

13. COPD mortality In Appalachia

Chronic Obstructive Pulmonary Disease (COPD) encompasses a fairly broad number of specific diseases including emphysema, asthma, and bronchitis. COPD is the fourth leading cause of death nationally. Risk factors which lead to COPD illness include cigarette smoking and exposure to second hand cigarette smoke, exposure to coal dust and other occupational dusts and fumes.

Both in the Appalachian region and the non-Appalachian U.S., death rates from all COPD rank fifth among death rates used in this analysis for white and black men of both age groups (Figure. 6 – Section I). Among white and black women of both age groups COPD death rates rank fourth.

County –Level Rates of COPD Mortality in Appalachia

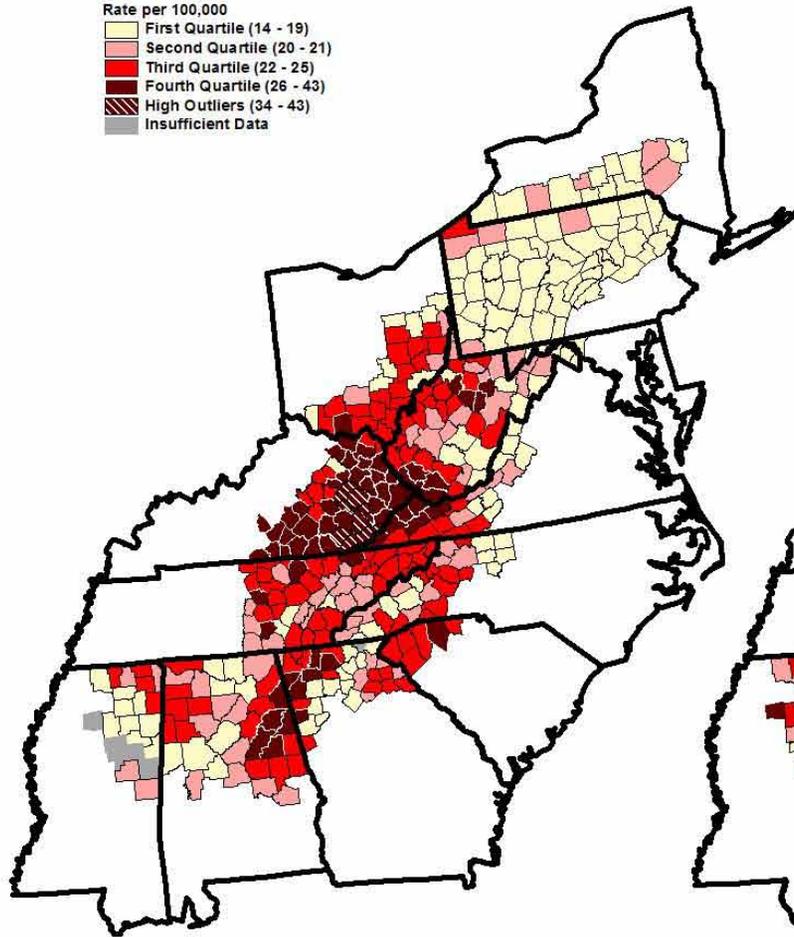
County level rates of mortality from COPD are shown on pages 86-89. County-level COPD death rates range from 14 to 43 death per 100,000 among white men ages 35 to 64, from 343 to 655 deaths per 100,000 among elderly white men, from 29 to 69 deaths per 100,000 among black men ages 35 to 64, from 297 to 638 deaths per 100,000 among elderly black men, 9 to 29 deaths per 100,000 among white women ages 35 to 64, from 216 to 377 deaths per 100,000 among elderly white women, from 18 to 43 deaths per 100,000 among black women ages 35 to 64, and from 151 to 350 deaths per 100,000 among elderly black women.

Distinct geographic patterns are evident in the distribution of COPD death rates, and there appears to be a great deal of similarity in geographic patterns among population subgroups. In general, high death rates from COPD are predominant in the central portion of the Appalachian

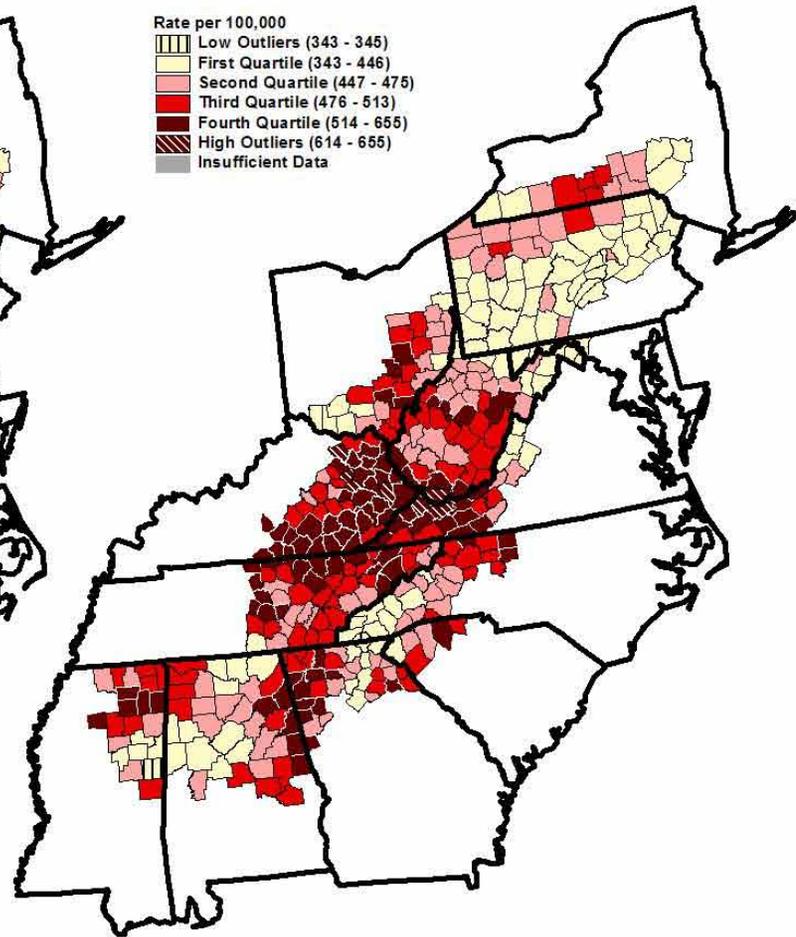
region among white population subgroups. Among white men of both age groups, high COPD death rates appear to cluster primarily in Eastern Kentucky, Southern West Virginia, and Western Virginia with high outliers occurring in several counties in Eastern Kentucky, Southern West Virginia, and Western Virginia. A smaller group of counties in Northern Georgia and Alabama also exhibit high rates of COPD mortality for white men. Among white women the patterns are very similar to those of white men with high rate areas primarily in Eastern Kentucky, Southern West Virginia, and Western Virginia with high outliers occurring in several counties in Eastern Kentucky. While a limited number of counties had sufficient data to calculate stable rates of COPD mortality for black population subgroups, some geographic patterns are evident. There appear to be consistently high rates of COPD mortality among counties in the Western Carolinas and in Alabama among all black population groups. For elderly black men, high rate areas are also found in Southern West Virginia, Northeastern Pennsylvania, and several high outlier counties in Eastern Ohio.

Smoothed COPD Death Rate, 1990-1997

White Men Ages 35 to 64

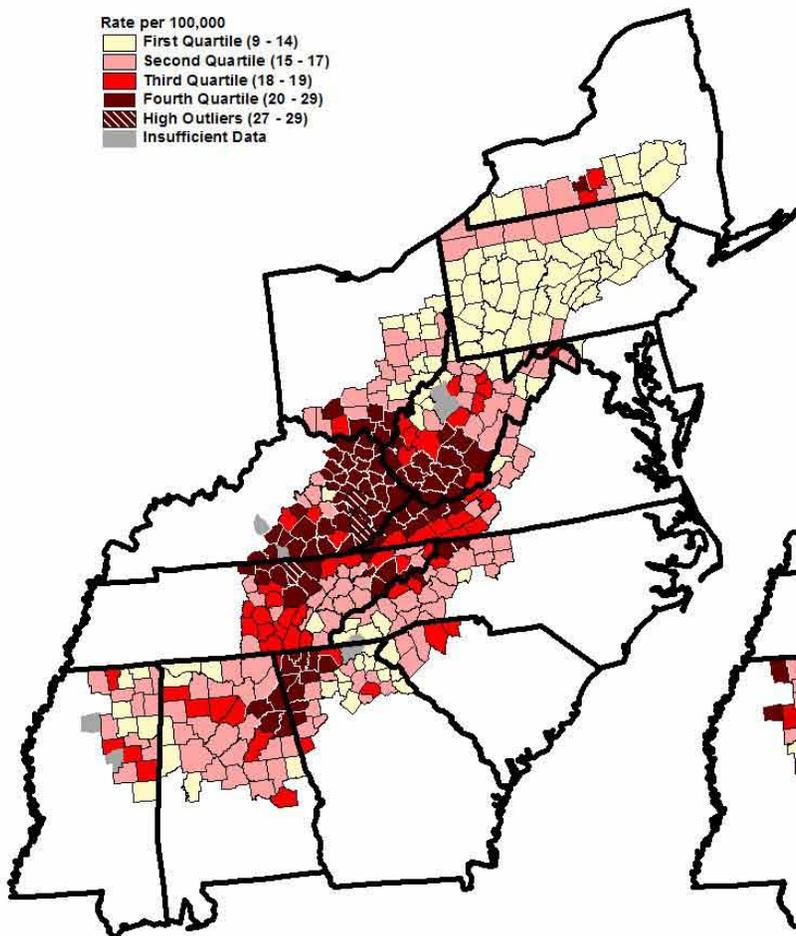


White Men Ages 65 and Older

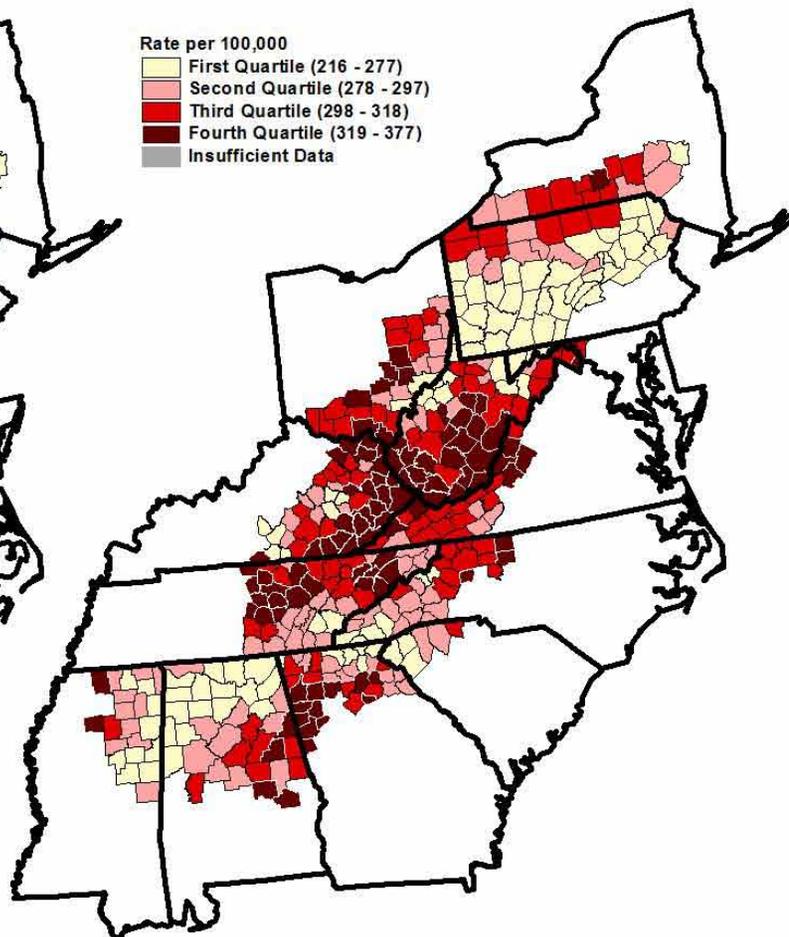


Smoothed COPD Death Rate, 1990-1997

White Women Ages 35 to 64

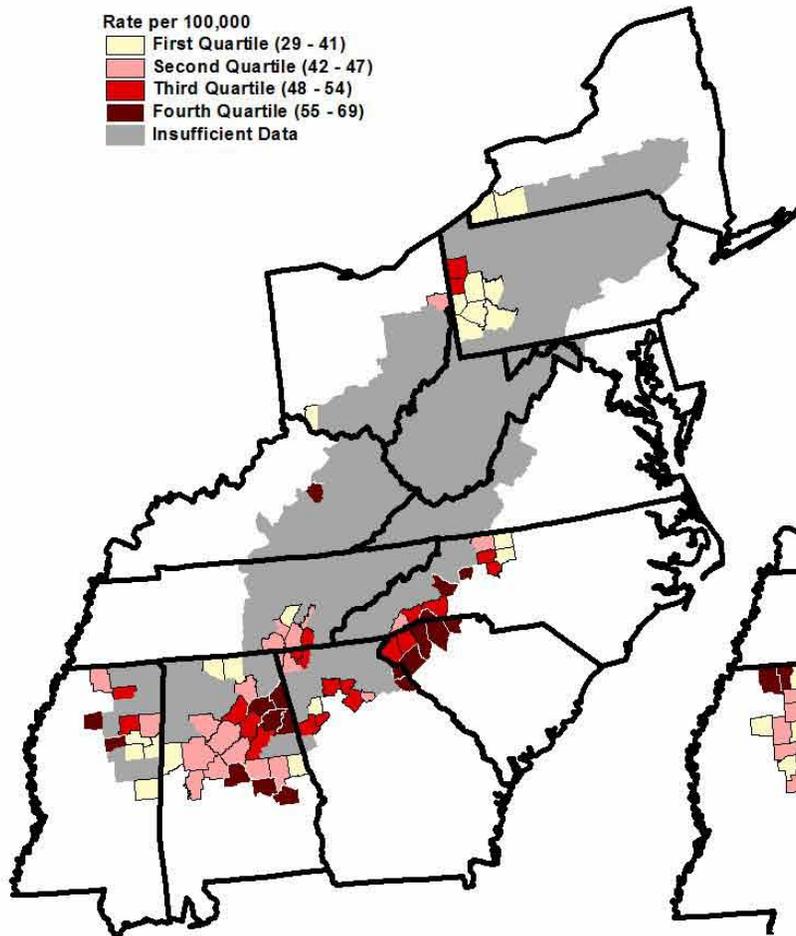
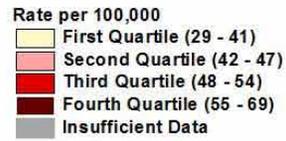


White Women Ages 65 and Older

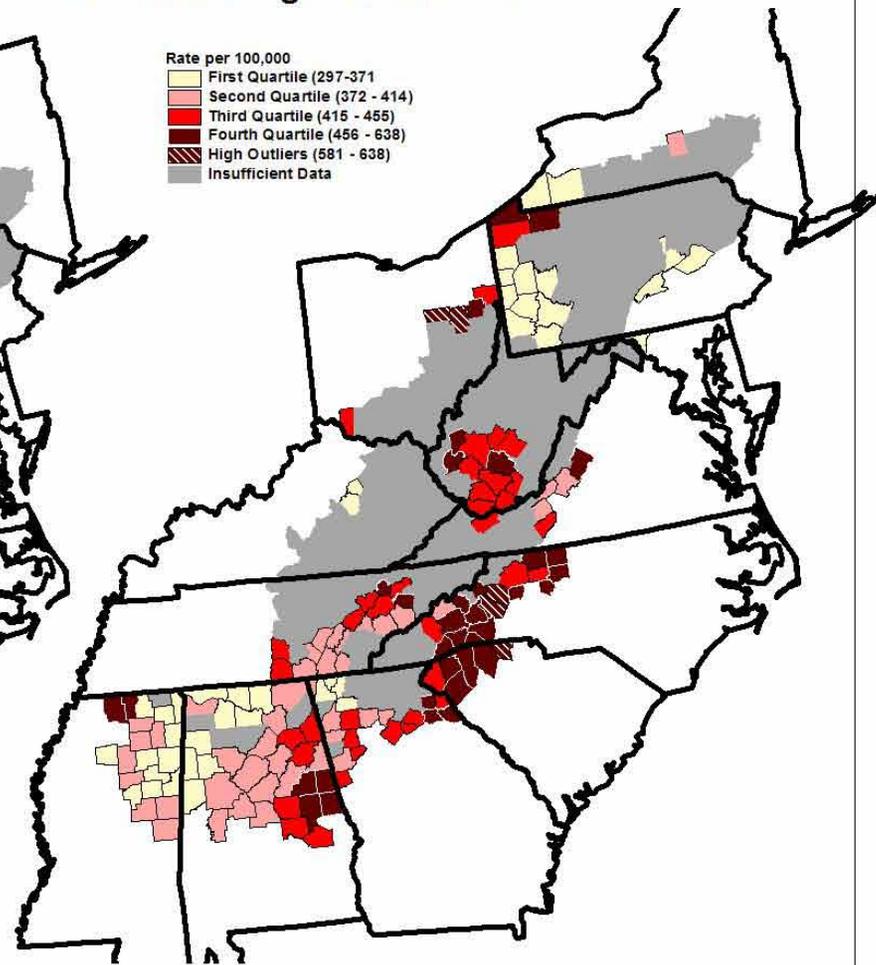
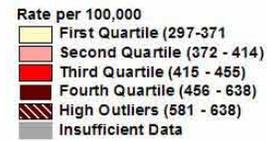


Smoothed COPD Death Rate, 1990-1997

Black Men Ages 35 to 64

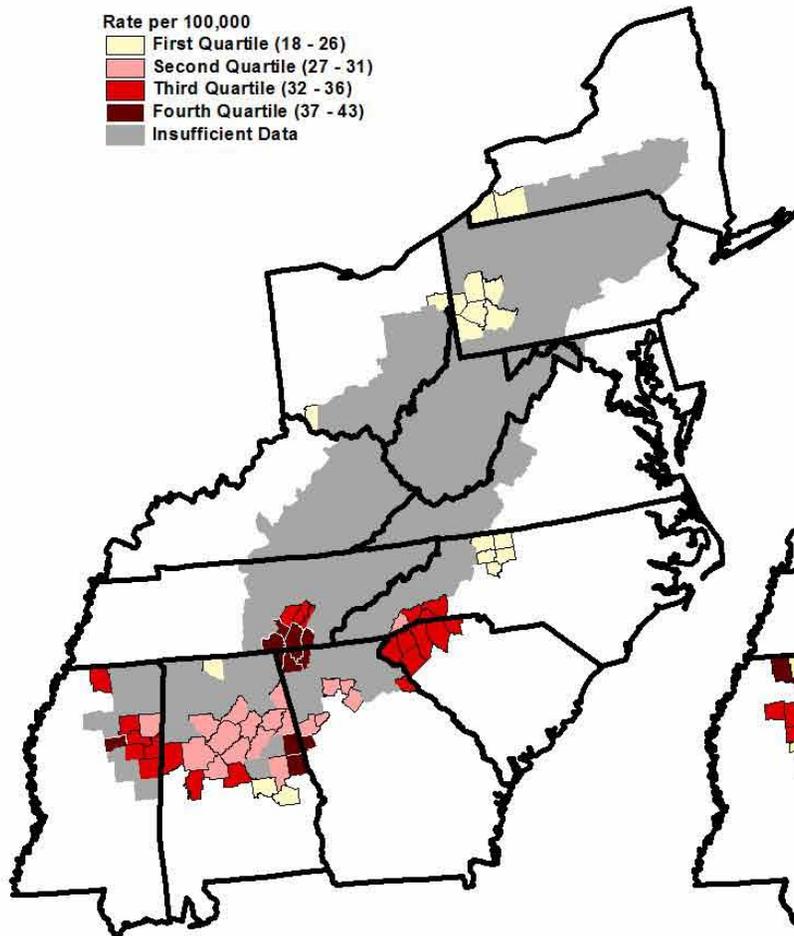
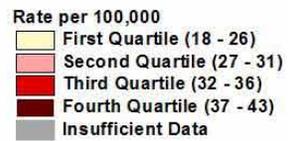


Black Men Ages 65 and Older

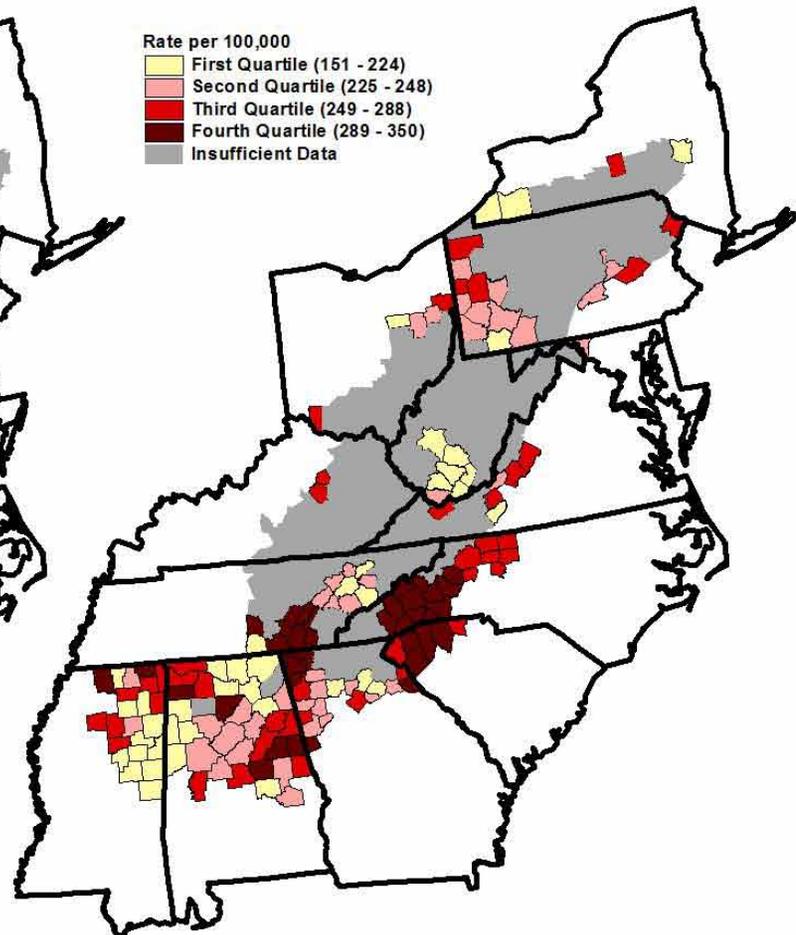
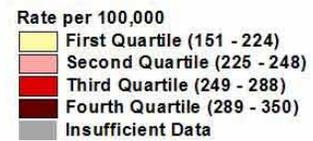


Smoothed COPD Death Rate, 1990-1997

Black Women Ages 35 to 64



Black Women Ages 65 and Older



14. County Trends in COPD mortality

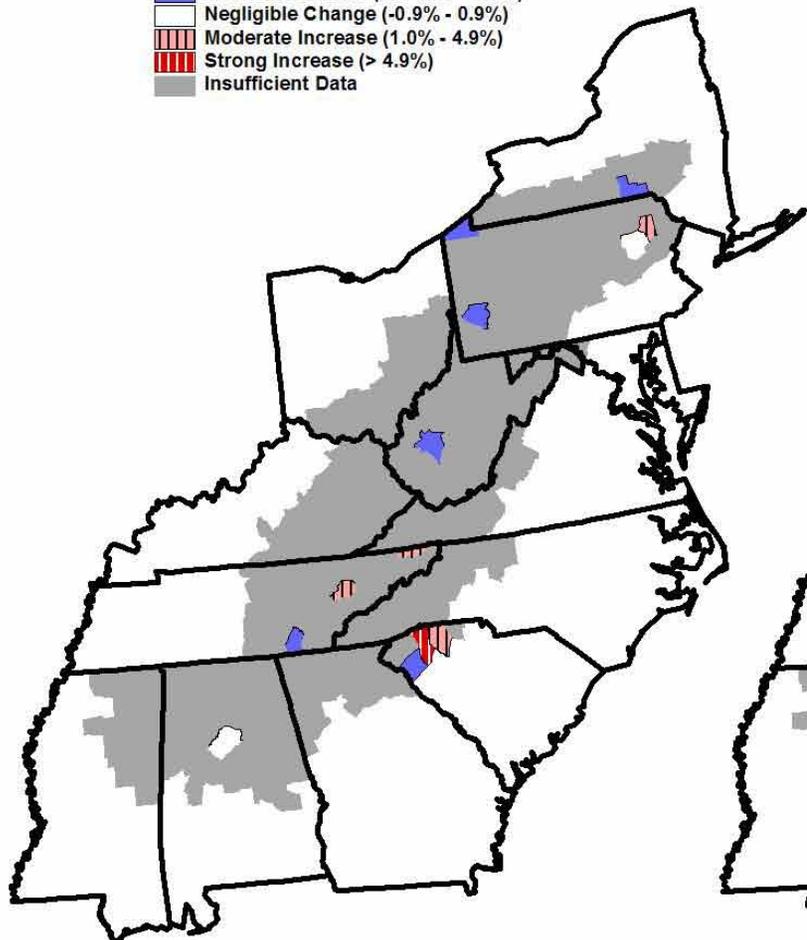
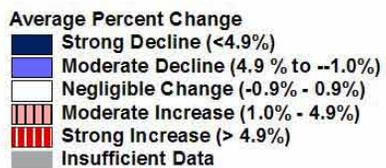
Maps depicting trends for COPD death rates over the period 1985-1997 are presented on pages 91-92. Overall, death rates from COPD had increased between 1950 and the late 1980's before stabilizing (Pickle, 1996). The county-level trends presented in the following maps indicate significant variability in the mortality trends among counties in the Appalachian region. For many counties there were insufficient data to calculate county-level COPD mortality trends, particularly among the 35 to 64 age groups and no trend estimate could be generated for black population groups (refer to Section I B. County level Mortality Analyses and the Technical Appendix B for details on the estimation of mortality trends).

Perhaps the most striking feature of the trend maps on pages 91-92, is the number of counties that have experienced moderate to strong increases in mortality from COPD. These occur primarily in elderly population and especially among elderly white women where the majority of counties have experienced either strong or moderate increases in COPD mortality.

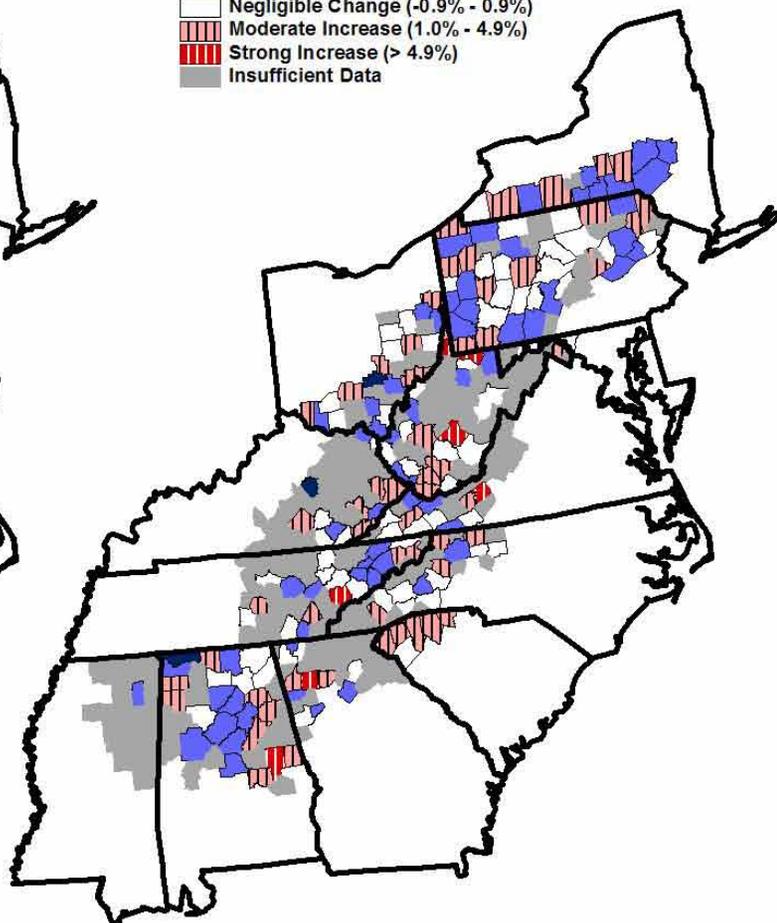
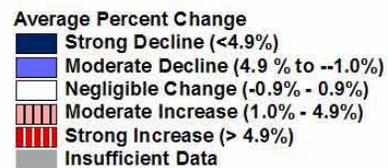
This may be due in part to variability in smoking cessation rates and or exposure to hazardous dusts and fumes, in addition to variability in the availability of medical resources for treatment of COPD related illnesses.

Trends in COPD Mortality, 1985-1997

White Men Ages 35 to 64

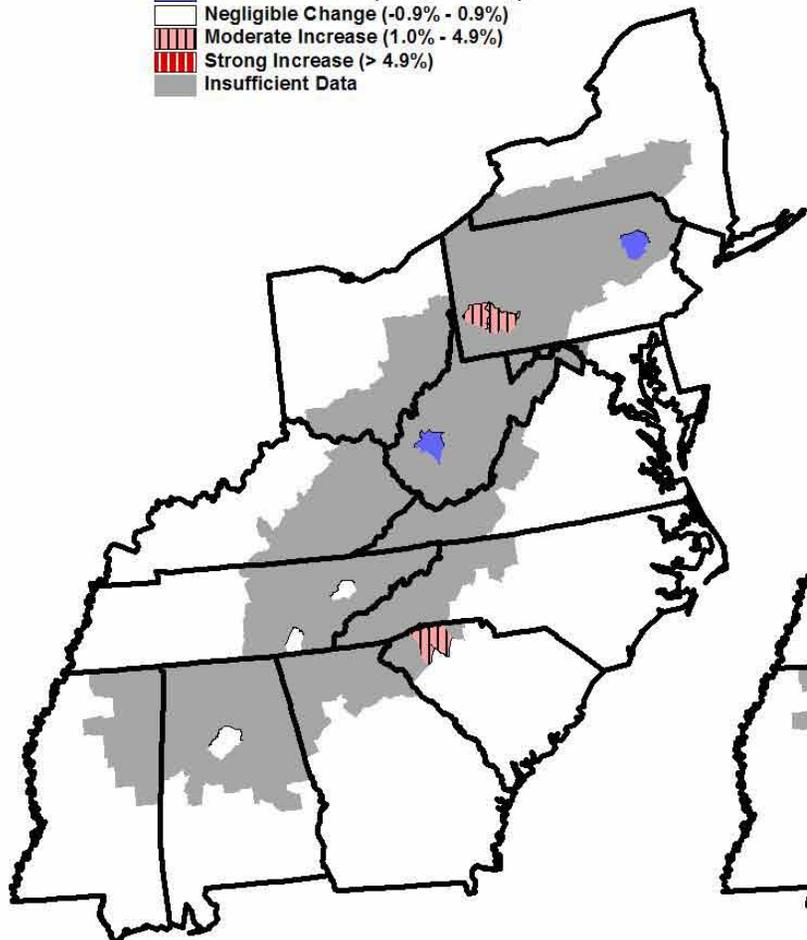
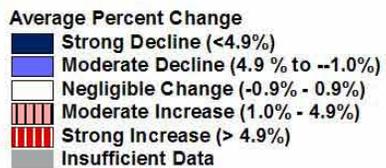


White Men Ages 65 and Older



Trends in COPD Mortality, 1985-1997

White Women Ages 35 to 64



White Women Ages 65 and Older

