

# CHAPTER 3 POPULATION

## INTRODUCTION

It is essential to study population trends for the County and region in order to better understand future population projections. Although predicting population may be complex and complicated at times, resources such as the Kentucky State Data Center (KSDC) and the Kentucky Population Research (KPR) allow population projecting to be facile. An economic boom or decline can have a significant impact on the results, as could natural or man-made calamities. The Population Element of this plan will be based on the figures and estimates of the KSDC, KPR, and the U.S. Census Bureau.

## POPULATION TRENDS

According to the U.S. Department of Commerce, Bureau of the Census, Barren County, as a whole, from 1910 to 2020 grew a total of 19,192 people. That results into a 75% increase in population over a 100-year span. Barren County has had an increase every decade except for two. Between 1950 and 1960 the County experienced a slight decrease in population, going from 28,461 to 28,303 and during 1980 to 1990 decreasing only eight people. During the fifty year period from 1960 to 2010, the County experienced a 32.8% population increase of 13,712 persons. During the most recent decade, 2010 to 2020, the population rose 2,312, representing a 5.48% increase, see Table 3.1 and Figure 3.1.

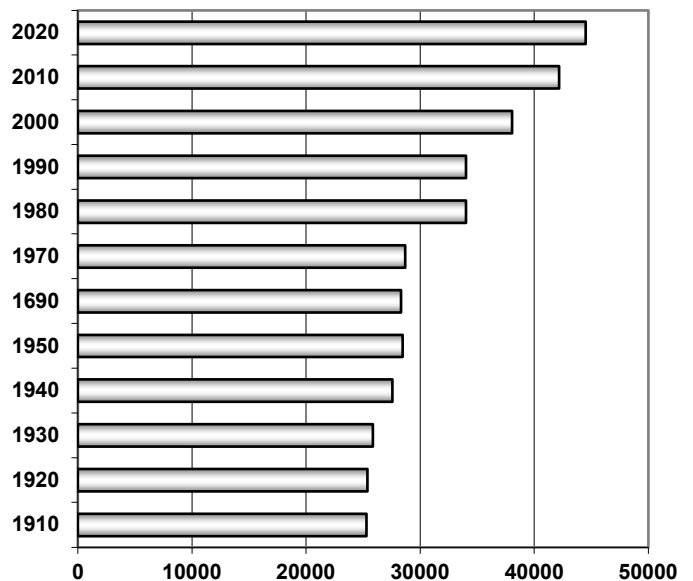
The 2010-2020 decade increase in population could be associated with the regions development of industry and higher education. However, the increase is most likely related to the areas development of technology, transportation infrastructure, and economic development. As seen in Table 3.2, the Barren River Area Development District (BRADD), which encompasses a 10-county area including Barren County, experienced a 9.8% increase in population since 2010.

**Table 3.1:**  
***Population Trends for  
Barren County Over a 120-Year Span***

Year	Population	Change Between Periods	Number Change from 1900	% Growth from 1900
<b>Barren County</b>				
1910	25,293	-----		-----
1920	25,356	63	2,159	9.3%
1930	25,844	488	2,647	11.4%
1940	27,559	1,715	4,362	18.8%
1950	28,461	902	5,264	22.7%
1960	28,303	-158	5,106	22%
1970	28,677	374	5,480	23.6%
1980	34,009	5,324	10,812	46.7%
1990	34,001	-8	10,804	46.6%
2000	38,033	4,032	14,836	64%
2010	42,173	4,140	18,976	82%
2020	44,485	2,312	19,192	92%

Source: U.S. Census Bureau

**Figure 3.1:**  
***Population Trends for  
Barren County Over a 110-Year Span***



Source: U.S. Census Bureau

**Table 3.2:**  
**Population Trends for the  
BRADD Region Over a 60-Year Span**

Year	Population	Change Between Periods	Number Change from 1960	% Change Between Periods
<b>Barren River Area Development District Region</b>				
1960	170,461	-----	-----	-----
1970	186,279	15,818	15,818	9.3%
1980	217,041	30,762	46,580	16.5%
1990	221,719	4,678	51,258	2.2%
2000	255,225	33,506	84,764	15.1%
2010	284,195	28,970	113,734	10.2%
2020	312,062	27,867	141,601	9.8%

Source: U.S. Census Bureau

An accurate perception of the geographic distribution of the population within Barren County is an important component of the planning process. As seen in Table 3.3, the three Cities located within Barren County makeup 40.5% of the population while 59.5% is located in the unincorporated area of the County. The largest concentration of population is found in the County Seat of Glasgow.

**Table 3.3:**  
**Spatial Distributions  
by County and City for 2024**

Location	Total	Percent of Total Population
Unincorporated	26,501	59.5%
Glasgow	15,014	33.8%
Cave City	2,356	5.3%
Park City	614	1.4%

Source: U.S. Census Bureau

As expressed earlier, between 1960 and 2010 the County experienced a 49% increase in population. A large percentage of this growth has occurred in the unincorporated areas; however this is a relatively recent occurrence. During the period from 1960 to 1970 the growth was taking place in the Cities, especially Glasgow and Cave City. However, since

1970 population growth in the unincorporated areas is steadily outpacing that of the Cities.

Since 1960 Glasgow has experienced a 42.6% growth rate. Except for the period between 1980 and 1990, growth has steadily increased in Glasgow. Cave City, the second largest city, experienced a 70% rate increase during the fifty-seven year period. Much of this increase is likely do to available jobs in neighboring Hart County. Park City has seen relatively little increase in population recently after growing early in the period, see Table 3.4.

**Table 3.4:**  
**Population Trends of Barren County,  
Incorporated Cities and Unincorporated Area  
1970 - 2020**

Area	1970	1980	1990	2000	2010	2020	% Change
Barren County	28,677	34,009	34,001	38,033	42,173	44,485	57.2
Glasgow	11,301	12,958	12,351	13,019	14,028	15,014	49.1
Cave City	1,818	2,098	1,953	1,880	2,240	2,356	66.1
Park City	567	614	549	517	537	614	23.5
Cities	13,838	16,019	15,073	15,640	16,805	17,984	50.1
County	14,839	17,990	18,928	22,363	25,368	26,501	62.4

Source: U.S. Census Bureau

## POPULATION PROJECTION

### OFFICIAL PROJECTION DATA CENTERS

#### Kentucky State Data Center (KSDC)

The Kentucky State Data Center (KSDC) is a cooperative effort among the University of Louisville, the Commonwealth of Kentucky and the U.S. Census Bureau in providing training and technical assistance to interested data users.

#### Kentucky Population Research (KPR)

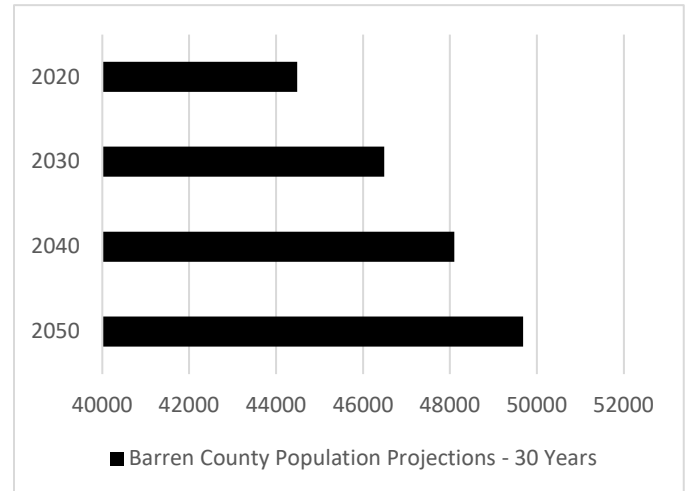
Kentucky Population Research (KPR) is the applied demographic research program of the University of

Louisville's Urban Studies Institute, providing technical assistance to the Kentucky State Data Center. KPR is Kentucky's representative in the Federal-State Cooperative Program for Population Estimates and Projections. KPR is also in conjunction with the U.S. Census Bureau, the state's official source of population forecasts and estimates.

**POPULATION PROJECTION**

Population projections for Barren County are published by the Kentucky State Data Center. These forecasts are based on the cohort-component method. Assumptions were made for future births, deaths and migration as derived from recent demographic trends by age, gender and race groups. For planning purposes, the middle range projection series forecast by the Kentucky State Data Center will be utilized. According to the U.S. Census Bureau, Kentucky had a 3.8% increase in population from 2010 to 2020. In relation, Barren County was ahead of the increase for the state by 5.48% for the same decade. Between 2020 and 2050, the population for Barren County is projected to exceed the state in growth by 5.5%. Barren County is projected to grow from 44,485 in 2020 to 49,688 in 2050, representing a 11.7% increase in projected growth, see Table 3.5 and Figure 3.2.

**Figure 3.2:**  
**Population Projections for Barren County**



Source: Kentucky State Data Center, 2024

**Table 3.5:**  
**Population Projections for Barren County and Kentucky through 2050**

Year	Population	Change Between Periods	Number Change from 2020	% Change from 2020
<b>Kentucky</b>				
2020	4,505,836	-----	-----	-----
2030	4,641,150	135,314	135,314	3.0
2040	4,721,118	79,968	215,282	4.8
2050	4,785,233	64,115	279,397	6.2
<b>Barren County</b>				
2020	44,485	-----	-----	-----
2030	46,488	2,003	2,003	4.5
2040	48,100	1,612	3,615	8.1
2050	49,688	1,588	5,203	11.7

Source: Kentucky State Data Center, Vintage 20 Projections

**BARREN COUNTY GROWTH**

The County is being influenced by the rapid growth of neighboring Warren County to the west. Interstate 65 provides good access to jobs for citizens of Barren County, Warren County and neighboring counties as well. With planned development taking place in eastern Warren County and the development of Interstate 66, it is likely people will be moving to Barren County to live, in part due to lower housing costs and the rural character. Barren County population trends are influenced by the same trends affecting the United States overall as well as much of the western civilization. The overall population growth is higher than in the past. As seen in Table 3.6, birth rates increased in 2020 compared to 2010, while death rates also increased for that period. This trend is expected to continue as shown in Figure 3.3.

**GENDER AND AGE CHARACTERISTICS**

The age structure increase/decrease percentage for Barren County from 2000 to 2020 is presented in Table 3.6. During 2020 the total amount of males in Barren County was at 48.8% and females represented 52.2%. The total amount of males in the County for 2020 was 21,709 or 48.8%, while females represented 22,776 or 52.2% of the population. These results show that the population in Barren County is becoming more even in the male-to-female ratio. During the 2000 – 2020 period, the age groups that gained the most in population were the 60 to 64

group and the 65 to 74 group. The greatest gain was in the 60 to 64 cohort, which had a 76.7% increase. The cohort that lost the most within this time period was the 35-44 age group which declined by 7.5%.

**Table 3.6:**  
**Population Percentage**  
**Increase/Decrease by Age and**  
**Sex 2000 – 2020**

Cohorts	2000 Pop.	2010 Pop.	2020 Estimate	% Change 00-20
Total	38,033	42,173	44,485	16.9%
Male	18,298	20,464	21,709	18.6%
Female	19,735	21,709	22,776	15.4%
Under 5	2,432	2,756	2,653	9.1%
5-9	2,614	2,760	2,934	12.2%
10-14	2,566	2,889	2,956	15.2%
15-19	2,587	2,812	2,772	8.7%
20-24	2,113	2,238	2,336	10.6%
25-34	5,001	5,038	5,621	12.4%
35-44	5,964	5,584	5,518	-7.5%
45-54	5,171	6,329	5,735	10.9%
55-59	2,095	2,720	2,919	39.3%
60-64	1,783	2,547	3,150	76.7%
65-74	3,010	3,543	4,678	55.4%
75-84	1,925	2,120	2,411	25.2%
85+	772	837	828	7.3%
Median Age	38.0	39.7	40.2	5.8%
20 and over	28,823	31,957	33,196	15.2%
Male	13,598	15,289	15,830	16.4%
Female	15,225	16,668	17,366	14.1%
65 and over	5,707	6,500	7,917	38.7%
Male	2,266	2,694	3,481	53.6%
Female	3,441	3,806	4,406	28.0%

Source: \*2022 American Community Survey, U.S. Census Bureau,

An analysis of the cohort projections is also warranted which can identify targeted age group needs and potential issues. In evaluating the projections from the 2022 American Community Survey, the most notable changes are the decrease in the 35-44 year age group and the slight increase of the 25-34 year age group. Analysis shows that Barren County’s workforce under age 35 is increasing at a lesser rate. This is an important factor

economically because cohorts under age 19 and over 65 are considered “Non-Producers” as they are typically out of the workforce due to being school-age or being retired. “Producers” are typically considered in the 20-64 cohorts.

The median age of Barren County has increased in the past decade. Median age is defined as the age which divides the population at the midpoint with two equal size groups, one group younger than the midpoint and the other older. Median age does not indicate a point of concentration in age distribution. The median age for the County in 2000 was 38.0 and rose to 40.2 in 2020, showing as a whole the population is getting older.

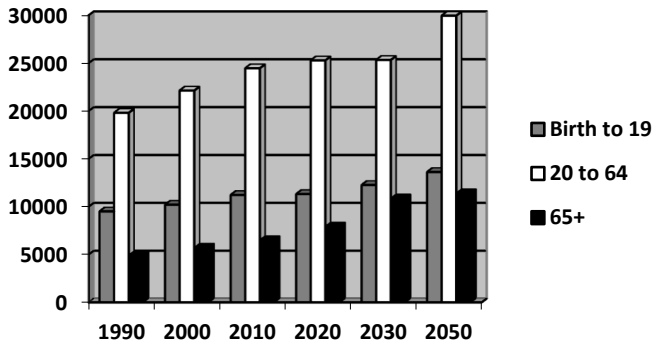
Figure 3.3 presents the Barren County population and projections for the period 2000 – 2050, by age groups into three cohorts, 0-19 years, 20-64 years, and 65 years and older. The 0-19 age cohort has a great significance to the County because of childcare, education, recreation, and other similar needs. The University of Kentucky projects a steady increase in the 0-19 age group through 2050. In 2010, the 0-19 age cohort comprised 27% of the population, 11,217 persons. By 2050 this cohort is projected to represent 27% of the total population or 13,619 persons.

The University of Kentucky projects that the State’s population will continue to “gray” as the number of persons over 65 years of age increases. According to the 2010 Census, the percentage of persons 65 years of age and older for the state was 13.3%. Barren County was above the state average with 15.4% of the total population within the 65 years and older cohorts. Through the year 2050 the 65 years and older cohort, as a percentage of total population, is projected to increase from 15% to 25% within Barren County. This is an increase of 4,383 persons.

Age dependency ratios are another measure which reflects the composition of Barren County’s population. There are three types of dependency ratios: youth dependency, old age dependency, and total dependency. Youth dependency ratios isolate those under 20, while old age dependency ratios segregate those 65 and older. The total dependency ratio is the relationship of the combined youth and aged population to the intermediate population. This ratio compares the “non-producers” (ages 0-19 and 65+) to the “producers” (20-64). In 2010, Barren County had a total dependency ratio of 1:1.38 (non-producers to producers). The census indicates a 2020 dependency ratio of 1:1.31; a 2030 dependency ratio of 1:1.09; and a 2050 dependency ratio of 1:1.16.

These ratios indicate the number of producers, or those ages 20-64, will be decreasing proportionately to that of the non-producers. Therefore, it is projected that while our resident workforce will be increasing, the dependency demand will be increasing at a faster pace. see Table 3.7.

**Figure 3.3:**  
**Barren County Population and Projections**  
**by Age Group 1990 - 2050**



Source: University of Kentucky Population Projections

**Table 3.7:**  
**Cohort Population and Projections 2010 - 2050**

Year	0 - 19		20 - 65		65 +	
	Total	%	Total	%	Total	%
2000	10,199	27	22,127	58	5,707	15
2010	11,217	27	24,456	58	6,500	15
2020	11,315	25	25,279	57	7,917	18
2030	12,262	26	25,322	54	10,864	23
2050	13,619	27	29,948	60	12,300	25

Source: Kentucky State Data Center and U.S. Census Bureau

### POPULATION PYRAMIDS

Population pyramids are visual representations that help to understand the age and gender of a certain population. When several pyramids are used for the past and present decades, it is easier to understand what age cohorts and genders are increasing or decreasing. This knowledge will assist planners to prepare for the future needs of the community. Each

pyramid is divided into male and female, and age cohorts of five years starting with birth to four years old and up to the age of 85 and older. This information is important in understanding the population change currently taking place in order to plan for all elements of the community. When viewing the pyramid, the first observation is the aging of both sexes. Figure 3.4, located on page 6, depicts the population pyramids for Barren County for 2020 and 2050.

### RACIAL CHARACTERISTICS

According to the 2020 Census, Barren County's population is primarily white with 39,270 persons, or 92% of the total population. The 2020 non-white population is comprised of 3,535 persons, or 8% of the total population.

**Table 3.8:**  
**Total Non-White Composition**  
**of Barren County 2000 – 2020**

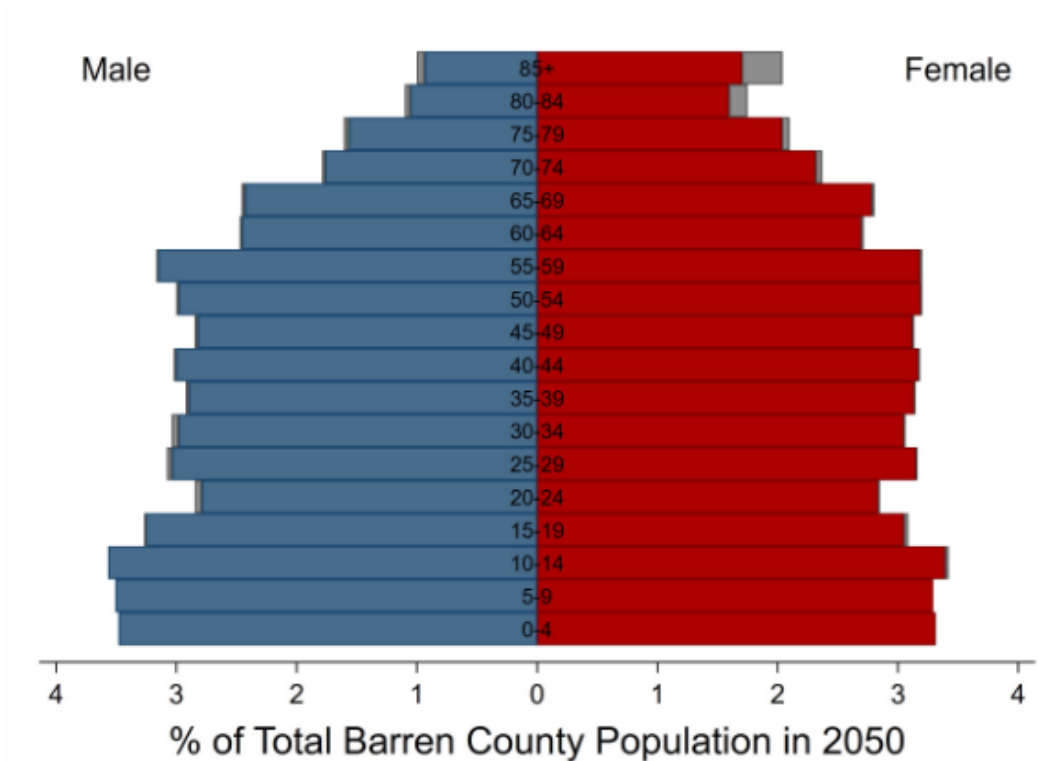
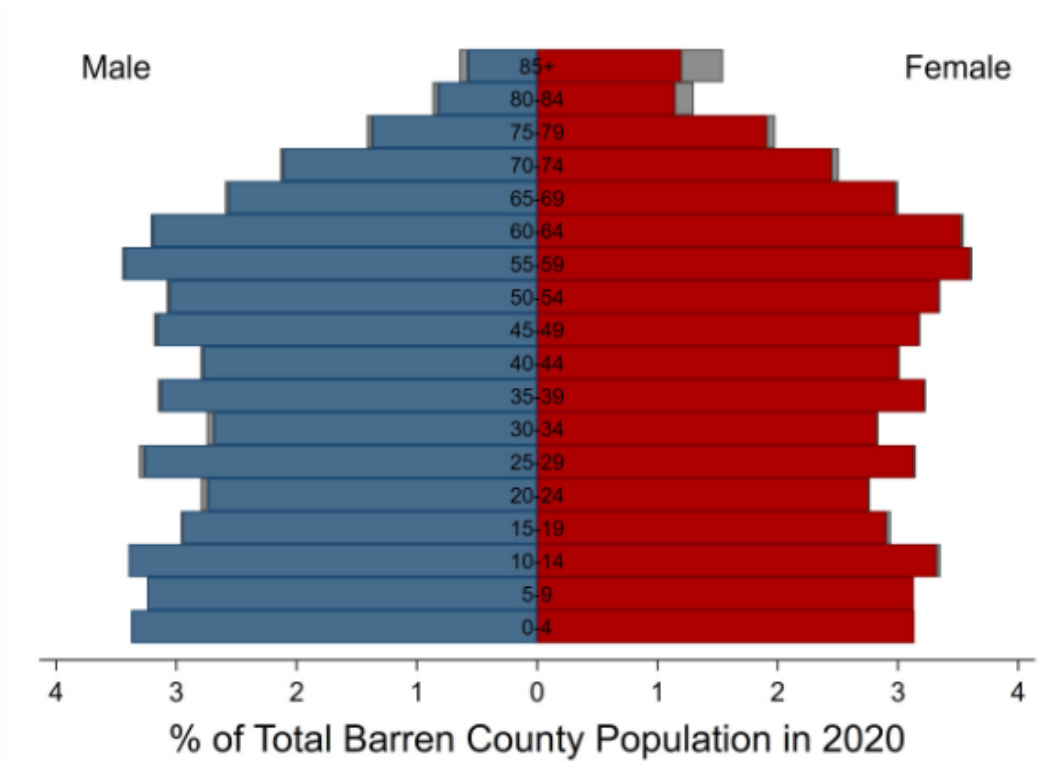
	2000	2010	2020	% Change 2000-2020
African American	1,556	1,627	1,724	10.8
Hispanic	355	1,110	1,889	432.1
Other	56	617	949	1,594.6
Asian/Pacific Islander	155	181	314	102.6
Total	2,122	3,535	4,876	129.8

Source: U.S. Census Bureau, KSDC 2017 Estimate

Table 3.8 displays the 2000, 2010 and 2020 non-white population composition for the County and the percentage change for the twenty-year period. Percentage changes are helpful in recognizing trends. However, these figures must be considered with the actual numbers since large percentage increased or decreased can result from minor changes in the raw numbers if the community is smaller.

In 2020, on a countywide basis, Hispanics comprised the largest percentage of Barren County's non-white population at 4.2%. African Americans were the next largest group at almost 3.8%, followed by Others at 2.1%. Since 2000 the most notable change in the composition is reflected in Others which rose from 56 to 949 or over 1500%.

**Figure 3.4:**  
**Barren County Population Projection Pyramids 2020-2050**



Source: Kentucky State Data Center

**VITAL STATISTICS**

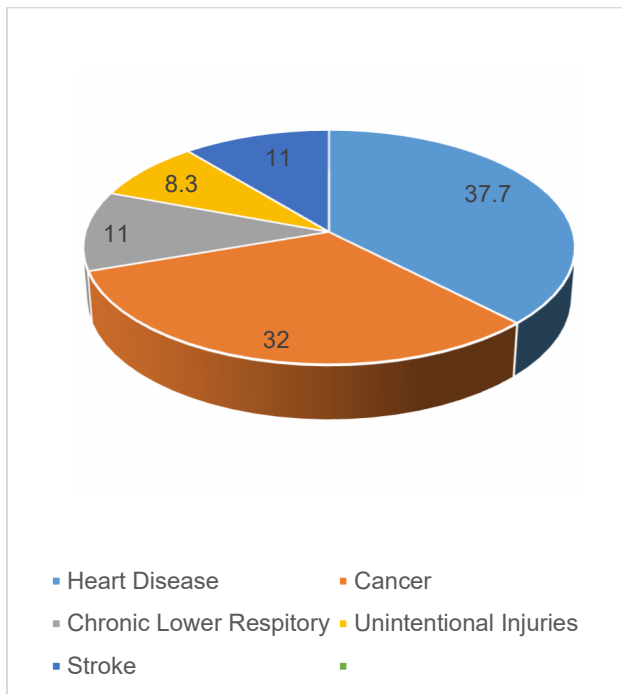
The leading cause of death for both Kentucky and Barren County is heart disease. In 2017 this disease comprised 37.7% of Barren County’s deaths. For both the State and the County a large percentage of total deaths fall under the “other” category. Numerous maladies are contained within this category because their individual percentages of total deaths are too small to display graphically. Figure 3.5 breaks down the causes of death for Barren County.

**Table 3.9:**  
**Leading Causes of Death in the United States, Kentucky and Barren County 2020**

Cause of Death	Barren County	Kentucky	United States
Heart Disease	203.9	195.9	211.5
Cancer	124.7	185.7	182.8
Respiratory	61.1	64.5	46.3
Injuries	46.7	72.9	51.0
Stroke	61.1	39.4	48.6

\* Rate per 100,000 Total Population  
Source: Kentucky Cabinet for Health Services

**Figure 3.5:**  
**Leading Causes of Deaths in Barren County**



Source: Kentucky Cabinet for Health Services, 2011

**CONCLUSION**

As shown in Figure 3.2 and reported by the Kentucky State Data Center, Barren County is expected to increase dramatically in population over the next 30 years. As our population increases, our elderly population (65+) will increase as well. The population will continue to “gray” and this graying effect will have an impact on development patterns, housing, services, etc. The jobs created in neighboring counties as well as Barren County itself will create regional growth pressures that will bring more and better paying jobs to our area. This factor will result in a population increase, as more and more people will be moving to reside within Barren County. As our County grows in population so will the demand for additional community facility services. Barren County now needs to look at the possible problems of tomorrow and decide on a current course of action to help alleviate the financial, social and political challenges that will occur with an increase in population.