9,384	672	654	492	1,069	1,381	1,304	662	509	778	553	198	40.1	7,206	
Cumberland	7,147	486	497	332	842	1,076	937	423	410	692	419	167	40.1	5,458	
Daviess	91,545	6,796	6,958	5,568	11,553	14,469	12,568	4,520	3,922	6,701	4,421	1,521	36.8	67,925	
Edmonson	11,644	787	838	731	1,496	1,738	1,605	749	588	963	534	178	38.0	8,899	
Elliott	6,748	497	508	414	856	997	963	369	338	480	289	132	37.0	5,036	
Estill	15,307	1,023	1,078	977	2,155	2,308	2,078	886	735	1,132	672	258	36.7	11,610	
Fayette	260,512	14,947	18,422	28,355	44,542	41,824	34,491	11,275	8,625	13,890	9,149	3,135	33.0	204,979	
Fleming	13,792	981	969	792	1,938	2,060	1,926	744	622	1,012	618	215	36.3	10,292	
Floyd	42,441	2,889	3,084	2,866	6,064	6,787	6,303	2,242	1,841	2,868	1,752	549	36.7	32,407	
Franklin	47,687	2,993	3,259	3,220	6,847	7,685	7,336	2,572	1,984	3,175	2,045	665	37.0	36,911	
Fulton	7,752	545	596	469	888	1,086	1,028	431	341	657	503	200	38.5	5,824	
Gallatin	7,870	637	529	419	1,133	1,305	1,048	417	302	424	277	109	34.6	5,623	
Garrard	14,792	1,048	990	813	2,055	2,516	2,012	838	644	1,090	604	235	37.1	11,190	
Grant	22,384	1,778	1,640	1,470	3,471	3,580	2,735	1,104	836	1,154	737	246	32.7	15,959	
Graves	37,028	2,575	2,527	2,111	4,651	5,469	4,994	2,110	1,721	2,868	2,293	797	38.1	27,960	
Grayson	24,053	1,650	1,661	1,527	3,123	3,608	3,330	1,396	1,184	1,926	1,097	349	37.5	18,177	
Green	11,518	803	770	650	1,339	1,753	1,624	688	613	1,004	696	252	40.0	8,904	
Greenup	36,891	2,538	2,490	1,992	4,590	5,711	5,418	2,264	1,923	3,148	1,757	484	39.2	28,192	
Hancock	8,392	649	545	517	1,131	1,299	1,227	484	375	510	309	102	35.9	6,151	
Hardin	94,174	7,466	7,894	6,797	13,368	16,322	11,989	4,105	3,350	5,315	2,865	914	33.5	68,211	
Harlan	33,202	2,423	2,499	1,848	4,143	4,971	5,095	1,811	1,446	2,446	1,653	530	37.8	24,905	
Harrison	17,983	1,281	1,282	993	2,465	2,901	2,501	964	775	1,259	835	318	37.1	13,486	
Hart	17,445	1,288	1,271	1,021	2,199	2,726	2,303	988	816	1,350	826	257	36.9	12,957	

Source: U.S. Census Bureau, Census 2000

**PROFILE OF DEMOGRAPHIC CHARACTERISTICS
Kentucky, 2000**

County	Total Population	Population by Age												
		Under 5 Years	5 - 9 Years	10 - 14 Years	15 - 19 Years	20 - 24 Years	25 - 34 Years	35 - 44 Years	45 - 54 Years	55 - 59 Years	60 - 64 Years	65 - 74 Years	75 - 84 Years	85+ Years
Henderson	44,829	3,144	3,192	2,596	6,002	7,426	6,489	2,343	1,867	3,258	2,028	607	37.2	33,786
Henry	15,060	1,096	1,010	809	1,982	2,497	2,179	826	715	994	669	191	37.3	11,240
Hickman	5,262	351	325	247	628	775	727	327	310	459	353	160	40.9	4,100
Hopkins	46,519	3,331	3,110	2,665	5,960	7,158	6,718	2,553	2,186	3,487	2,481	890	38.3	35,279
Jackson	13,495	1,028	1,018	922	1,921	2,044	1,813	661	621	874	528	195	34.9	9,979
Jefferson	693,604	46,495	45,065	44,022	98,072	113,100	97,858	33,282	27,228	49,967	33,162	10,853	36.7	525,333
Jessamine	39,041	2,833	2,982	3,208	5,839	6,292	5,287	1,700	1,361	2,032	1,257	428	32.9	28,741
Johnson	23,445	1,607	1,754	1,390	3,148	3,617	3,612	1,287	1,137	1,657	951	346	37.4	17,817
Kenton	151,464	11,188	10,318	10,068	23,125	25,240	20,444	6,675	5,333	8,982	5,914	1,873	34.5	111,565
Knott	17,649	1,191	1,519	1,263	2,304	2,822	2,617	901	768	1,091	679	234	35.9	13,330
Knox	31,795	2,332	2,339	2,131	4,341	4,591	4,240	1,743	1,407	2,081	1,452	523	35.3	23,471
Larue	13,373	973	981	687	1,625	2,152	1,813	739	657	1,058	711	238	38.2	10,025
Laurel	52,715	3,680	3,670	3,452	7,621	8,428	7,324	2,782	2,267	3,519	1,904	619	35.5	39,314
Lawrence	15,569	1,169	1,176	956	2,153	2,323	2,235	868	744	1,085	640	212	36.5	11,633
Lee	7,916	569	548	503	1,163	1,239	1,091	404	377	627	360	148	37.4	6,119
Leslie	12,401	901	898	830	1,722	2,104	1,794	588	576	823	446	155	36.4	9,350
Letcher	25,277	1,717	1,916	1,599	3,194	4,067	3,902	1,390	1,232	1,787	1,050	346	37.9	19,281
Lewis	14,092	1,002	1,050	883	1,979	2,171	1,937	743	654	963	596	197	35.9	10,522
Lincoln	23,361	1,725	1,550	1,409	3,310	3,641	3,020	1,249	1,139	1,690	1,070	291	36.0	17,364
Livingston	9,804	669	635	487	1,230	1,539	1,463	657	527	803	490	170	39.8	7,616
Logan	26,573	1,868	1,910	1,554	3,419	4,147	3,564	1,509	1,211	1,904	1,285	467	37.0	19,748
Lyon	8,080	372	358	476	1,198	1,463	1,166	499	514	758	419	180	41.5	6,805
McCracken	65,514	4,307	4,205	3,612	8,126	10,258	9,690	3,734	2,773	5,288	3,743	1,414	39.2	50,199
McCreary	17,080	1,379	1,432	1,152	2,366	2,458	2,341	935	766	1,037	595	178	34.2	12,351
McLean	9,938	689	696	549	1,295	1,455	1,406	619	495	745	520	173	38.1	7,533
Madison	70,872	4,179	6,209	9,541	10,808	10,053	8,591	3,190	2,463	3,851	2,288	794	30.7	55,360

Source: U.S. Census Bureau, Census 2000

PROFILE OF DEMOGRAPHIC CHARACTERISTICS
Kentucky, 2000

County	Total Population	Population by Age													Median Age
		Under 5 Years	5 - 9 Years	10 - 14 Years	15 - 19 Years	20 - 24 Years	25 - 34 Years	35 - 44 Years	45 - 54 Years	55 - 59 Years	60 - 64 Years	65 - 74 Years	75 - 84 Years	85+ Years	
Magoffin	13,332	1,018	1,099	922	1,887	2,136	1,804	611	573	782	471	154	34.3	9,762	4,741
Marion	18,212	1,296	1,280	1,301	2,575	2,946	2,443	860	652	1,240	751	348	35.4	13,616	6,863
Marshall	30,125	1,984	1,887	1,547	3,521	4,619	4,271	1,864	1,772	2,820	1,772	679	40.9	23,565	11,389
Martin	12,578	979	1,037	843	1,704	1,986	1,856	593	479	729	394	102	34.1	9,039	4,333
Mason	16,800	1,206	1,091	940	2,190	2,595	2,448	862	705	1,364	947	293	38.1	12,747	6,022
Meade	26,349	2,114	1,917	1,724	4,070	4,558	3,238	1,150	953	1,339	632	168	32.2	18,510	9,177
Menifee	6,556	456	619	411	848	994	914	401	334	465	223	84	36.3	4,922	2,438
Mercer	20,817	1,379	1,294	1,078	2,751	3,302	2,928	1,186	983	1,607	1,071	359	38.2	15,737	7,441
Metcalfe	10,037	708	656	572	1,311	1,554	1,289	560	515	853	485	171	37.7	7,566	3,637
Monroe	11,756	744	835	729	1,465	1,786	1,549	678	627	977	591	228	38.2	8,945	4,262
Montgomery	22,554	1,531	1,463	1,442	3,324	3,479	3,203	1,175	897	1,549	1,004	347	36.0	16,939	8,072
Morgan	13,948	880	976	1,126	2,177	2,417	1,879	662	570	918	521	204	35.8	10,830	6,088
Muhlenberg	31,839	2,049	2,190	2,057	4,055	4,847	4,495	1,882	1,511	2,572	1,709	645	38.7	24,633	12,075
Nelson	37,477	2,928	2,770	2,219	5,160	6,365	5,165	1,741	1,428	2,203	1,354	426	34.9	27,105	13,166
Nicholas	6,813	451	446	413	896	1,028	954	367	345	528	365	154	38.4	5,205	2,456
Ohio	22,916	1,673	1,657	1,374	2,952	3,353	3,169	1,360	1,110	1,701	1,155	440	37.5	17,212	8,349
Oldham	46,178	3,824	3,200	2,170	5,777	9,514	7,771	2,502	1,529	1,930	973	344	36.7	33,534	18,141
Owen	10,547	791	756	623	1,287	1,661	1,481	570	493	791	508	180	37.5	7,853	3,882
Owsley	4,858	357	367	297	599	714	668	295	227	395	239	97	38.2	3,664	1,801
Pendleton	14,390	1,225	1,049	852	1,999	2,495	1,820	702	566	857	475	170	34.4	10,306	5,098
Perry	29,390	2,050	2,197	1,843	4,243	4,791	4,403	1,513	1,328	1,869	1,083	336	36.3	22,229	10,606
Pike	68,736	4,589	4,871	4,444	9,592	11,018	10,385	3,684	3,032	4,899	2,815	734	37.1	52,451	25,014
Powell	13,237	1,004	1,058	870	1,877	2,100	1,811	691	581	836	417	149	34.8	9,713	4,733
Pulaski	56,217	3,859	3,707	3,140	7,433	8,660	7,911	3,223	2,867	4,774	2,800	912	38.5	43,061	20,623
Robertson	2,266	163	141	96	276	339	308	148	121	193	139	52	39.5	1,727	830
Rockcastle	16,582	1,199	1,113	1,062	2,432	2,535	2,215	898	795	1,241	673	282	36.3	12,528	6,090

Source: U.S. Census Bureau, Census 2000

PROFILE OF DEMOGRAPHIC CHARACTERISTICS
Kentucky, 2000

County	Total Population	Under 5 Years	Population by Age													Median Age
			5 - 9 Years	10 - 14 Years	15 - 19 Years	20 - 24 Years	25 - 34 Years	35 - 44 Years	45 - 54 Years	55 - 59 Years	60 - 64 Years	65 - 74 Years	75 - 84 Years	85+ Years		
Rowan	22,094	1,195	2,425	3,524	2,840	2,873	2,523	961	934	1,294	776	225	29.8	17,619	8,495	
Russell	16,315	1,082	1,073	824	2,073	2,420	2,297	1,015	918	1,489	920	279	39.9	12,640	6,021	
Scott	33,061	2,288	2,575	2,671	5,282	5,498	4,277	1,414	1,053	1,601	965	370	32.4	24,376	11,595	
Shelby	33,337	2,277	2,426	1,983	4,814	5,658	4,845	1,833	1,313	1,952	1,205	433	35.9	24,946	11,905	
Simpson	16,405	1,207	1,076	1,002	2,255	2,531	2,201	837	728	1,077	797	279	35.9	12,100	5,785	
Spencer	11,766	867	803	617	1,790	2,155	1,647	572	447	610	341	122	35.1	8,595	4,287	
Taylor	22,927	1,555	1,784	1,558	2,640	3,528	3,111	1,241	1,174	1,973	1,127	387	38.1	17,562	8,254	
Todd	11,971	886	827	718	1,598	1,802	1,510	666	504	891	608	172	35.9	8,788	4,228	
Trigg	12,597	868	706	610	1,520	1,840	1,784	840	777	1,217	676	197	40.5	9,711	4,707	
Trimble	8,125	642	541	427	1,204	1,308	1,171	392	354	485	323	118	35.7	5,980	2,910	
Union	15,637	1,061	1,817	1,296	1,796	2,194	2,157	741	627	1,067	683	262	34.5	11,680	5,819	
Warren	92,522	5,756	8,335	10,377	13,105	13,835	11,916	4,254	3,357	5,210	3,305	1,162	32.3	71,124	34,280	
Washington	10,916	812	852	647	1,346	1,700	1,450	571	497	830	586	217	37.1	8,159	3,907	
Wayne	19,923	1,457	1,435	1,258	2,688	2,914	2,692	1,097	999	1,547	891	277	36.6	14,874	7,243	
Webster	14,120	948	1,024	874	1,821	2,119	1,976	757	665	1,109	727	277	37.8	10,714	5,170	
Whitley	35,865	2,672	2,874	2,613	4,624	5,171	4,743	1,977	1,597	2,500	1,571	563	35.4	26,620	12,582	
Wolfe	7,065	542	526	472	877	1,134	960	397	304	481	286	128	36.4	5,234	2,565	
Woodford	23,208	1,788	1,624	1,221	3,028	4,210	3,623	1,242	965	1,350	803	261	37.1	17,317	8,261	

Source: U.S. Census Bureau, Census 2000

APPENDIX G

Leading Causes of Death by Gender
Kentucky, 1999

Rank	Female					Male				
	Cause	No.	% of Total	Crude Rate*	AAR	Cause	No.	% of Total	Crude Rate*	AAR
	All Causes	19,693	100.0%	966.8	834.5	All Causes	19,241	100.0%	1,000.5	1,233.3
1	Disease of heart	6,373	32.4%	312.9	264.1	Disease of heart	5,963	31.0%	310.1	393.0
2	Malignant neoplasms	4,179	21.2%	205.2	183.3	Malignant neoplasms	4,754	24.7%	247.2	291.7
3	Cerebrovascular diseases	1,735	8.8%	85.2	71.4	Chronic lower respiratory diseases	1,200	6.2%	62.4	78.6
4	Chronic lower respiratory diseases	1,085	5.5%	53.3	46.7	Unintentional injuries	1,122	5.8%	58.3	62.3
5	Diabetes mellitus	641	3.3%	31.5	27.5	Cerebrovascular diseases	1,045	5.4%	54.3	73.5
6	Unintentional injuries	591	3.0%	29.0	26.7	Diabetes mellitus	477	2.5%	24.8	30.0
7	Alzheimer's disease	553	2.8%	27.1	22.1	Intentional self-harm (suicide)	389	2.0%	20.2	21.0
8	Nephritis and nephrosis	417	2.1%	20.5	17.3	Nephritis & nephrosis	382	2.0%	19.9	26.2
9	Septicemia	360	1.8%	17.7	15.0	Septicemia	309	1.6%	16.1	20.8
10	Influenza & pneumonia	328	1.7%	16.1	13.3	Influenza & pneumonia	276	1.4%	14.4	20.6
11	Essential hypertension & renal disease	130	0.7%	6.4	5.4	Chronic liver disease & cirrhosis	238	1.2%	12.4	12.9
12	Chronic liver disease & cirrhosis	128	0.6%	6.3	5.8	Alzheimer's disease	223	1.2%	11.6	17.9
13	Aortic aneurysm & dissection	116	0.6%	5.7	4.9	Aortic aneurysm & dissection	170	0.9%	8.8	10.9
14	Atherosclerosis	102	0.5%	5.0	4.1	Assault (homicide)	145	0.8%	7.5	7.4
15	Parkinson's disease	88	0.4%	4.3	3.7	Parkinson's disease	106	0.6%	5.5	7.6
16	In situ neoplasms, benign neoplasms	87	0.4%	4.3	3.6	Conditions org. in perinatal period	102	0.5%	5.3	5.2
17	Intentional self-harm (suicide)	84	0.4%	4.1	4.0	Essential hypertension & renal disease	87	0.5%	4.5	5.9
18	Conditions org. in perinatal period	78	0.4%	3.8	4.2	In situ neoplasms, benign neoplasms	84	0.4%	4.4	5.8
19	Pneumonitis due to solids & liquids	67	0.3%	3.3	2.7	Congenital malformations, deformations	83	0.4%	4.3	4.2
20	Assault (homicide)	66	0.3%	3.2	3.2	Pneumonitis due to solids & liquids	62	0.3%	3.2	4.9

*Crude rate per 100,000 population by gender; Age-Adjusted rate (AAR) adjusted to the 2000 U.S. Standard Population

Source: Kentucky Death Certificate File, 1999. Surveillance and Health Data Branch

Hospital Discharges by Major Diagnostic Category (MDC) and Gender, Kentucky, 2000

	GENDER		Data		FEMALE		MALE		UNKNOWN		Overall	
	Total Cases	Mean LOS	Total Cases	ALOS	Total Cases	ALOS	Total Cases	ALOS	Total Cases	ALOS	Total Cases	ALOS
CLINICAL - MDC CATEGORY	15,293	5.6	12,185	5.9	3	2.7	27,481	5.7			27,481	5.7
01 D&D OF THE NERVOUS SYSTEM	273	3.1	311	3.1			584	3.1			584	3.1
02 D&D OF THE EYE	3,164	3.0	3,051	3.2	1	1.0	6,216	3.1			6,216	3.1
03 D&D OF THE EAR, NOSE, MOUTH & THROAT	38,586	5.8	31,737	5.7	2	5.5	70,325	5.7			70,325	5.7
04 D&D OF THE RESPIRATORY SYSTEM	47,835	4.5	45,392	4.3	2	1.0	93,229	4.4			93,229	4.4
05 D&D OF THE CIRCULATORY SYSTEM	26,396	4.8	18,882	4.8	1	2.0	45,279	4.8			45,279	4.8
06 D&D OF THE DIGESTIVE SYSTEM	8,229	4.8	5,938	5.5			14,167	5.1			14,167	5.1
07 D&D OF HEPATOBILIARY SYSTEM & PANCREAS	21,001	5.2	14,165	4.5			35,166	4.9			35,166	4.9
08 D&D MUSCULOSKELTL SYSTEM CONNECT TISSUE	5,887	4.6	3,752	4.6	2	3.5	9,641	4.6			9,641	4.6
09 D&D SKIN, SUBCUTANEOUS TISSUE & BREAST	10,092	4.2	6,102	3.9	1	7.0	16,195	4.1			16,195	4.1
10 ENDOCRINE, NUTRITIONAL & METABOLIC D&D	11,130	4.6	8,270	4.4			19,400	4.5			19,400	4.5
11 D&D OF THE KIDNEY & URINARY TRACT			2,589	3.5			2,589	3.5			2,589	3.5
12 D&D OF THE MALE REPRODUCTIVE SYSTEM	14,606	2.6					14,606	2.6			14,606	2.6
13 D&D OF THE FEMALE REPRODUCTIVE SYSTEM	51,126	2.6					51,126	2.6			51,126	2.6
14 PREGNANCY, CHILDBIRTH & THE PUERPERIUM	20,380	3.1	21,917	3.2	1	20.0	42,298	3.2			42,298	3.2
15 NEWBORN & NEOS WITH COND ORIG PERINATAL	2,602	4.4	1,709	4.4			4,311	4.4			4,311	4.4
16 D&D OF BLOOD & BLOOD FORMING ORGANS	1,875	6.9	1,875	7.1			3,750	7.0			3,750	7.0
17 MYELOPROLIFERATIVE DISORDERS	5,107	6.7	4,060	6.6			9,167	6.7			9,167	6.7
18 INFECTIOUS & PARASITIC DISEASES	11,183	7.8	8,850	9.5			20,033	8.6			20,033	8.6
19 MENTAL DISEASES & DISORDERS	1,942	4.4	4,346	4.3			6,288	4.3			6,288	4.3
20 ALCOHOL/DRUG USE & INDUCED ORG MNTL DIS	3,005	3.5	2,819	3.6			5,824	3.6			5,824	3.6
21 INJURIES,POISONS,TOXIC EFFECT OF DRUGS	130	8.4	275	7.7			405	7.9			405	7.9
22 BURNS	3,038	11.3	1,672	12.1			4,710	11.6			4,710	11.6
23 FCTRS INFLU HLTH STAT,OTH CNTCT HTH SER	272	10.3	532	10.0			804	10.1			804	10.1
24 MULTIPLE SIGNIFICANT TRAUMA	84	8.1	310	9.2			394	9.0			394	9.0
25 HIV INFECTIONS												
Grand Total	303,236	4.5	200,739	5.0	13	4.5	503,988	4.7			503,988	4.7

SOURCE: Kentucky Department for Public Health, Health Policy Development Branch, 2000 Kentucky Hospital Discharge File

