ABSTRACT FOR THE USING PAST AND PRESENT TO MAP FUTURE ACTIONS. AGRICULTURAL SAFETY AND HEALTH CONFERENCE. BALTIMORE, MD, MARCH 2-4, 2001. PROCEEDINGS. HTTP://WWW.UIC.EDU/SPH/GLAKES/AGSAFETY2001/

Mortality and Morbidity in Agriculture in the United States

Risto H. Rautiainen, MS, Stephen J. Reynolds, PhD, CIH
The University of Iowa, Great Plains Center for Agricultural Health, Iowa City, Iowa

Abstract

The fatal injury rate in agriculture has been essentially the same for the past decades. According to the Bureau of Labor Statistics (BLS), Census of Fatal Occupational Injuries (CFOI), 807 persons died in 1999 in the agriculture industry, which includes forestry and fishing. The injury rate was 24 fatalities per 100,000 workers. This is five times higher than the rate in other industries on the average, and only mining has a higher fatality rate than agriculture. Tractor remains the primary cause of farm fatalities. National Safety Council (NSC) estimates that there were 255 tractor related fatalities in 1997, the rate being 6.5 deaths per 100,000 tractors. Approximately 60% of tractors in the United States lack Rollover Protective Structures (ROPS), and tractor overturn with non-ROPS tractors is the most frequent type of fatal farm injury. Some data shows that progress may have been made regionally to reduce fatality rates. Research also suggests that childhood fatalities reduced from 300 annually in 1978-83 to 104 annually in 1990-93. The rate reduction during this time period was 39%. Children are specifically at risk for runovers when bystanders or extra riders on tractors and farm equipment. The farming population is older than most other working populations. The elderly farmers are at risk for fatal injuries, especially from tractor overturns.

BLS reported 7.0 non-fatal injuries and 3.3 lost workday injuries per 100 full time workers in agriculture in 1999. This includes data only from those farms with 11 or more employees. NSC reported 140,000 disabling injuries in agriculture in 1998, the rate being 4 disabling injuries per 100 workers. NIOSH estimated that there were 121,936 lost-time injuries in 1994; 4.7 lost-time injuries per 100 full time workers. Some surveys have reported significantly higher injury rates in agriculture. Variation exists in these estimates due to different data collection methods and definitions for agriculture and injury.

According to BLS, morbidity from work related illness was 43/10,000 workers in agriculture. This data is limited to farms with 11 or more employees. NIOSH has reported 51 fatalities in 1996 from hypersensitivity pneumonitis, some of which may be agricultural work related. Research suggests that livestock farmers experience high rates of lung disease (up to 30%). NIOSH has reported that farmers experience lower rates of cancer (Proportional Mortality Ratio (PMR)=0.89) than other industries in 1984-95. Especially lung cancer rates (0.81) were lower in agriculture. Specific cancers including skin (1.22), non-Hodgkins lymphoma (1.01), and leukemia (1.05) were elevated in agriculture. Farmers also suffer from higher levels of suicide (1.11), and underlying stress and depression.

The reported rates for occupational injury and illness in agriculture are likely lower than the actual rates as the farmers in general have no workers compensation or surveillance, which would consistently identify and report work related incidents. Lack of comprehensive and accurate reporting limits the possibilities to draw conclusions regarding rates and trends. However, the available data suggest that agriculture remains one of the most hazardous occupations in the United States and has not experienced similar progress as other occupations.