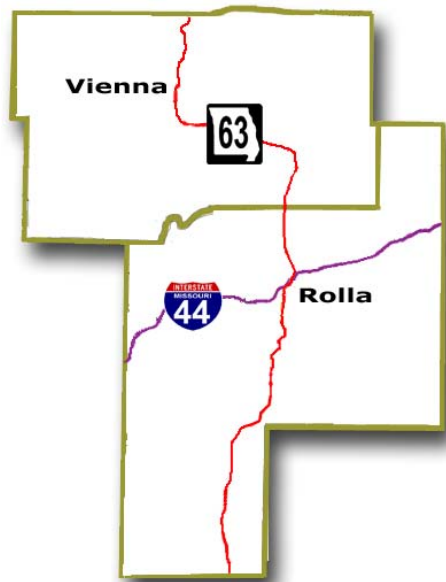


# COMMUNITY HEALTH ASSESSMENT



## PHELPS-MARIES COUNTY REGION

Phelps-Maries County Health Department  
March 2009

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## I. Introduction

The Phelps-Maries County Health Department was established as a combined two-county health department by a contract between Phelps and Maries counties in coordination with the Missouri Department of Health in 1991. This community health assessment reports combined data for the two-county Region, except where combined data is not available or reporting each county's data separately is more helpful in understanding the Region's health status.

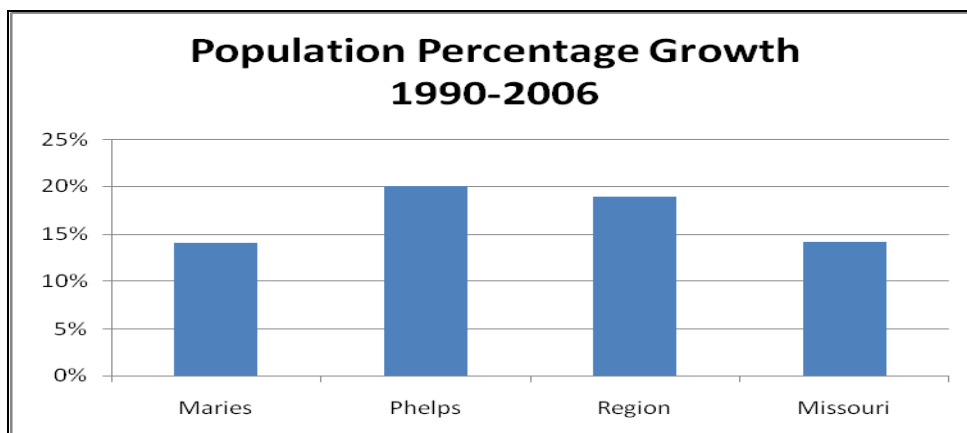
The combined Region encompasses 1,201 square miles with 43 people per square mile. Phelps County is larger than Maries County (673 square miles compared to 528 square miles), and is much more densely populated with 59 persons per square mile compared to 17 persons per square mile for Maries County. Phelps County is also more urban, with almost 50% of its population in urban centers versus none for Maries County.<sup>1</sup>

The main east-west road through the Region is I-44 and the main north-south route is US 63. The closest metropolitan area is Jefferson City. The Region is halfway between Saint Louis and Springfield. Rolla, in Phelps County, is home to the largest medical center in South Central Missouri, the 240 bed Phelps County Regional Medical Center. In addition to PCRMC, there are two large multi-physician groups, the Bond Clinic and St. Johns Clinic-Rolla, both located in Rolla. PCRMC maintains a clinic in Vienna in Maries County.

Because Maries County has a small population, some of its data is not statistically reliable due to low event numbers. It is not possible to make statistically accurate statements of Regional trends where underlying data is not reliable. Regional statistics were determined by summing each county's proportion of a data element based on its proportion of the appropriate population measure. In order to overcome limitations caused by annual low event numbers, some data is a combination of multiple years rather than a single year.

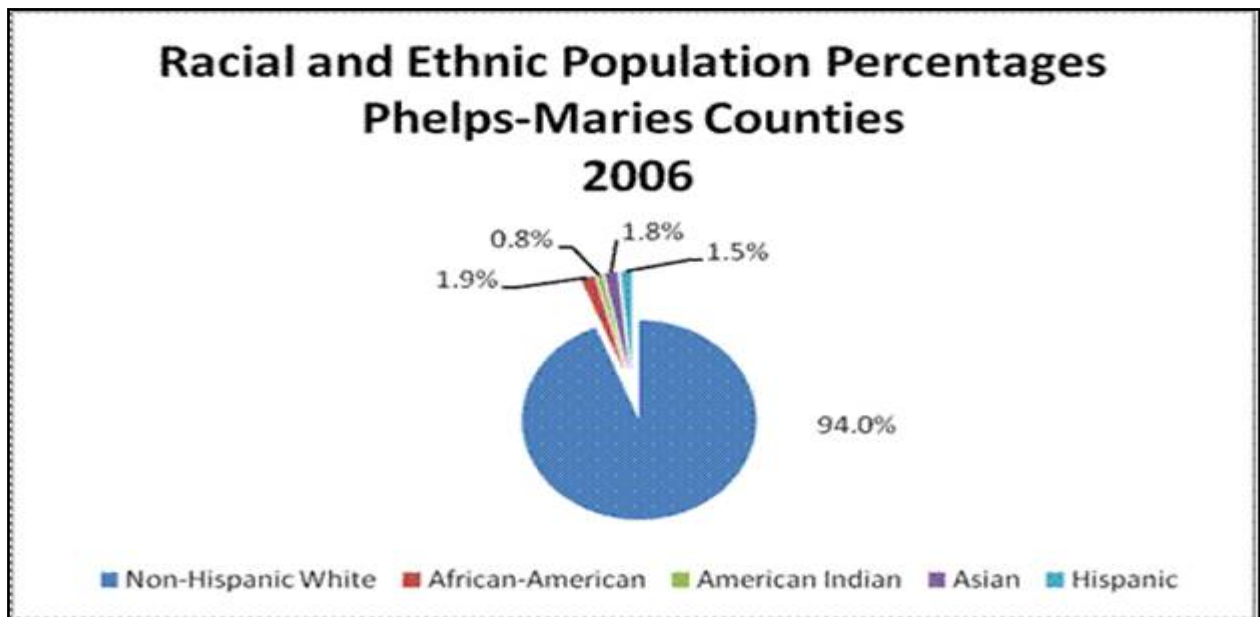
## II. Demographics

The U.S. Census Bureau estimated the 2006 Regional population at 51,388, of which 51.1% were male and 48.9% were female, an exact reversal of Missouri's overall gender distribution. The Region's population growth between 1990 and 2006 was 18.9%, or 30% higher than Missouri's percentage growth during the same period. While both counties grew during that 16 year period, all of the growth in excess of the state average is attributable to Phelps County.<sup>2</sup>



In 2006, the Region's population was slightly younger than Missouri's with 35.7% of the population under 25 years old compared to 34% for the state. However, the Region's percentage of children under 15 years old was almost ten percent less than that for the state (18.2% vs. 19.9%). Similar to Missouri as a whole, between 1990 and 2006 the Region's only age cohort that grew as a percentage of the population was the 45 to 64 year olds, which increased from 19.6% to 24.0% of the Regional population.<sup>3</sup>

Unlike the rest of Missouri, there is little ethnic or racial diversity in the Region's population. Although there have been significant percentage increases in the Region's African-American, Native American, and Hispanic populations over the last 16 years, in total they accounted for only 6% of the total population in 2006, up from 3.9% in 1990.<sup>4</sup>



Because of the low level of racial and ethnic diversity in the Region, this community assessment will not present data based on either measurement. Generally, data broken down by race or ethnicity is not available, and often where estimates are presented, they are considered statistically unreliable.

### III. Economic and Education

Maries County's 81.7% home ownership in 2000 was substantially higher than Phelps County's 65.5%. Because of Phelps County's population predominance, however, the Region's 68.5% home ownership was less than the 70.3% state average. The Region's \$33,630 median household income in 2004 lagged almost 18% behind Missouri's \$40,885 average. Household size in the Region was also slightly smaller than in the rest of the state (2.40 persons per household versus 2.48).<sup>5</sup>

In 2004, the percentage of people living below the federal poverty level was 16.2% higher than in the rest of the state (15.1% versus 13.0%). The percentage of persons in the Region living at less than 185% of the federal poverty level in 2000 was 35.4% compared to a state average of 27.2%. On the other hand, in 2000 both the percentage of single parent families and the

percentage of single mother families in both counties and in the Region were lower than in the state.<sup>6</sup>

A lower percentage of each county's, and the Region's, population were high school graduates than in the rest of Missouri (78.2% for the Region versus 81.3% for the state).<sup>7</sup> Although industrial occupations change rapidly in the current economy, in 2000, the Region was more heavily weighted towards education/health/social services, construction, and public administration than the rest of the state.<sup>8</sup> It is anticipated that the area's employment remains heavily weighted towards education, health services, social services, and public administration.

#### **IV. Environment**

Housing units in the Region are slightly newer than in the state as a whole. The percentage of homes built before 1950 in Maries County is 15% higher than in Phelps County and the median age of a home in Maries County is four years older than in Phelps County.<sup>9</sup>

<b>Age of Housing</b>		
<b>Area</b>	<b>Percent of houses built before 1950</b>	<b>Median year house built</b>
Maries	34.9%	1971
Phelps	26.3%	1975
Region	27.9%	1974
Missouri	35.9%	1970

According to the Missouri Economic Research and Information Center, most of the older houses are in the southeast portion of the Region, with the newer housing surrounding Rolla. Houses in the remaining area of the Region are generally between 25 and 35 years old.<sup>10</sup>

Lead testing in 2006 was completed on 19.2% of the children under six in the Region. Lead levels in excess of 9 mg/dl were found in 12% of the children tested, or 1.1% of the children under six in the Region. This incidence of blood lead level in the Region is half that in Missouri.<sup>11</sup>

There is no public fluoridated enriched or naturally occurring water system in Maries County. There are four enriched and one naturally occurring fluoridated water systems in Phelps County that cover 20,795 people or 40.5% of the Region's population.<sup>12</sup>

During 2002 through 2004 there was one report of a hazardous substance release in Maries County involving carbon monoxide poisoning, but the cause and source were not determined. During the same period, Phelps County experienced three events, all transportation related. One involved an over turned tractor trailer (lead oxide) and the other defective packaging of hydrochloric acid.<sup>13</sup>

#### **V. Public Safety/Domestic Violence**

The Regional crime rates for homicide, aggravated assault, and violent crimes are all lower than the respective rates for the state, but the Regional rates for aggravated assault and violent crimes

have shown significant increases since 2002, and now more nearly reflect state trends. Part of the increase may be the result of better and more complete reporting as a new tracking system began in 2001. The rate of juvenile crimes in Phelps County shows a similar significant increase between 2002 and 2007, and was higher than the respective state rate.<sup>14</sup>

<b>Crime Analysis</b>								
	Criminal Homicide		Aggravated Assault		Violent Crimes		Juvenile	
Rate	Per 100,000		Per 100,000		Per 100,000		Per 1,000	
Year	2002	2007	2002	2007	2002	2007	2002	2005
Maries	0.00	0.00	11.40	76.80	22.79	87.77	23.7	16.9
Phelps	2.50	0.00	175.28	423.03	222.86	486.49	35.8	65.1
Region	2.05	0.00	145.76	359.55	186.82	413.38	33.5	56.3
Missouri	6.84	6.24	384.77	391.36	554.97	559.66	61.8	59.0

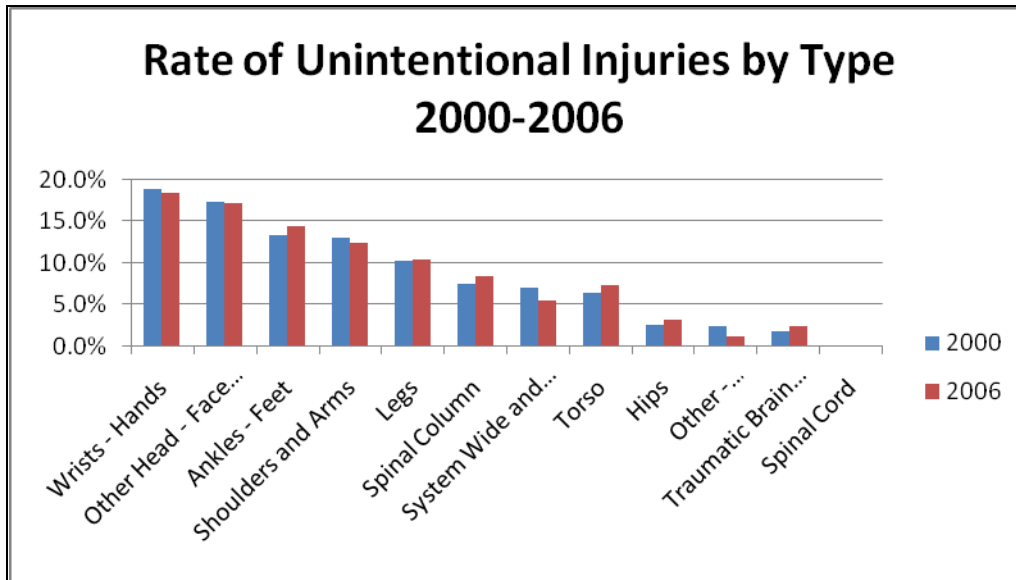
Child abuse and neglect is a continuing problem in the Region, particularly in Phelps County. Eight children died as the result of child abuse and neglect in Phelps County between 1997 and 2006. The Regional CAN incidence is greater than the state average and all of the difference is attributable to Phelps County. The director of the 25<sup>th</sup> Circuit Children’s Division believes the Phelps County rate is higher due to greater public awareness of the problem in Phelps County that leads to higher reporting rates.<sup>15</sup>

<b>Child Abuse and Neglect</b>		
Rate	Per 1000	
Year	2002	2006
Maries	27.1	21.3
Phelps	50.9	42.8
Region	46.4	38.8
Missouri	44.0	32.7

Regional domestic violence rates in 2007 were slightly lower than the state rate (620.04 per 100,000 versus 640.36 per 100,000). In 2002 and 2003, the Regional domestic violence rates (229 per 100,000) were much lower than the state rate (663.9 per 100,000), but the difference may be the result of adjusting to a new reporting system.<sup>16</sup>

## **VI. Unintended Injury**

In both 2000 and 2006, the top five types of unintended injury in the Region, in order, were: wrist and hand injuries; traumatic brain, head, face, and neck injuries; ankle and foot injuries; shoulder injuries, and leg injuries. Each of the five types of injury represented at least 10% of the total of all unintentional injuries and in 2006, combined they accounted for 72.1% of all types of unintentional injuries. Both the order of significance and the percentage of each type of injury were essentially the same in both years.<sup>17</sup>



For the combined seven year period of 2000 through 2006, the five leading causes of unintentional injuries were: falls and jumps (29.6%); struck by a blunt object or involved in a fight (16.4%); miscellaneous causes (11.6%); over-exertion (9.8%); and cutting or piercing (8.8%). The top five causes of unintentional injury accounted for 76.2% of all unintentional injuries. Between 2000 and 2006, the percentage of injuries from falls and jumps increased and from motor vehicle accidents decreased. The percentage incidence of other causes remained essentially the same.<sup>18</sup>

The distribution of injuries by age group in the Region is not consistent with the age-group distribution of the population. The younger the person, the more likely he or she will be unintentionally injured. For instance, in 2006 the youngest 35.9% of the population suffered 45.7% of the unintentional injuries. Similar rates for the state are 34.0% of the population incurring 43.9% of the injuries. Between 2000 and 2006 the Region's 15 to 24 year old age group saw a 13.4% decrease in the rate of injuries, while the 45 to 64 year old age group experienced a 25.8% increase in injuries.<sup>19</sup>

Percentage of Unintentional Injuries by Age Group								
Age Group	2000				2006			
	Region		State		Region		State	
	% of Pop.	% of Injuries	% of Pop.	% of Injuries	% of Pop.	% of Injuries	% of Pop.	% of Injuries
Under 15	18.4%	24.2%	20.0%	25.4%	18.4%	24.4%	20.0%	23.7%
15 to 24	17.5%	24.6%	14.0%	21.0%	17.5%	21.3%	14.0%	20.2%
25 to 44	26.1%	27.5%	27.1%	29.9%	26.1%	26.7%	27.1%	27.6%
45 to 64	24.0%	12.9%	25.6%	13.6%	24.0%	16.0%	25.6%	16.8%
65 +	14.1%	10.7%	13.3%	10.1%	14.1%	11.6%	13.3%	11.7%

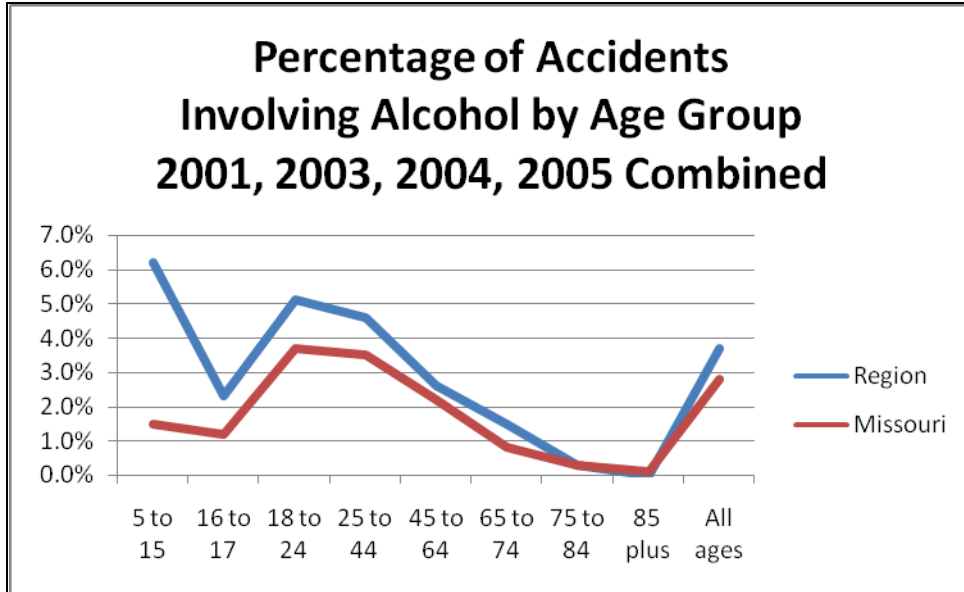
While the injury and poisoning hospitalization rate for the Region increased slightly between 2000 and 2006, it did not increase as much as did the state rate.<sup>20</sup>

<b>Inpatient Hospitalization Injury and Poisoning Discharge Rate</b>		
	Rate per 10,000	
Year	2000	2006
Maries	99.6	87.0
Phelps	109.4	117.4
Region	107.3	111.0
Missouri	98.9	111.8

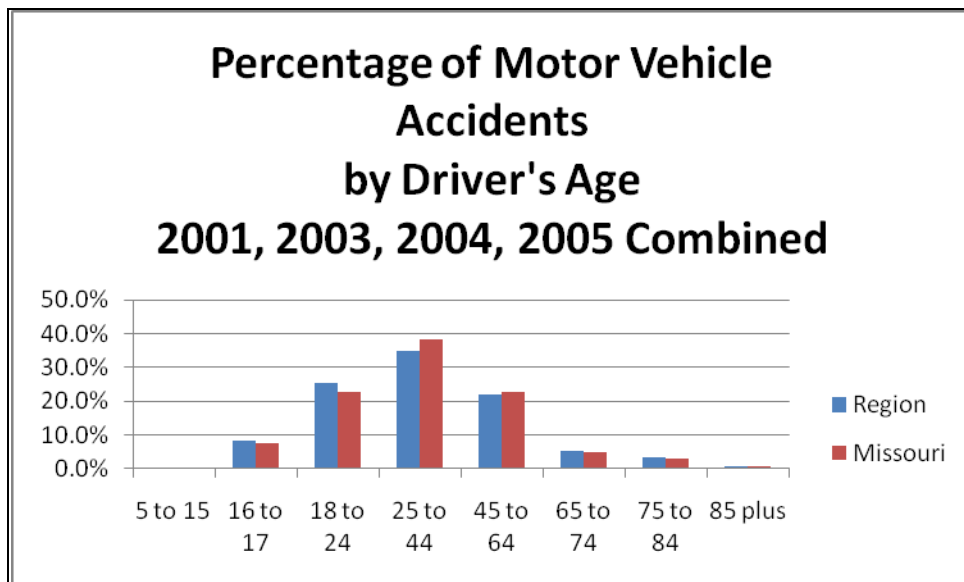
Seat belt usage in the Region increased between 2001 and 2005. Overall Regional usage was 89.6% in 2001 compared to 90.6% for the state. By 2005, the Regional usage increased to 93.5%, the same as the state rate. For all age groups except 16 and 17 year olds and 75 to 84 year olds, the Regional rate of seat belt usage exceeds the rate for the state.<sup>21</sup>

<b>Regional and State Seat Belt Usage by Age Group Cars and Pickups</b>				
	2001		2005	
	Region	Missouri	Region	Missouri
5 to 15	100.0%	78.2%	100.0%	79.9%
16 to 17	87.4%	87.3%	91.3%	92.1%
18 to 24	87.4%	87.3%	91.3%	91.0%
25 to 44	89.4%	91.5%	93.8%	93.8%
45 to 64	91.9%	93.1%	95.5%	95.4%
65 to 74	93.3%	92.7%	96.9%	95.1%
75 to 84	94.0%	92.0%	92.4%	95.3%
85 plus	81.2%	89.9%	94.4%	93.1%
All ages	89.6%	90.6%	93.5%	93.5%

During the combined years 2001, 2003, 2004, and 2005, the rates of alcohol related accidents in the Region were higher than the state rate for every driver age group except those 85 years old or older. In fact the rate is three times higher for the youngest drivers and double for 16 and 17 year olds. The Regional rate for all drivers is 32.1% higher than the state rate for all drivers. Between 2001 and 2005 all Regional age groups experienced a decline in the rate of alcohol related accidents except 45 to 64 year olds and 65 to 74 year olds. State rates remained essentially the same across age groups.<sup>22</sup>

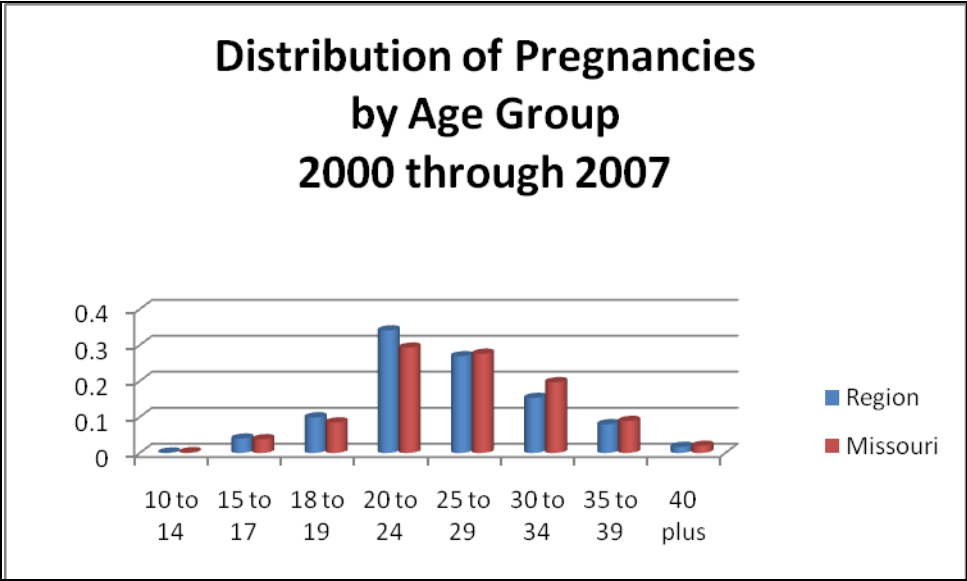


The rate of automobile and pickup truck accidents by driver's age in the Region is similar to the comparable rate in Missouri. Comparing the rates in 2001 and 2005 reveals little change on a Regional or state-wide basis.<sup>23</sup>

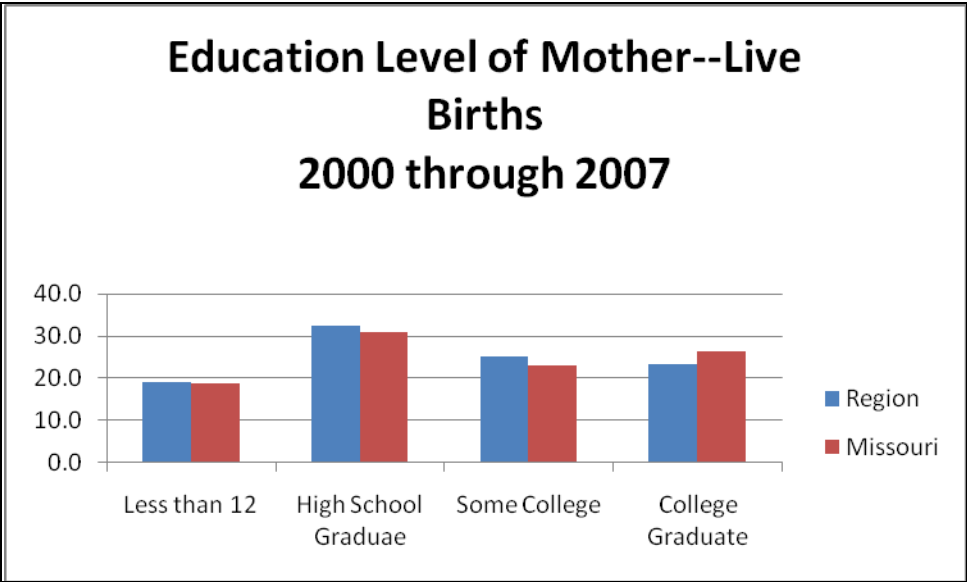


## VII. Maternal and Children's Health

From 2000 through 2007, the Region had 5,105 deliveries of which 26 were fetal deaths, a rate of .5% that is consistent with the state rate. The Region had a 5.8% rate of abortion for all pregnancies compared to a state rate of 13.3%.<sup>24</sup> The Region's distribution of pregnancies by age group is similar to that of the state with the exception of 18 to 24 year olds whose rate for the Region is 16% higher than the state and for 30 to 34 year olds whose rate is 22% below that for the state.<sup>25</sup>



The percentage distribution of live births by mother's education in the Region is similar to that of the state.<sup>26</sup>



The rate of smoking during pregnancy and others smoking in the house during pregnancy of WIC (Women, Infant, and Children) recipients is higher in the Region than in the state.<sup>27</sup>

<b>Rates of Smoking Related to Pregnancy 2000 through 2007</b>		
	Region	Missouri
Smoking three months prior to pregnancy	45.2%	42.1%
Smoking during last seven days	29.6%	27.0%
Others in household smoking prior to pregnancy	44.4%	38.7%

Births in the Region are spaced closer together than in the state as a whole. The rate for spacing a subsequent pregnancy less than nine months from prior delivery to current conception is 24.9% in the Region and 20.0% in the state. Similarly, spacing of less than 16 months from prior delivery to current conception is 37.9% for the Region and 36.8% for the state.<sup>28</sup>

The infant mortality rate in Phelps County for the period of 1996 through 2006 was 7.6 per 1,000 deaths. For Maries County, the rate was 4.6 per 1,000 deaths, however, the number of infant deaths was so small during that period (5) that the rate is considered unstable. The Missouri rate for the same period of time was 7.6 per 1,000. The Regional rate is some degree lower than the state rate.<sup>29</sup>

For WIC recipients during the period 2000 through 2007, the Region had a significantly higher (50%) rate of low birth weight full term babies (6.4% for the Region versus 4.2% for the state). Maries County was particularly high at 7.1%.<sup>30</sup> However, for the all births from 2002 through 2006, the Phelps County rate was 3.2% and the state rate was 3.9%. The rate for Maries County is considered due to the small number of births during the period (15).<sup>31</sup>

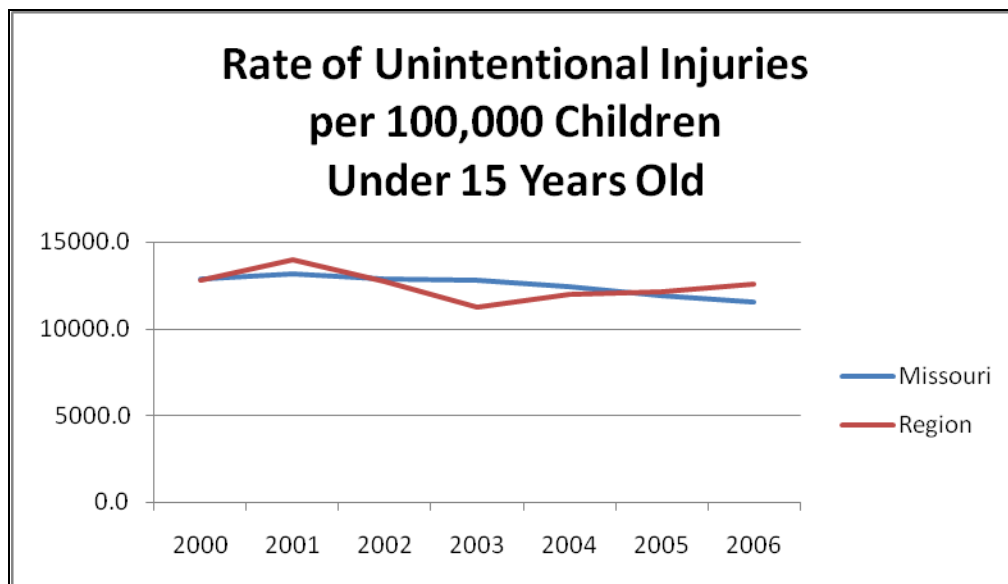
The Regional injury hospitalization rate (fractures, wounds, dislocations, poisonings, etc.) of 340.6 per 100,000 in Phelps County for children between one and 14 years old in 2006 was significantly higher than the state rate of 222.5 per 100,000. The Maries County rate of 183.3 per 100,000 is not considered reliable due to a low number of incidents.<sup>32</sup>

The Region has seen significant increases in the rate of child immunizations since 2001 and its rates are now higher than the state rates. In 2001 the rate of immunizations for WIC participant infants was 54.7% compared to 92.4% in 2007. The comparable 2007 rate for the state was 79.3%.<sup>33</sup>

For the combined period 1996 through 2006, the Regional death rate in children ages 1 to 14 (42.3 per 100,000) was almost twice as high as the state average (24.5 per 100,000), however due to the low number of deaths in Maries County, that county's and the Regional rates are considered unstable. Almost half of the Regional deaths of children were attributed to unintentional injuries (19). The rest of the deaths were attributed to motor vehicle accidents (12), homicide (4), cancers (2), birth defects (1), and heart disease (1). Because of the low actual number of deaths, trends have not been determined.<sup>34</sup>

Similarly, while the number of deaths among 15 to 19 year olds from 1996 to 2006 was higher than for 1 to 14 year olds, because the actual number is small, it is not possible to compare the Region to the state or to develop trend lines. Phelps County's death rate for 15 to 19 year olds (68.4 per 100,000) was about 20% lower than the state rate (85.6 per 100,000). The actual Regional numbers of deaths of 15 to 19 year olds for 1996 through 2006 are: unintentional injury (25), motor vehicle (20), homicide (3), suicide (3), heart disease (1).<sup>35</sup>

Regional unintentional injury rates per 100,000 children under 15 are of the same magnitude as state rates, but vary more from year to year and do not show the same consistent downward trend from 2000 to 2006 as do state rates.<sup>36</sup>



## VIII. Senior Health Indicators

The fastest growing age cohort in the Region is 45 to 64 year olds who are approaching their senior years status. In 2007, seniors (65+ years old) were 14.3% of the Region's population. In 2015 it is estimated seniors will comprise 16.3% of the population (a 14.0% growth rate) and by 2025 they will represent 20.0% of the regional population (a 39.9% growth rate over 2007).<sup>37</sup>

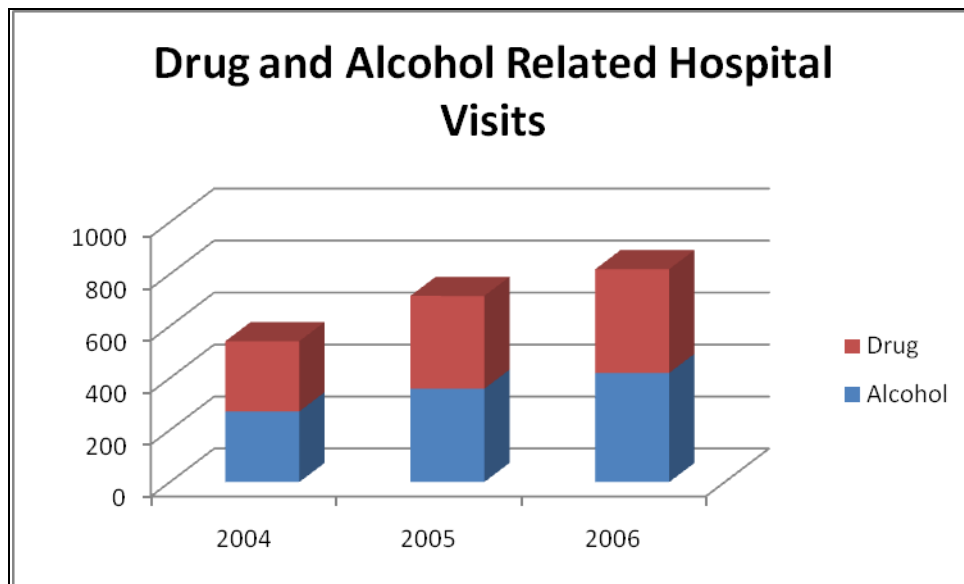
Senior health issues will become a greater public health concern as the population ages. While senior health indicators for the Region are generally consistent with Missouri indicators, several areas stand out as needing attention. For instance, reported smoking by seniors in the Region increased significantly more between 2005 and 2007 (a 40.2% increase for the Region versus a 17.4% increase for the state). Similarly, the rate of increase in the percentage of seniors who do not exercise was greater in the Region than in the state (13.6% versus 11.0%). During the same period, the percentage of overweight, but not obese, seniors also increased at a greater percentage in the Region than in Missouri, but the Region's percentage of obese seniors actually decreased. However, Maries County reported a 63% increase in senior obesity.<sup>38</sup>

Senior Health Care Indicators								
	Smoking in Past 12 Months		No Exercise in Past Month		Overweight: Not Obese		Obese	
	2005	2007	2005	2007	2005	2007	2005	2007
Maries	7.0%	7.1%	32.7%	43.8%	43.2%	42.1%	20.9%	34.1%
Phelps	7.0%	10.4%	32.7%	35.7%	43.2%	48.8%	20.9%	17.9%
Region	7.0%	9.8%	32.7%	37.1%	43.2%	47.6%	20.9%	20.8%
Missouri	9.2%	10.8%	34.7%	38.5%	37.0%	39.8%	21.6%	25.2%

Medicaid long term care per capital costs increased in Phelps County from \$116 in 2002 to \$147 in 2007, but decreased in Maries County from \$178 to \$114. The Regional 2007 per capita long term cost was \$141 while the Missouri per capita cost was \$136. The Regional rate of hospitalizations and emergency room visits for diabetes per 10,000 seniors decreased substantially between 2002 and 2005 from 76.2 to 59.0 per 10,000 seniors. The Missouri rate in 2005 was 72.0 per 10,000 seniors. The Region's rate of primary physicians per 1,000 seniors lags far behind the Missouri rate (8.07 in 2007 versus 11.9).<sup>39</sup>

## IX. Substance Abuse

The Region's incidence of drug and alcohol related hospital visits (general admissions, emergency room hospitalizations, and emergency room outpatients) between 2004 and 2006 show a disturbing 51.1% increase.



Drug and alcohol related traffic incidents, however, not only did not increase over the three year period, they decreased by three incidents. On the other hand, arrests for DWI/DUI, and drug arrests increased 42.9%, from 587 in 2004 to 839 in 2007. Both counties have experienced dramatic reductions in Methamphetamine lab incidents, down from a total of 29 in 2004 to 10 in 2006.<sup>40</sup> Since drug arrests increased substantially, the decrease in meth lab incidents may be

related to a change in venue for manufacturing the drug. People in vocational rehabilitation for drug or alcohol disability in the Region increased from 80 to 104 between 2005 and 2007, although all of the increase is attributed to Phelps County since Maries County decreased.<sup>41</sup>

In 2007, the primary drug incidents in order of importance were caused by: alcohol, methamphetamine and other stimulants, marijuana, heroin and other analgesics, and cocaine, with the first three drugs representing 90.8% of the incidents. Injection drug use saw a significant increase between 2005 and 2007, increasing from 38 to 62 incidents. The reported age of first drug use in 2007 was 18.<sup>42</sup>

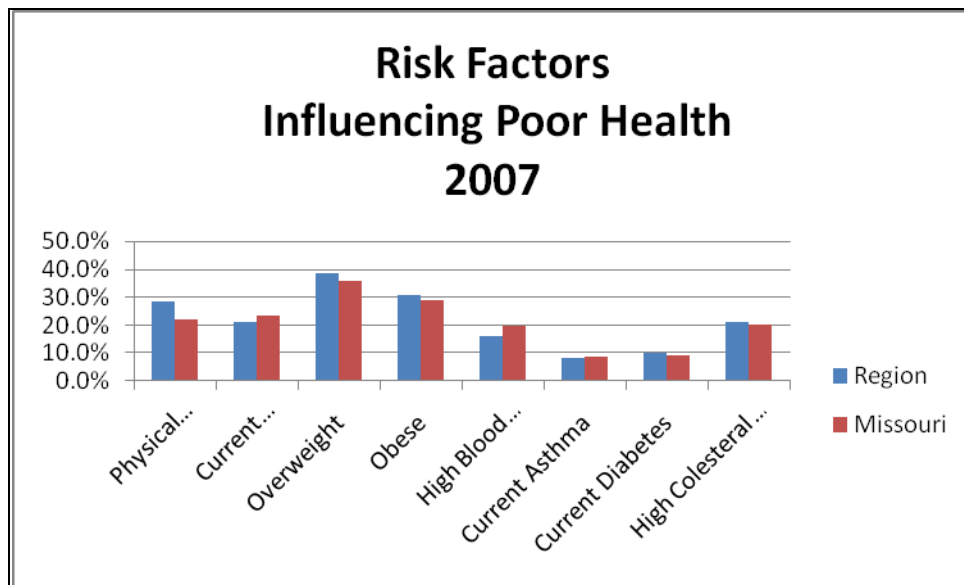
## X. Prevalence of Infectious Disease

From 1994 through 2006 there were five hospitalizations as a result of the failure to vaccinate for preventable diseases. Five is too few incidents from which to develop a reliable rate per 10,000. The comparable state rate was .2 per 10,000. Interestingly three of the five Regional cases occurred in 2005.<sup>43</sup>

The eight cases of tuberculosis in the Region from 1994 through 2006 was too low a number to develop a reliable rate per 10,000 persons. The comparable rate for the state was .2 per 10,000.<sup>44</sup>

## XI. Prevalence of Chronic Disease Risk Factors

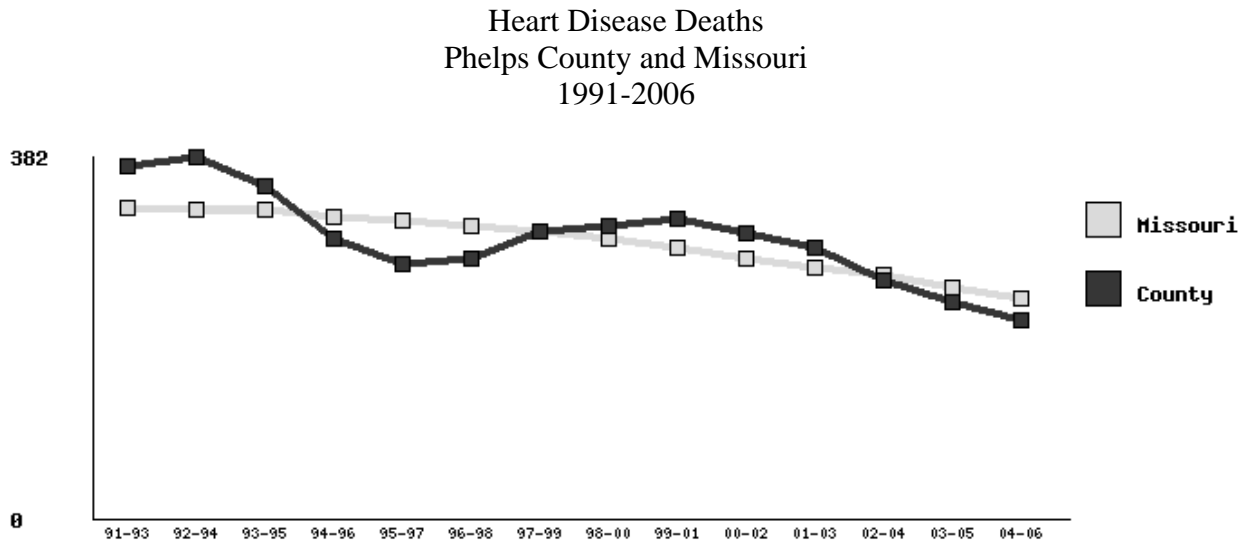
The Region's rates for chronic health risk factors are generally similar to those of the state. However, the Region has a 6% greater rate of physical inactivity and a 3% greater overweight rate than the state. On the other hand, the Region has an almost 2% lower smoking rate and a more than 3% lower rate of high blood pressure.<sup>45</sup> Data by age, race, gender, or income is not available for the either of the Region's counties.



More than ninety percent of preventable hospitalizations are caused by ten conditions in both the Region and the state. While the ten conditions are the same in the Region and the state, their orders of importance are somewhat different. Dehydration (~25%) and bacterial pneumonia

(~15%), are the two top causes of preventable hospitalizations in both the Region and the state and account for about 40% of all preventable hospitalizations. Following in somewhat different order in each area are asthma (7% Region, 13% state), congestive heart failure (9% Region, 11% state), chronic obstructive pulmonary disease (11% Region, 11% state), and diabetes (8% Region, 10% state). The next three causes of preventable hospitalizations in order in both areas are kidney and urinary tract infections, convulsions, and gastroenteritis.<sup>46</sup>

Both Phelps County and the state have experienced statistically significant decreases in the death rate due to heart disease. Maries County's trend, however, is not statistically significant.<sup>47</sup>



Neither Phelps County nor Maries County shows a statistically significant trend in the increase or decrease in deaths from stroke or other cerebrovascular disease. Similarly, there is no statistically significant trend in the Region regarding cancer deaths, although the state has shown a decrease since 1991-1993. Deaths attributed to smoking show no statistically significant change in the Region, but have decreased overall in the state.<sup>48</sup>

Although the incidence of sexually transmitted diseases (chlamydia, syphilis, and gonorrhea) in 15 to 19 year olds is lower in the Region than in the state, Phelps County experienced a statistically significant increase in cases of Chlamydia between 2000 and 2006.<sup>49</sup>

More than half of the residents of Phelps and Maries Counties have had either a sigmoidoscopy or colonoscopy in the last ten years. At least 60% of the women over 40 had a mammogram or clinical breast exam in the last year. Only 4% of women over 17 have never had a Pap smear and more than 75% had one in the last year. Less than 20% of men and women over 49 had a blood stool test in the last year and more than half have never had one.<sup>50</sup>

## **XII. Leading Causes of Mortality**

For the combined period of 2000 through 2007, the death rate in the Region is 4.0% higher than the Missouri state rate. The rate in Maries County is slightly lower than in Phelps County. Although the rate varies from year to year, both the Maries County and Phelps County rates as well as the Region's rate decreased between 7 and 10% from 2000 to 2007.

Between 2000 and 2007 the five leading causes of death in the Region, in order, were: heart disease; cancer; cerebrovascular disease (stroke); chronic lower respiratory disease; and pneumonia and influenza. In Missouri the five leading causes of death in order were: heart disease, cancer; cerebrovascular disease; all other accidents; and diabetes. For the same time period the Region had rates of death that were higher than the state rates for the following causes: heart disease; cerebrovascular disease; pneumonia and influenza; chronic lower respiratory disease; kidney disease, chronic liver disease; birth defects, motor vehicle accidents; and all other accidents. The Region's cause of death rate was ten percent or more higher than the state rate for: cerebrovascular disease; pneumonia and influenza; kidney disease; birth defects; and motor vehicle accidents.

There have been some changes in the Region's ranking of the five major causes of death from 2000 to 2007. The top two causes of death--heart disease and cancer--remained as the first and second causes of death, respectively, but in 2007, chronic lower respiratory disease exchanged positions with cerebrovascular disease to become the third ranking cause of death. Similarly, in 2007 kidney disease overtook pneumonia and influenza as the fifth major cause of death.<sup>51</sup>

<b>Change in Rates for Major Causes of Death Per 100,000</b>			
Disease	Year		Percent Change
	2000	2007	
Heart disease	320.6	246.1	-23.2
Cancer	194.6	188.7	-3.0
Cerebrovascular disease (stroke)	78.1	47.6	-39.1
Chronic lower respiratory disease	45.9	49.7	+8.3

### **XIII. Health Care System Indicators**

Because of the location of the Phelps County Regional Medical Center in Rolla, as well as two multi-physician practices (St. John's Clinic--Rolla and the Bond Clinic), residents in Rolla and those living in close proximity have access to a broad base of health care providers. Other parts of the Region, however, do not. Maries County, along with low income areas of Phelps County, are designated as primary medical care, dental, and mental health Health Provider Shortage Areas (HPSA) by the Health Resources and Services Administration, U.S. Department of health and Humans Services. Even Rolla is included in the mental health HPSA geographic area. The Maries County primary care and mental health HPSAs qualify for Medicare physician bonus payments.<sup>52</sup>

Phelps County Regional Medical Center is a 248 bed, level III trauma hospital. It is fully accredited by The Joint Commission and its cancer services are accredited by the American College of Surgeons' Commission on Cancer. PCRMC provides a wide scope of pediatric and adult medical services. PCRMC is the largest hospital in South Central Missouri and is located

on I-44 in Rolla halfway between St. Louis and Springfield. PCRMC maintains a regular ambulance service and has a helipad for air ambulance needs. Residents in the Region are at most a 30 to 45 minute drive to PCRMC. The Region has no public transport, but does have taxi cab services and, for Phelps County, the not-for-profit Southeast Missouri Transportation Services, Inc. (SMTS) specialty van service.

In 2007, 11.1% of Phelps County and 15.6% of Maries County residents did not have medical care coverage (including all types of medical care coverage--private insurance, employer provided, and all government programs).<sup>53</sup> In 2006, 38.2% of the children in the Region were on MC+/Medicaid, which was down from 42.2% in 2000. Comparable percentages for Missouri were 33.3% in 2006 and 35.1% in 2000.<sup>54</sup> Decreases in Medicaid coverage are more likely the result of program changes due to state budgetary issues than in lowered need.

There is one dentist in Maries County and five in Phelps County who accept Medicaid payments. Five general/family practice physicians in Maries County and eight in Phelps County accept Medicaid.<sup>55</sup> However, the mere fact that there are physicians and dentists listed as accepting Medicaid does not mean that they are taking new patients. A school-community based, pediatric two-chair mobile dental van is owned by PCRMC and services the Phelps-Maries County Region, as well as several other area counties.

#### **XIV. Community Health Resource Indicators**

In collaboration with PCRMC, the Area Health Education Center, and volunteer nurses and physicians in the community, the PMCHD maintains the primary care Community Care Clinic. The Clinic is an ambulatory care facility that provides services for commonly occurring, self-limiting acute illnesses, stable chronic health conditions, preventative health and health maintenance issues, mental health services and primary care. Potentially severe or emergent care situations and chronic conditions with the likelihood of severe or emergent complications are referred to appropriate health care settings and specialists. The PMCHD website, <http://phelpscountyhealth.com/>, provides access to public health information, health education services, environmental health services, and vital records information. St. John's Clinic-Rolla holds a free clinic to assist with uninsured health care, but only operates it two hours a week.

Even with support from PCRMC, the Community Care Clinic, and St. John's Clinic-Rolla, the Phelps-Maries County Health Department does not have the financial resources to fulfill all of the Region's unmet, uninsured health and dental care needs.

The Central Missouri Area Agency on Aging maintains three senior service sites in Phelps and Maries County—Rolla, St. James, and Vienna. The centers provide on-site noon meals that are designed to provide one-third of a client's nutritional needs. The CMAAA also provides a meals-on-wheels program and nutritional counseling to address seniors' nutritional needs.<sup>56</sup> CMAAA is a private, non-profit corporation that is the Missouri Department of Health and Senior Services designated area agency on aging pursuant to the 1973 amendments to the federal *Older Americans Act*.<sup>57</sup>

The Region has also suffered from natural disasters such as tornadoes and floods in the last two years. The health department has developed and trained a Medical Reserve Corps unit to work with the emergency management directors and the American Red Cross to care for special needs

clients in mass care shelters. These trained volunteers are an additional community health resource to surge our healthcare system during disaster conditions.

While the Region's health indicators are similar to the state in many categories, several stand out as problem areas. One of the indicators that is significantly higher than the state is alcohol related motor vehicle accidents. The discrepancies with the state alcohol related accident rates are across almost all age groups of drivers. Expanded educational opportunities related to drinking and driving must be developed.

A second health indicator that adversely varies from the state average is smoking by or around pregnant women. This is another indicator that must be addressed through enhanced educational efforts. Spacing between children is also shorter in the Region than in the state. Research shows that longer spacing between children results in healthier babies and mothers, better long term outcomes, and fewer miscarriages, low birth weight, and premature babies.<sup>58</sup>

The death rate of children 1 to 14 years old is higher in the Region, and significantly higher in Phelps County, than in the state, and all of the difference is attributed to unintentional injuries and motor vehicle accidents.

In fact, the percentages of cancer and birth defects as causes of death in the Region, and in Phelps County, are much lower than the similar percentages in the state. The Region also experiences a significantly higher children's injury hospitalization rate that includes for instance fractures, wounds, dislocations, and poisoning.

While the smoking rate in the Region is lower than in the state, the Region has a higher rate of obesity. While data is insufficient to draw any conclusion based on age, gender, race, or ethnicity, more education is needed to address the community wide problem. The Community Partnership is in the fifth year of a six year Phelps County nutrition initiative in collaboration with local school districts, PMCHD, and other community groups. The initiative is funded through a grant from the Missouri Foundation for Health.

## **XV. Summary of Findings**

A review of community health status indicators reveals the following problems:

**Issues relating to tobacco use and cessation; overweight, obesity and physical inactivity; poverty and the uninsured rate; drug and alcohol abuse; alcohol related accidents; child neglect and abuse in Phelps County; smoking during pregnancy, low birth weight full-term babies, short spacing between pregnancies; and injuries relating to falls and jumps are all present in Phelps and Maries Counties.**

A review of Behavior Risk Factor Surveillance System data reveals the following problems:  
**Physical inactivity is high, an increasing percentage of the population is overweight, health insurance coverage is inadequate.**

The three most significant problems affecting health status of the population within the jurisdiction of the Phelps/Maries County Health Department are:

- **Access to health and dental care**

- **Nutrition/Physical Inactivity**
- **Child abuse/neglect**

The health department will continue to work with community partners (Phelps County Regional Medical Center, Pathways Community Behavioral Healthcare, Inc., The Community Partnership, Prevention Consultants, area schools and others) to continue and maintain our current healthcare interventions to maintain and improve our citizen's health during an economic downturn.

## XVI. Endnotes

- <sup>1</sup> U.S. Census Bureau, Quick Facts, <http://quickfacts.census.gov/qfd/states>
- <sup>2</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/PopulationMICA/indexcounty.html>; 2006 estimates
- <sup>3</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/PopulationMICA/indexcounty.html>; 2006 estimates
- <sup>4</sup> [http://mcdc.missouri.edu/tmpscratch/28JAN09\\_00013.estimate\\_by\\_age/xtract.csv](http://mcdc.missouri.edu/tmpscratch/28JAN09_00013.estimate_by_age/xtract.csv)
- <sup>5</sup> U.S. Census Bureau, Quick Facts, <http://quickfacts.census.gov/qfd/states>
- <sup>6</sup> MCDC, Demographic Profile 3, 2000 Census
- <sup>7</sup> U.S. Census Bureau, Quick Facts, <http://quickfacts.census.gov/qfd/states>
- <sup>8</sup> Profile of Selected Economic Characteristics:2000, DP-3, 2000 Summary File 3, U.S. Census Bureau
- <sup>9</sup> Profile of Selected Housing Characteristics:2000, DP-3, 2000 Summary File 3, U.S. Census Bureau
- <sup>10</sup> <http://missourieconomy.org/Regional/census>
- <sup>11</sup> Community Data Profiles, Child Health (9/8/08), Missouri Department of Health and Senior Services
- <sup>12</sup> Census of Missouri Public Water Systems 2008, Missouri Department of Natural Resources
- <sup>13</sup> Community Data Profiles, Hazardous Substance, Missouri Department of Health and Senior Services; <http://www.dhss.mo.gov/CommunityDataProfiles/index.html>
- <sup>14</sup> Criminal homicide, aggravated assault, and violent crime data from Missouri State Highway Patrol, [http://www.msdp.dps.missouri.gov/MSHPWeb/SAC/data\\_and\\_statistics\\_ucr.html](http://www.msdp.dps.missouri.gov/MSHPWeb/SAC/data_and_statistics_ucr.html)  
Juvenile data from Kids Count 2007, Citizens for Missouri's Children
- <sup>15</sup> Kids Count 2007, Citizens for Missouri's Children; <http://www.mokids.org>
- <sup>16</sup> Crime in Missouri 2002, 2007, Missouri Dept. of Public Safety; <http://www.msdp.dps.missouri.gov>
- <sup>17</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/InjuryMICA/indexcounty.html>
- <sup>18</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/InjuryMICA/indexcounty.html>
- <sup>19</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/cgi-bin/injurytesting>
- <sup>20</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/cgi-bin/inpathosp1>
- <sup>21</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/MotorVehicleCrashMICA/indexcounty.html>
- <sup>22</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/MotorVehicleCrashMICA/indexcounty.html>
- <sup>23</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/MotorVehicleCrashMICA/indexcounty.html>
- <sup>24</sup> Missouri DHSS, MICA; Missouri DHSS, MICA; <http://www.dhss.mo.gov/cgi-bin/pregcgi>
- <sup>25</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/cgi-bin/pregcgi>
- <sup>26</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/PregnancyMICA/indexcounty.html>
- <sup>27</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/WICMICA/wicprenatal.html>
- <sup>28</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/WICMICA/wicprenatal.html>
- <sup>29</sup> Missouri DHSS; <http://www.dhss.mo.gov/ASPsInfant/>
- <sup>30</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/cgi-bin/wicchildmjm-r>
- <sup>31</sup> Missouri DHSS; <http://www.dhss.mo.gov/ASPsInfant>
- <sup>32</sup> Missouri DHSS; <http://www.dhss.mo.gov/ASPsInfant>
- <sup>33</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/cgi-bin/Pinf>
- <sup>34</sup> Community Data Profiles, Child Health (9/8/08), Missouri Department of Health and Senior Services; <http://www.dhss.mo.gov/ASPsChildHealth/Main>
- <sup>35</sup> Community Data Profiles, Child Health (9/8/08), Missouri Department of Health and Senior Services; <http://www.dhss.mo.gov/ASPsChildHealth/Main>
- <sup>36</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/cgi-bin/injurytesting>
- <sup>37</sup> Missouri DHSS, Missouri Senior Report 2008; [http://missouriseniorreport.org/county\\_profiles](http://missouriseniorreport.org/county_profiles)
- <sup>38</sup> Missouri DHSS, Missouri Senior Report 2008; [http://mcdc2.missouri.edu/webrepts/mosenior/profile\\_reports08](http://mcdc2.missouri.edu/webrepts/mosenior/profile_reports08)

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- <sup>39</sup> Missouri DHSS, Missouri Senior Report 2008; [http://missouriseniorreport.org/county\\_profiles](http://missouriseniorreport.org/county_profiles)
- <sup>40</sup> Status Report on Missouri's Alcohol and Drug Abuse Problems, 14<sup>th</sup> Edition—2008; <http://www.dmh.missouri.gov/ada/rpts/status.htm>
- <sup>41</sup> Status Report on Missouri's Alcohol and Drug Abuse Problems, 14<sup>th</sup> Edition—2008; <http://www.dmh.missouri.gov/ada/rpts/status.htm>
- <sup>42</sup> Status Report on Missouri's Alcohol and Drug Abuse Problems, 14<sup>th</sup> Edition—2008; <http://www.dmh.missouri.gov/ada/rpts/status.htm>
- <sup>43</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/cgi-bin/prevco4>
- <sup>44</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/cgi-bin/prevco4>
- <sup>45</sup> Missouri DHSS, MICA; [http://www.dhss.mo.gov/County\\_level\\_study/header](http://www.dhss.mo.gov/County_level_study/header)
- <sup>46</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/cgi-bin/prevco4>
- <sup>47</sup> Community Data Profiles, Chronic Diseases (8/5/08), Missouri Department of Health and Senior Services; <http://www.dhss.mo.gov/ASPsChronicDisease/Trend>
- <sup>48</sup> Community Data Profiles, Chronic Diseases (8/5/08), Missouri Department of Health and Senior Services; <http://www.dhss.mo.gov/ASPsChronicDisease/Trend>
- <sup>49</sup> Community Data Profiles, Chronic Diseases (8/5/08), Missouri Department of Health and Senior Services; <http://www.dhss.mo.gov/ASPsChronicDisease/Trend>
- <sup>50</sup> Community Data Profiles, Health and Preventive Practices 2007, Missouri Department of Health and Senior Services; [http://www.dhss.mo.gov/County\\_level\\_study](http://www.dhss.mo.gov/County_level_study)
- <sup>51</sup> Missouri DHSS, MICA; <http://www.dhss.mo.gov/cgi-bin/death1>
- <sup>52</sup> Health Resources and Services Administration, US Dept. of Health and Human Services; <http://hpsafind.hrsa.gov/HPSASerach.aspx>
- <sup>53</sup> Missouri Foundation for Health and Missouri Department of Health and Senior Services. Missouri County Level Study of Health and Preventive Practices, 2007.
- <sup>54</sup> Kids Count 2007, Citizens for Missouri's Children; <http://www.mokids.org>
- <sup>55</sup> Missouri Dept of Social Services; <https://dssapp.dss.mo.gov/ProviderList/sprovider.asp>
- <sup>56</sup> <http://www.cmaaa.net>.
- <sup>57</sup> Missouri Department of Health and Senior Services; <http://www.dhss.mo.gov/AAA/index.html>
- <sup>58</sup> University of Iowa Healthcare, <http://wuihelathcare.com>; New England Journal of Medicine, Feb. 1999.