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WEEKLY REPORT

Pedestrian Fatalities — Cobb, DeKalb, Fulton, and Gwinnett Counties, Georgia, 1994–1998

In 1997, a total of 5307 pedestrian fatalities occurred in the United States, accounting for 13% of motor-vehicle–related deaths (*1*). The Atlanta metropolitan statistical area (MSA) is reported to be the third most dangerous large metropolitan area for walking, behind Fort Lauderdale and Miami, Florida (*2*). This report summarizes an investigation of pedestrian fatalities in four central metropolitan Atlanta counties; the findings indicate that the annual pedestrian fatality rate* for these counties combined has been consistently higher than the national rate, and from 1994 to 1998 the four-county area pedestrian fatality rate increased 13%.

A pedestrian fatality was defined as a death of a person on foot within 30 days after being struck on a public roadway by a motor vehicle during 1994–1998 in the Georgia counties of Cobb, DeKalb, Fulton, and Gwinnett. The four counties constitute 65% of the 20-county Atlanta MSA population. These are the only counties in the Atlanta MSA with medical examiners (MEs), and MEs were the only source identified with a complete record of pedestrian deaths through the end of 1998. Cases identified in ME databases were confirmed using police crash reports from the Georgia Department of Public Safety. Both ME data and police crash report data were used in the analysis. MEs assigned each person who died a race/ethnicity in the mutually exclusive categories of black, white, and Hispanic. The corresponding census groups used in calculating the rates were non-Hispanic black, non-Hispanic white, and Hispanic, respectively. Other races/ethnicities were not included in the analysis. Population estimates from the Bureau of the Census were used to calculate rates. However, because estimates of the 1998 population by age, race, and sex were not available for the counties, the 1996 population was used to calculate average annual rates for these variables. Pedestrian fatality rates for the United States were obtained from the National Highway Traffic Safety Administration, Fatality Analysis Reporting System.

A total of 309 pedestrian fatalities occurred in the four-county area during 1994–1998. The pedestrian fatality rate (per 100,000 population) increased from 2.53 in 1994

*Dividing the number of pedestrian deaths from collisions in a county by the population of the county is not a rate because some of those who died may not have been county residents. For simplicity and consistency with reporting of national crash data, the term "rate" instead of "ratio" was used.

Pedestrian Fatalities — Continued

Emergency Response Operators (HERO) program to assist stranded motorists, primarily on Atlanta's interstate highways. During 1994–1998, 25 pedestrians died after exiting a vehicle on roads now covered by the HERO program. Increased awareness of the availability of this service has the potential to prevent pedestrian deaths and injuries. Second, messages to increase awareness of the risk for injury to pedestrians who have been drinking alcohol should be developed for both the public and establishments that serve alcohol (*4*). Third, pedestrians should be made aware of the dangers of being struck even while crossing at crosswalks. Stricter enforcement of driving laws (e.g., speeding, running a red light, and yielding to pedestrians) and pedestrian regulations (e.g., jaywalking) also may help protect pedestrians. The success of public health measures will require involvement of local community groups, evaluation to identify effective interventions, and ongoing surveillance.

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Deaths Among Children Aged ≤5 Years from Farm Machinery Runovers — Iowa, Kentucky, and Wisconsin, 1995–1998, and United States, 1990–1995

Children who reside on family farms are exposed to unique hazards. Young children may be present where work is being done and may wander into areas where machines are operating or may be passengers on these machines. This report describes four fatal incidents in Iowa, Kentucky, and Wisconsin in which young children were run over by farm machinery, summarizes national mortality data to characterize this problem, and provides recommendations for expanded prevention efforts.

Case information was collected and reported to CDC's National Institute for Occupational Safety and Health (NIOSH), Division of Safety Research (DSR), by state health departments in Iowa, Kentucky, and Wisconsin. Data were obtained through on-site

Farm Machinery Runovers — Continued

investigations, telephone interviews, official law and medical examiners' reports, and news reports.*

Case Reports

Case 1. In July 1998, a 5-year-old boy in Wisconsin and his two brothers, aged 8 and 12 years, were riding in the front bucket of a skid-steer loader (a compact loader that is steered by skidding the wheels) operated by their 9-year-old brother. The loader hit a bump, causing the 5-year-old to lose his balance and fall out of the bucket. He was run over by the loader and died instantly from massive head trauma. His brothers remained in the bucket and were not injured.

Case 2. In April 1998, a 1-year-old girl in Kentucky was run over by a farm tractor driven by her father, who was spreading mulch around trees lining a farm road. He drove the tractor along the road, stopping every few feet to apply mulch. In the late afternoon, he took a break with his wife and three children who had come to visit with him. As he prepared to resume work, his wife and children walked to a nearby creek. He saw his wife and two of the children and, assuming the third child was also with his wife, he engaged the tractor. His daughter was run over by the right rear tractor tire and died instantly from blunt impact to the head, trunk, and extremities and crushing head injuries.

Case 3. In May 1997, a 2-year-old girl in Iowa was killed on the family hog farm when she was run over by a tractor driven by her father. As the father was loading hogs into a livestock trailer attached to the tractor, his wife was assisting and the child was playing nearby. When he drove the tractor forward, the right front wheel ran over the child's lower torso. The child remained conscious and crying after the incident and was airlifted to a regional children's hospital where she died 4 hours after the incident from internal bleeding.

Case 4. In October 1995, a 4-year-old boy in Kentucky died after being run over by a tractor driven by his 10-year-old uncle. Five children, aged 4–12 years, were taking turns driving the tractor in the field. The 10-year-old occupied the driver's seat. The other children sat on two flat fenders, two on each side. The victim was held by an 8-year-old girl. The tractor hit a bump on the dirt farm road, and the victim fell beneath the rear tractor tire. The child sustained a skull fracture and died at the scene.

National Mortality Data, 1990–1995

Following receipt of these reports, DSR reviewed CDC's National Center for Health Statistics (NCHS) mortality data for 1990–1995 and identified 167 deaths among children aged ≤5 years caused by agricultural machinery (*International Classification of Diseases, Ninth Revision* code E919.0†). These data included all farm machinery-related cases, but excluded agricultural machines using public roadways (NIOSH, unpublished data, 1998). The average age of decedents was 3 years (range: 4 months–5 years); 73% were male. Approximately half the deaths occurred from April through

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* Information was collected using the NIOSH Fatality Assessment and Control Evaluation model, which evaluates the relations among agent, host, and environment during pre-event, event, and postevent phases of work-related fatalities. Cases in Kentucky were collected in collaboration with a NIOSH-sponsored Community Partners for Healthy Farming cooperative agreement.

† In addition to tractors, agricultural machinery includes animal-powered agricultural machines, combines, derricks (hay), harvesters, hay mowers or rakes, reapers, threshers, and farm machinery not otherwise specified.

Farm Machinery Runovers — Continued

July, with the largest proportions occurring in April (16.2%), June (12.6%), and July (12.6%); 27% occurred from August through October. One third (33%) of deaths occurred in hospital emergency departments, and 19% of the children died at the scene.

Reported by: SH Pollack, MD, Univ of Kentucky depts of Pediatrics and Preventive Medicine and Kentucky Injury Prevention and Research Center; TW Struttmann, MSPH, Kentucky Injury Prevention and Research Center and Southeast Center for Agricultural Health and Injury Prevention, Lexington. C Zwerling, MD, R Rautiainen, MScAgr, J Lundell, MA, W Johnson, MD, L Etre, PhD, Dept of Occupational Medicine and Environmental Health, Univ of Iowa, Iowa City. LP Hanrahan, PhD, J Tierney, Wisconsin Dept of Health and Family Svcs. Div of Safety Research, National Institute for Occupational Safety and Health; Div of Unintentional Injury Prevention, National Center for Injury Prevention and Control, CDC.

Editorial Note: From 1979–1981 to 1991–1993, the rate of farm-related fatalities for persons aged <20 years decreased by 39%, but the rate for children aged <5 years declined 29% (*1*). During 1991–1993 in the United States, machinery was involved in 36% of farming-related fatalities of children aged <5 years (*1*). An earlier study of U.S. agricultural equipment fatalities indicated that the rate for fatal tractor runovers of farm residents was highest among children aged <5 years (*2*), and during 1979–1985, a study of farm-related deaths among children aged 1–9 years in Wisconsin and Illinois indicated that moving machinery was the most common source of injury (63% and 53%, respectively) (*3*).

Machine runover fatalities among children aged 1–4 years often were associated with playing near machinery, and runover fatalities in children aged 5–9 years often were associated with falling from and being run over by machinery (*3*). Peaks in unintentional farm-related childhood injury deaths from all causes occur at age 2 years and ages 13–15 years (*4*); fatalities among very young children are related to accompanying their parents as they perform their work duties, and fatalities among older children are related to the children's increased time spent working on the farm. Most fatalities occurred in the spring and fall (i.e., times of planting and harvesting), when parents are busy with farm work and may have less time to supervise children (*1,3,4*).

Prevention efforts can be improved to reduce and eliminate childhood fatalities caused by agricultural machines. Pediatricians, family practitioners, and health departments providing health care to farm families and agricultural safety specialists, farm machinery manufacturers, and organizations serving farm families should warn parents that young children are at high risk for runover by farm machinery and encourage parents to make changes that will make their farms safer. The following recommendations to parents for child safety on farms are summarized from the National Safety Council (NSC) recommendations (*5*):

- Design a fenced, safe play area that is near the house and away from work activities.
- Inspect the farm on a regular basis for potential hazards, and correct such hazards immediately.
- Equip all barns and the farm shop with latches that can be locked or secured so children cannot enter.
- Always lower hydraulics, turn off agricultural machines, and remove ignition keys before leaving machines unattended.
- Never carry children on tractors or permit them into areas where agricultural machines are used or stored, and never allow additional riders, especially children, on any agricultural machinery.

Farm Machinery Runovers — Continued

In addition, NIOSH encourages parents to

- Ensure that agricultural machines are in safe operating condition.
- Carefully inspect the area around the machines before use to make sure no children are present.
- After any work interruption (e.g., lunch with the family), clarify who is to supervise children and confirm their location before work is resumed.
- Restrict operation of machinery to older adolescents and adults who possess the knowledge, skills, and physical capacity necessary for safe operation of these machines.

Additional information about child safety and farm equipment is available from the National Children's Center for Rural and Agricultural Health and Safety, telephone (888) 924-7233 or (715) 389-4999, and on the World-Wide Web[§] at http://research.marshfieldclinic.org/children; NSC, (800) 621-7615 (extension 2087) or (630) 775-2023, or at http://www.nsc.org/farmsafe.htm; Farm Safety 4 Just Kids, (800) 423-5437 or (515) 758-2827, or at http://www.fs4jk.org; NIOSH, (800) 356-4674 or http://www.cdc.gov/niosh/homepage.html; or NIOSH Centers for Agricultural Disease and Injury Research, Education, and Prevention, (304) 285-5711.

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[§]References to sites of nonfederal organizations on the World-Wide Web are provided as a service to *MMWR* readers and do not constitute or imply endorsement of these organizations or their programs by CDC or the U.S. Department of Health and Human Services. CDC is not responsible for the content of pages found at these sites.

Ascertainment of Secondary Cases of Hepatitis A — Kansas, 1996–1997

Each year, 25,000–30,000 cases of hepatitis A are reported in the United States. The most common infection source (22%–26%) is household or sexual contact with a person already infected with hepatitis A virus (HAV) (i.e., the source-patient) (*1*). In Kansas during 1992–1997, contact with a source-patient was reported by 39% of persons with hepatitis A (*2*). Cases reported in 1996 and 1997 were studied retrospectively to determine the reasons for the apparently high proportion of secondary cases and to evaluate missed opportunities for prevention (i.e., postexposure prophylaxis with immune globulin [IG]) (*3,4*). Results of this investigation indicate that persons with hepatitis A often were classified incorrectly as secondary cases and that some correctly identified secondary cases represented missed opportunities for prevention.