

WVU Study Links Chronic Illness to Coal-Mining Pollution

Pollution from coal mining may have a negative impact on public health in mining communities, according to data analyzed in a West Virginia University research study.

“Residents of coal-mining communities have long complained of impaired health,” Michael Hendryx, Ph.D., associate director of the WVU Institute for Health Policy Research in WVU’s Community Medicine department, said. “This study substantiates their claims. Those residents are at an increased risk of developing chronic heart, lung and kidney diseases.”

The study, “Relations between Health Indicators and Residential Proximity to Coal Mining in West Virginia,” appears in the April issue of the *American Journal of Public Health*.

Hendryx and co-author Melissa Ahern, Ph.D., of Washington State University, used data from a 2001

WVU Health Policy Research telephone survey of more than 16,400 West Virginians. That was correlated with data from the West Virginia Geological and Economic Survey, which shows volume of coal production from mining in each of the state’s 55 counties.

The goal was to determine whether there is a relationship between coal production and forms of cardiovascular, lung and kidney disease in the state.

According to Hendryx, as coal production increases, so does the incidence of chronic illness. Coal-processing chemicals, equipment powered by diesel engines, explosives, toxic impurities in coal, and even dust from uncovered coal trucks can cause environmental pollution that could have a negative affect on public health.

“We’ve considered that chronic illness might be prevalent in these

areas because rural West Virginians have less access to health care, higher smoking rates and poorer economic conditions,” Hendryx said. “We’ve adjusted our data to include those factors, and still found disease rates higher in coal-mining communities.”

Total mortality rates are higher in coal-mining areas compared to other areas of Appalachia and the nation, according to Hendryx. He said the incidence of mortality has been consistently higher in coal-mining areas for as long as Centers for Disease Control rates are available, back to 1979.

Total mortality data for West Virginia suggests there are 313 excess deaths every year from coal-mining pollution.

More detailed reports documenting the increases of mortality rates in coal-mining communities will be published in national journals this spring.