

15. Accidental mortality In Appalachia

Accidental (or unintentional) deaths in this analysis include a broad array of causes ranging from vehicular accidents (including railway, motor vehicle, boating, aircraft), accidental poisoning, fire, environmental extremes, suffocation, falls, and many others). The reader is directed to ICD-9-CM, 9th revision for a complete list of accidental death classifications.

Nationally, death rates from accidental causes are nearly three times higher for men than women. Age is a predominant risk factor for accidental deaths (Pickle *et al*, 1996). Younger persons are more prone to accidents due to inexperience and a higher likelihood of engaging in high-risk behavior. Older persons have diminishing physical capacity and are more prone to accidents relating to falls. Alcohol use is an associated risk factor for accidental deaths particularly those that are vehicular in nature as well as those that result from drowning. In addition, exposure to poisonous substances, dangerous machinery, or hazardous working environments increases the risk of sustaining fatal injuries.

Both in the Appalachian region and the non-Appalachian U.S., death rates from accidental causes rank third among death rates used in this analysis for white and black men ages 35 to 64 (Figure 6 – Section I). Among white and black women ages 35 to 64 accidental death rates rank fifth and sixth respectively. Among the elderly, Appalachian death rates from accidental causes rank sixth for white and black men and ninth for white and black women.

County –Level Rates of Accidental Mortality in Appalachia

County level rates of mortality from accidental causes are shown on pages 95-98. County death rates from accidental causes range from 49 to 155 death per 100,000 among white men ages 35 to 64, from 126 to 296 deaths per 100,000 among elderly white men, from 64 to 249 deaths per 100,000 among black men ages 35 to 64, from 121 to 341 deaths per 100,000 among elderly black men, 17 to 51 deaths per 100,000 among white women ages 35 to 64, from 62 to 133 deaths per 100,000 among elderly white women, from 27 to 71 deaths per 100,000 among black women ages 35 to 64, and from 58 to 156 deaths per 100,000 among elderly black women. The disparity among county level death rates is greatest among black men ages 35 to 64 and white men ages 35 to 64, which rank fourth and eighth respectively (Table 2 - Section I).

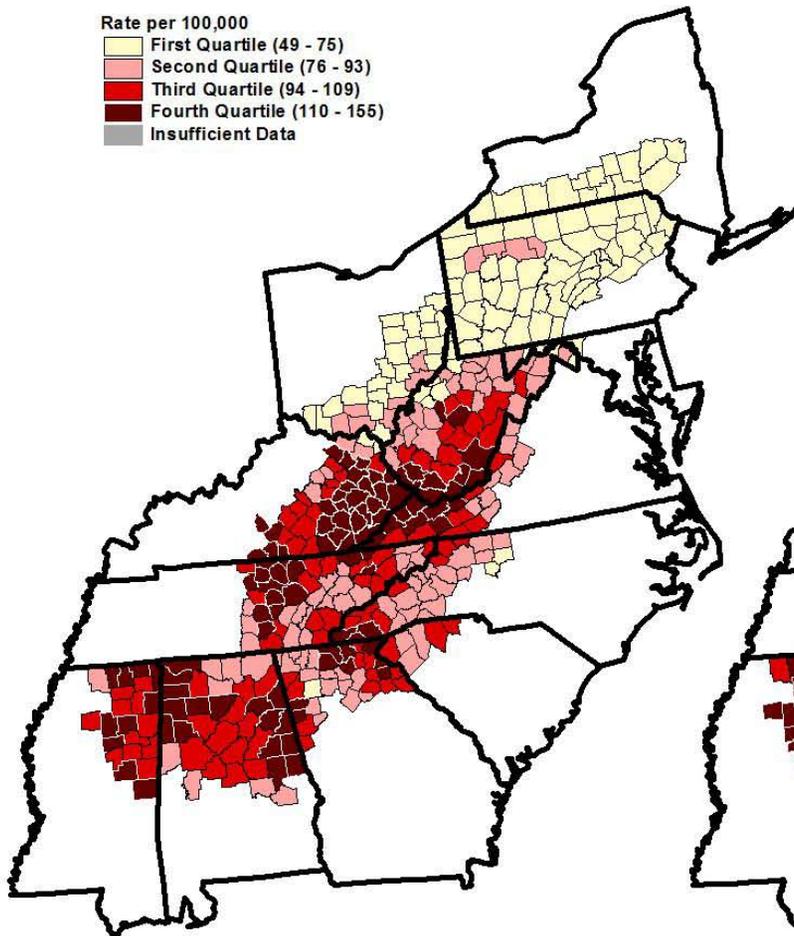
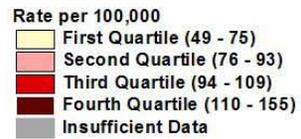
Some distinct geographic patterns are evident in the distribution of accidental death rates, although there is significant variation in the geographic distribution of rates among the geographic subgroups. In general, high death rates from accidental causes are predominant in the southern portion of the Appalachian region among all demographic subgroups. Among white men aged 35 to 64 high accidental death rates appear to cluster in Eastern Kentucky and Southern West Virginia. Smaller groups of high-rate counties occur in East-Central Tennessee, Northern Georgia and Southwestern North Carolina and both the Eastern and Western borders of Alabama. For elderly white men, the predominant high rate cluster appears in Northeastern Mississippi and Northern Alabama. Smaller groups of high rate counties for elderly white men occur in Central West Virginia, East-Central Kentucky, and Western Virginia and North Carolina. The patterns are nearly identical for white men and women ages 35 to 64, and with the exception of the high rate cluster in

Central West Virginia, are very similar between elderly white men and women. High outlier (unusually high) counties appear in the distributions for elderly white women in South-Central Kentucky.

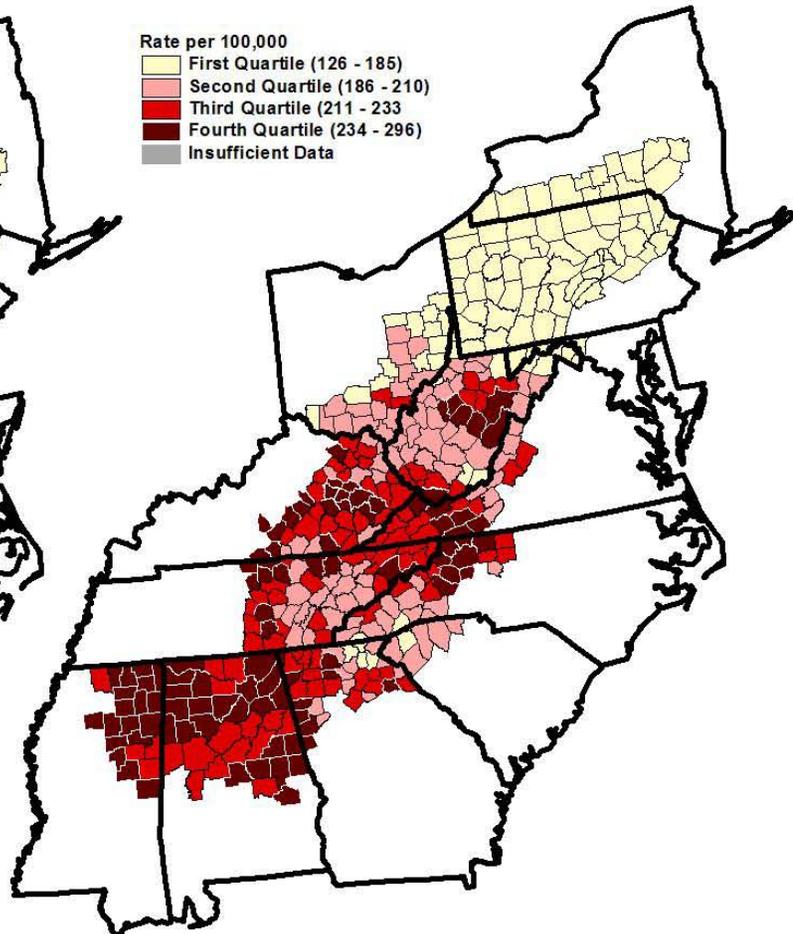
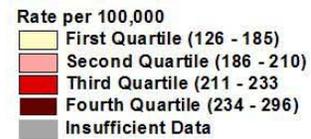
The geographic distributions are similar among black men and women of both age groups with some notable exceptions. Although the southern portion of the region appears to experience the greatest burden of accidental deaths among black men and women, several counties in Western Pennsylvania experience high rates of accidental deaths among black men and women ages 35 to 64. Elderly black men in Southern West Virginia and South-Central Tennessee appear to be at much greater risk of accidental death compared to their younger counterparts. The largest clusters of high rate counties appear in Central Alabama and North Eastern Mississippi of black men and women of both age groups although single high outlier counties occur in Southern West Virginia and Alabama for black men. A cluster of high outlier counties occur in Mississippi for black women ages 35 to 64 and a single high outlier county occurs in Western North Carolina for elderly black women.

Smoothed Accidental Death Rate, 1990-1997

White Men Ages 35 to 64

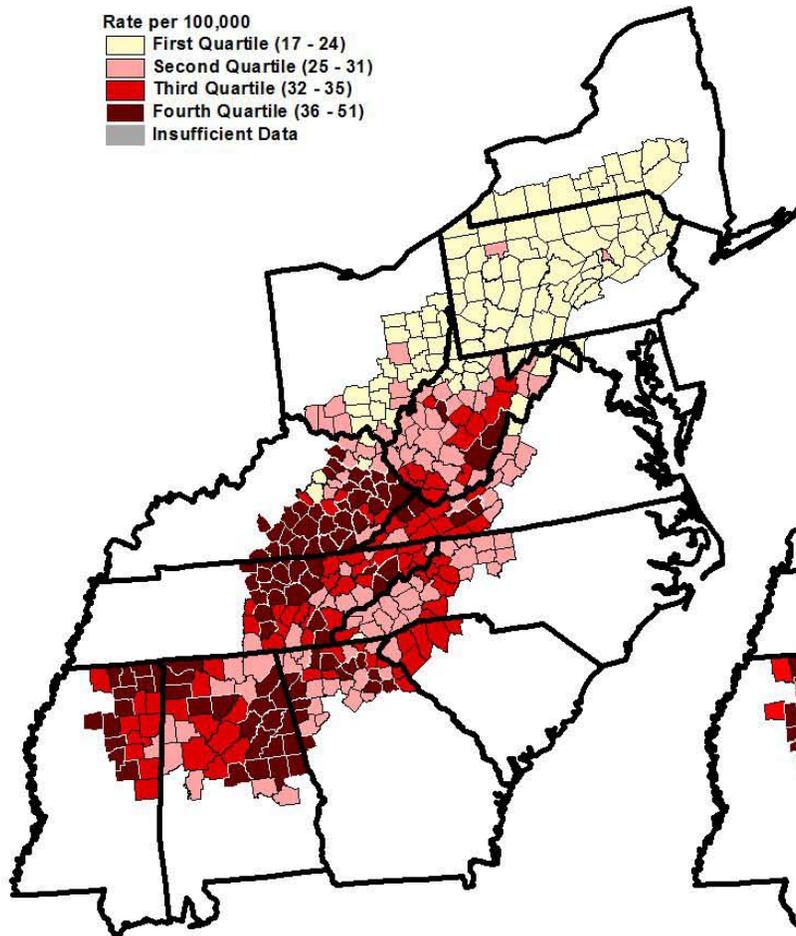
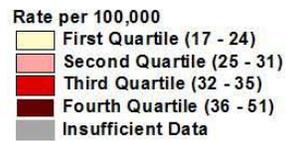


White Men Ages 65 and Older

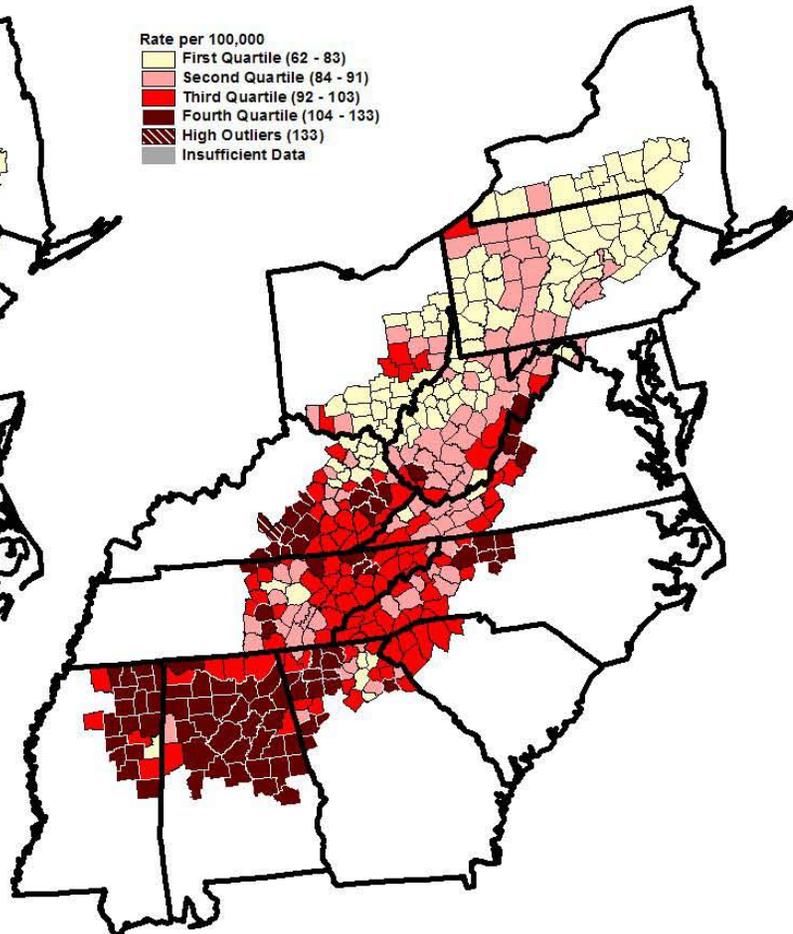


Smoothed Accidental Death Rate, 1990-1997

White Women Ages 35 to 64

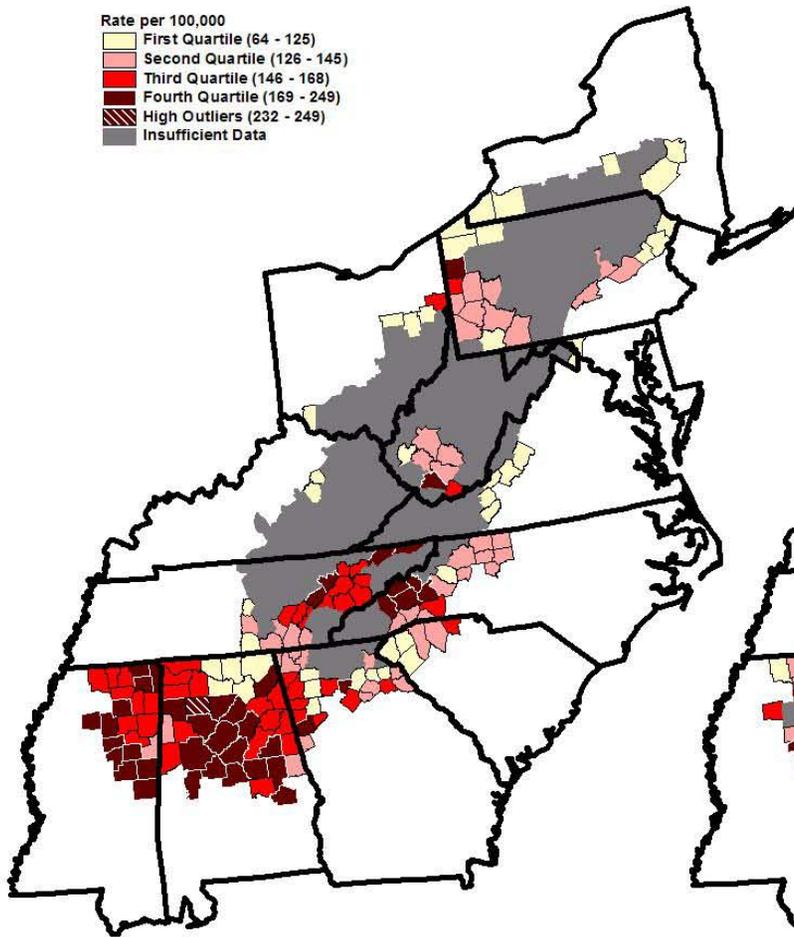


White Women Ages 65 and Older

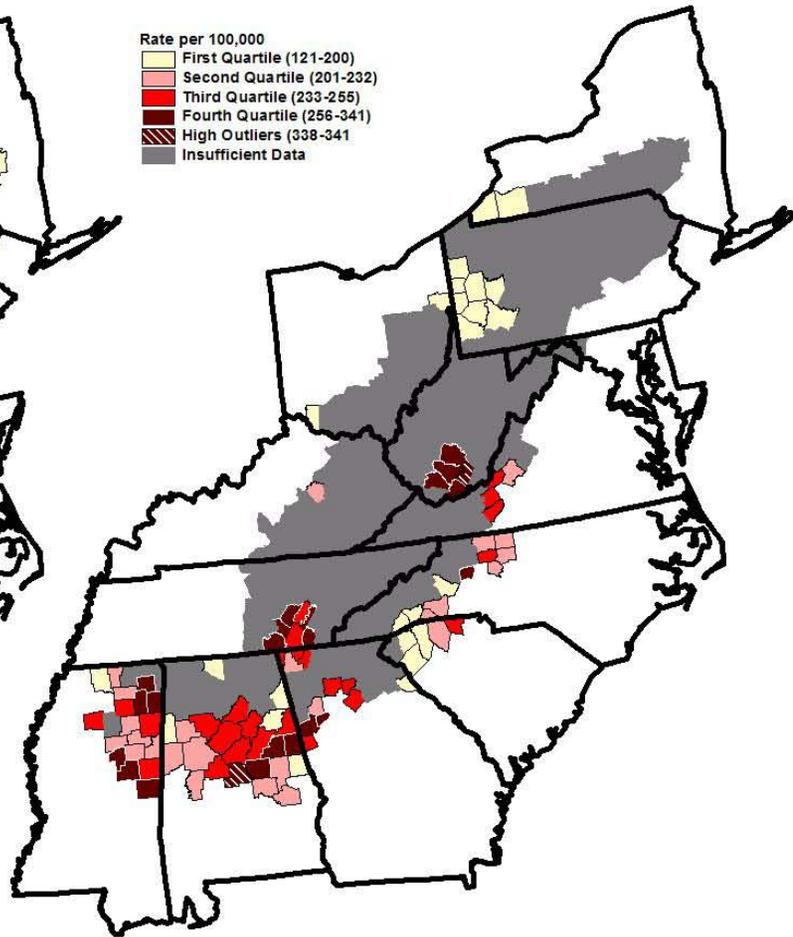


Smoothed Accidental Death Rate, 1990-1997

Black Men Ages 35 to 64

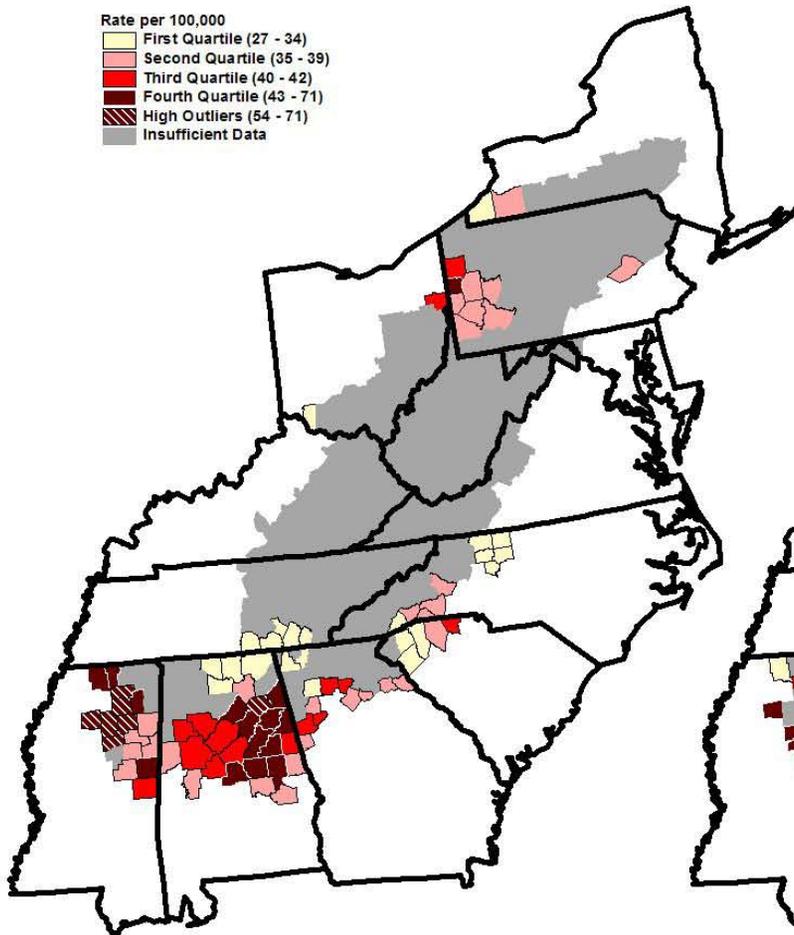


Black Men Ages 65 and Older

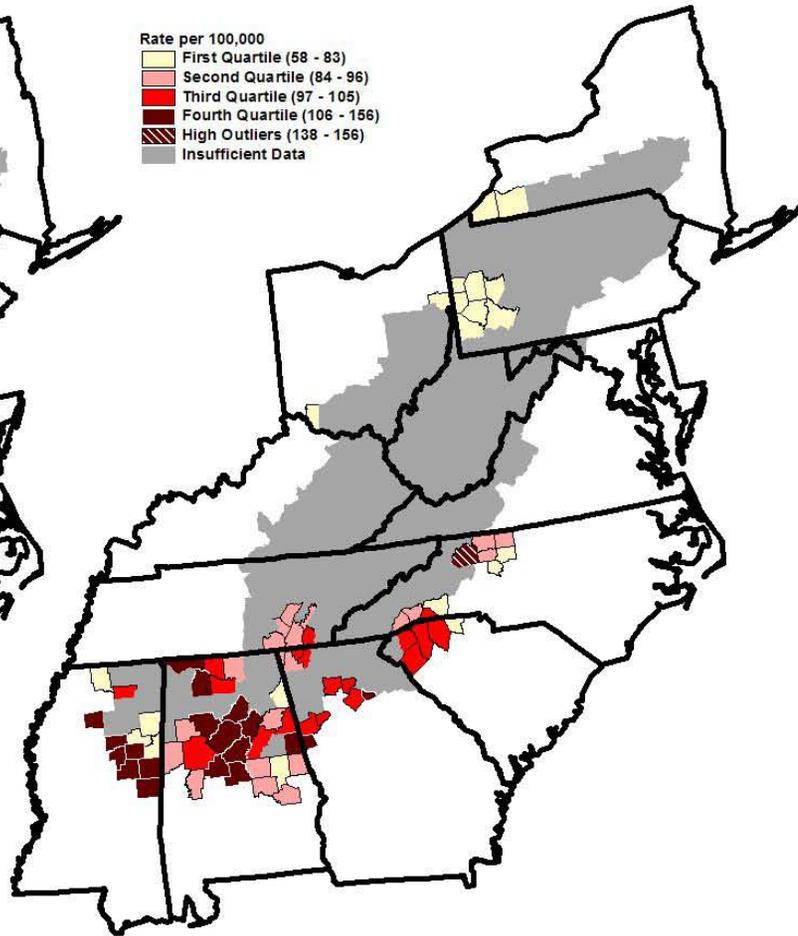


Smoothed Accidental Death Rate, 1990-1997

Black Women Ages 35 to 64



Black Women Ages 65 and Older



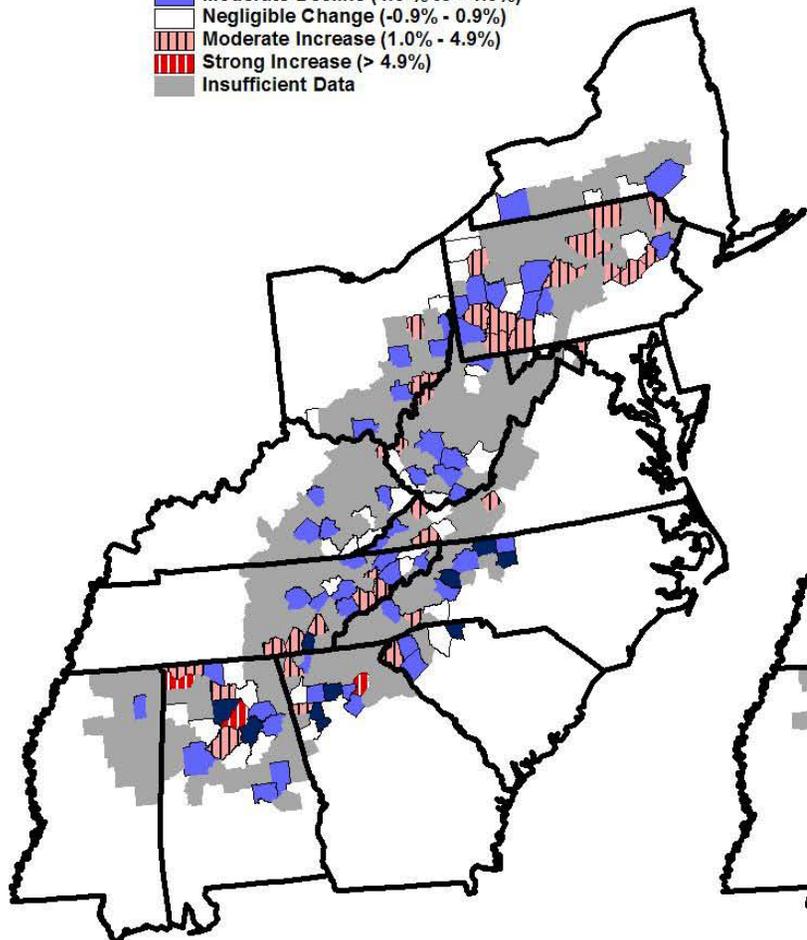
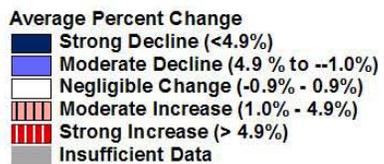
16. County Trends in Accidental Mortality

Maps depicting trends for accidental death rates over the period 1985-1997 are presented on pages 100-103. Overall, death rates from accidental causes have been decreasing since 1970 (Pickle, 1996). The county-level trends presented in the following maps indicate significant variability in the mortality trends among counties in the Appalachian region. Because deaths from accidental causes are relatively rare, trend estimates for many counties could not be calculated due to insufficient data, particularly among black population subgroups (refer to Section I B. County level Mortality Analyses and the Technical Appendix B for details on the estimation of mortality trends).

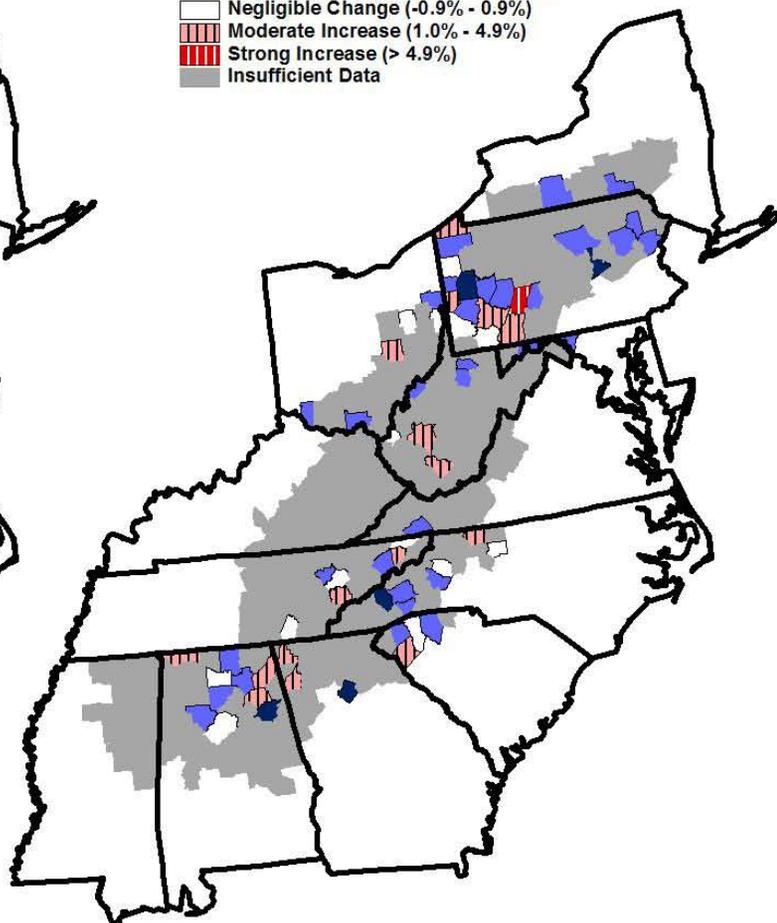
The majority of counties have experienced either moderate declines or negligible change for all demographic subgroups over the study period (sparse data for black men and women limited the number of counties for which trends could be calculated). However, a significant number of counties have experienced moderate increases. There does not appear to be a clustering of counties experiencing adverse trends, with the exception of a five-county group in Southwestern Pennsylvania for white men. In general, counties experiencing adverse trends are scattered throughout the region. Single counties experiencing strong increases in accidental death rates occur in Alabama and Georgia for white men ages 35 to 64, in Pennsylvania for white men ages 65 and older, white women ages 35 to 64, and black women ages 35 to 64.

Trends in Accidental Mortality, 1985-1997

White Men Ages 35 to 64

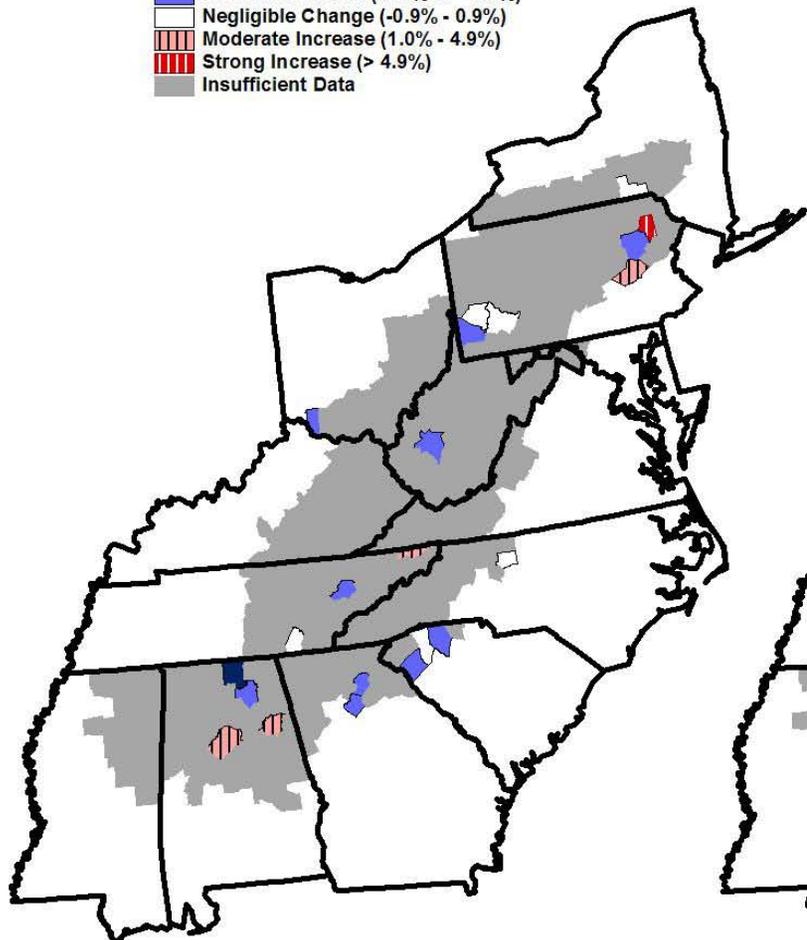
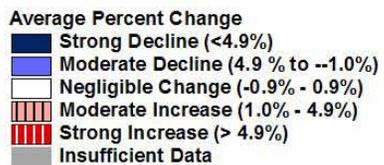


White Men Ages 65 and Older

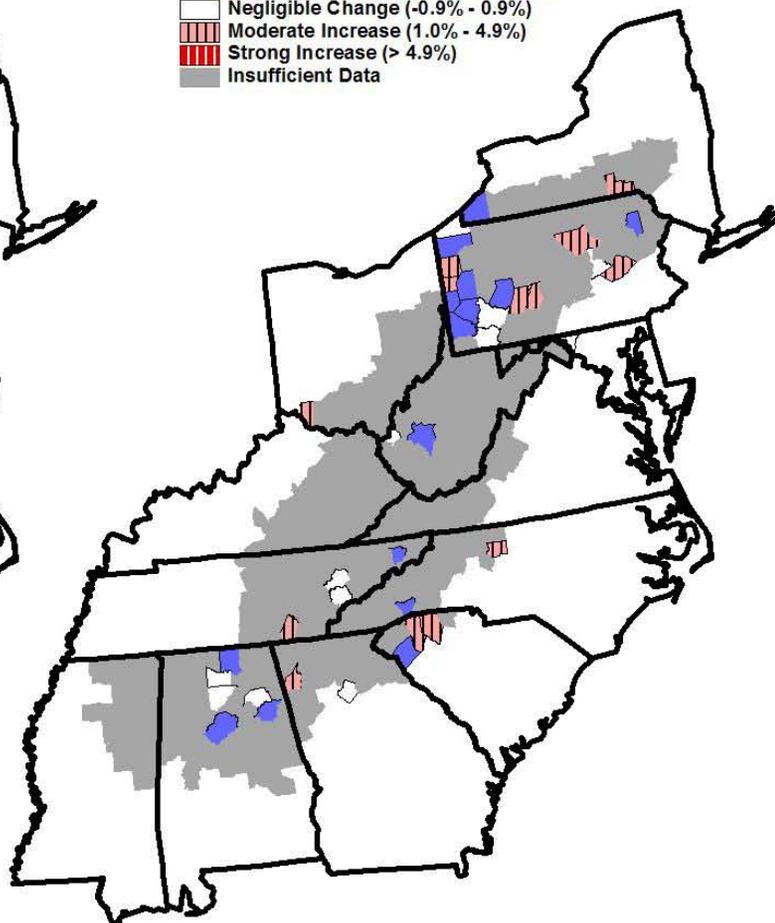
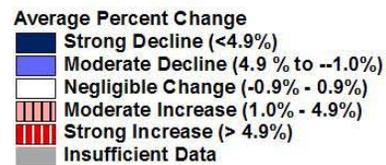


Trends in Accidental Mortality, 1985-1997

White Women Ages 35 to 64

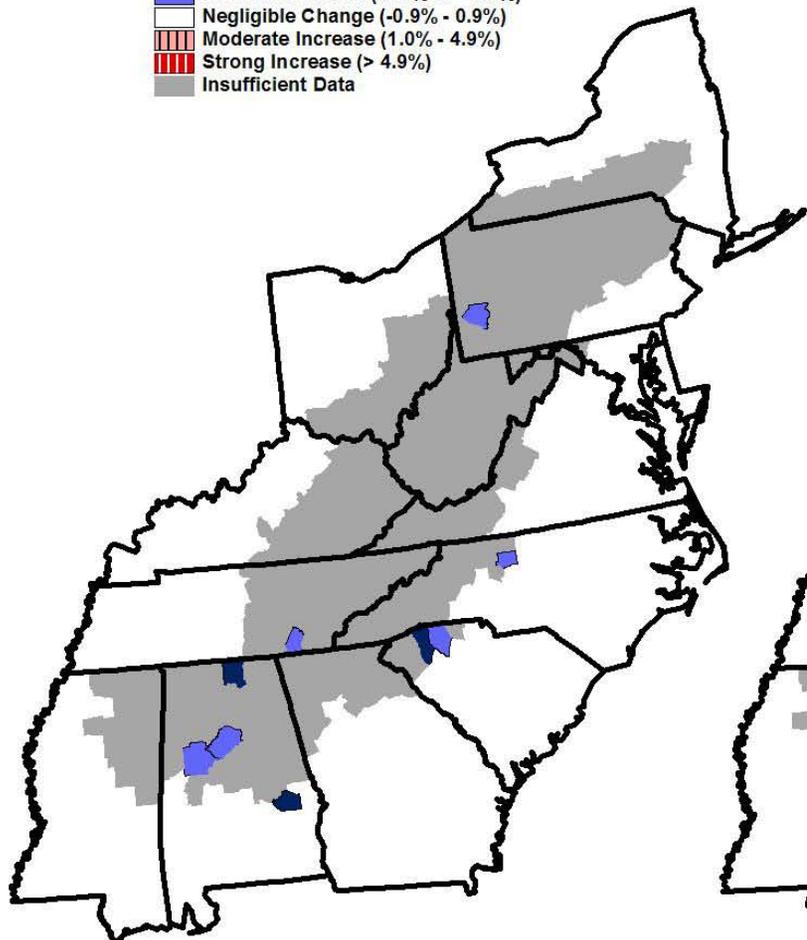
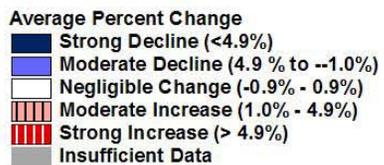


White Women Ages 65 and Older

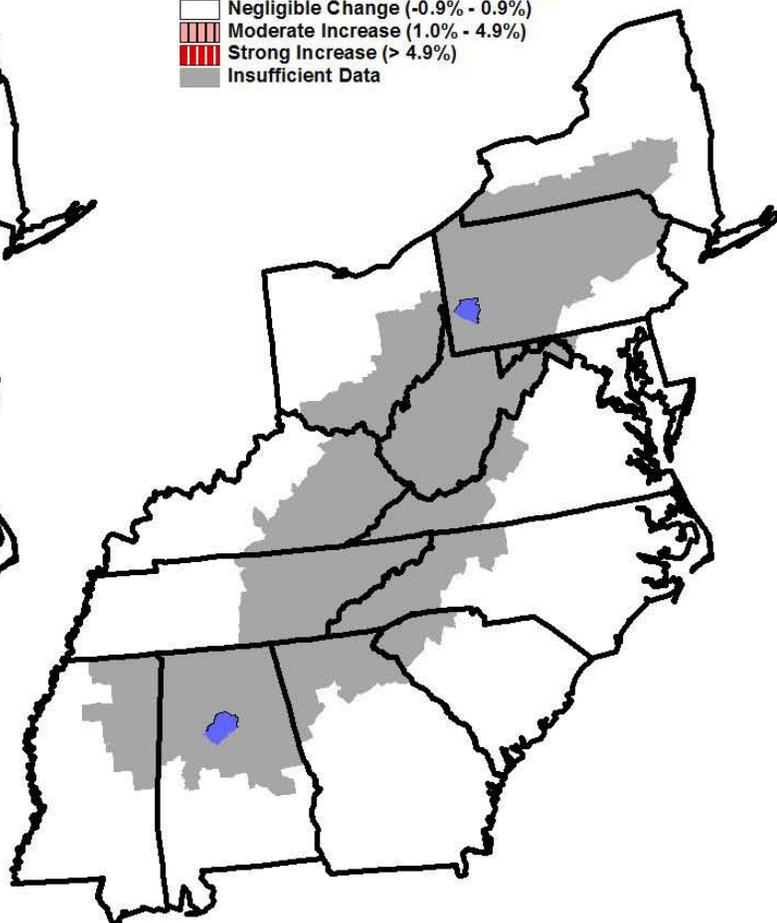
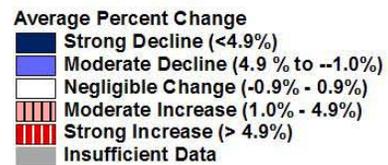


Trends in Accidental Mortality, 1985-1997

Black Men Ages 35 to 64

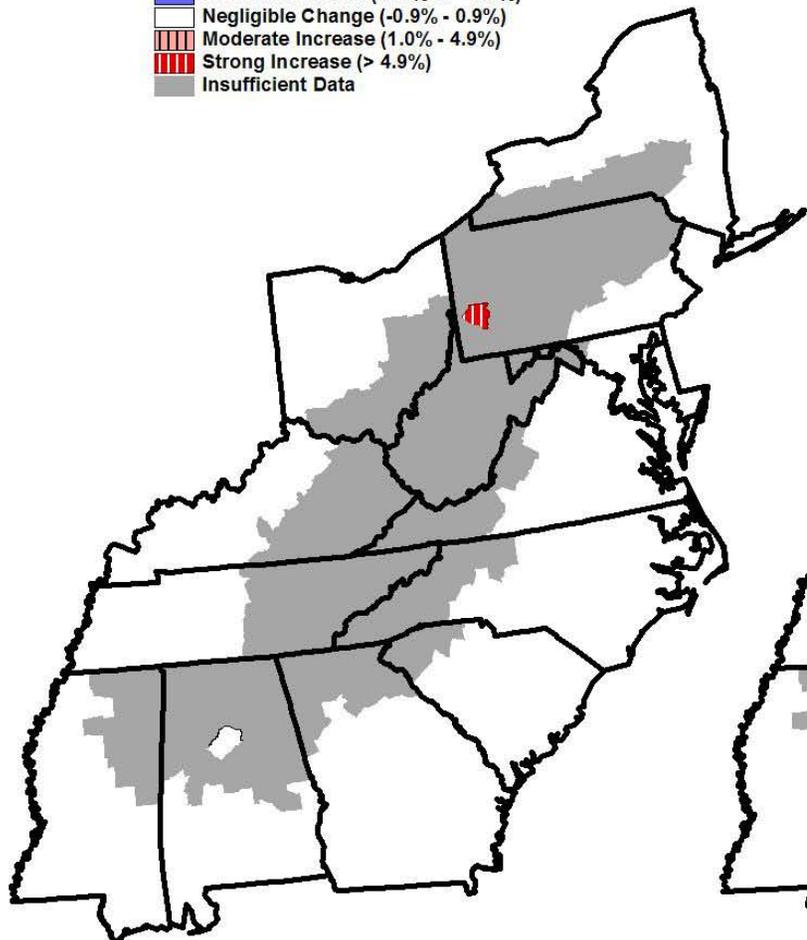
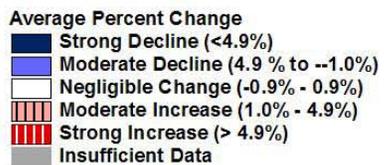


Black Men Ages 65 and Older



Trends in Accidental Mortality, 1985-1997

Black Women Ages 35 to 64



Black Women Ages 65 and Older

