

MMWRTM
**MORBIDITY AND MORTALITY
WEEKLY REPORT**

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Knowledge and Use of Folic Acid by Women of Childbearing Age — United States, 1995 and 1998

In the United States, approximately 4000 pregnancies are affected by neural tube defects each year; 50%–70% of these developmental defects could be prevented with daily intake of 400 µg of the B vitamin folic acid throughout the periconceptional period (1). In 1992, the Public Health Service recommended that all women capable of becoming pregnant consume 400 µg of folic acid daily throughout their childbearing years to reduce their risk for having a pregnancy affected by neural tube defects (2). In 1998, the Institute of Medicine recommended that all women of childbearing potential consume 400 µg of synthetic folic acid per day from fortified foods and/or a supplement in addition to food folate from a varied diet (3). This report summarizes the findings of a survey conducted during July–August 1998 to assess folic acid knowledge and practices among women of childbearing age in the United States (4) and compares these results with those from a similar survey conducted in 1995. The findings indicate that 7% of women know folic acid should be taken before pregnancy to reduce the risk for neural tube defects.

In 1998, the March of Dimes Birth Defects Foundation contracted with the Gallup Organization to conduct a random-digit-dialed telephone survey of a stratified national sample of 2115 women aged 18–45 years. The response rate was 52%. The margin of error for estimates based on the total sample size was ±3%; for comparisons involving subsets of the sample, the margin of error was greater. Statistical estimates were weighted to reflect the total population of women aged 18–45 years in the contiguous United States who resided in households with telephones. The 1998 survey included many of the same questions asked in 1995, and the methods employed were essentially the same (4).

Overall, 68% of women reported having ever heard of or having ever read about folic acid, a 31% increase from 52% in 1995. Awareness of folic acid was lowest among women aged 18–24 years (50%) and women who had less than a high school education (40%). Of all women surveyed, 13% knew that folic acid helps prevent birth defects, and 7% knew that folic acid should be taken before pregnancy (Table 1), compared with 5% and 2%, respectively, in 1995.

In 1998, 32% of women reported taking a vitamin supplement containing folic acid on a daily basis, compared with 28% in 1995. Among women who reported being not pregnant at the time of the survey, 29% reported taking a vitamin supplement

Playground Safety — Continued

These survey results should be interpreted cautiously because of at least four limitations. First, interrater reliability is unknown. Second, a single assessment may not reflect accurately seasonal or time-of-day differences in safety. Third, observation of the playground does not measure maintenance and supervision policies, although it does reflect actual practice. However, in a number of schools and child care centers, researchers were not permitted to be in the playground while children were present. Thus, the data on supervision may not reflect true practices. Finally, the sample size is small relative to the total number of playgrounds in the United States.

To provide a safer play environment, playgrounds must have adequate supervision, be maintained continually, and be equipped with age-appropriate equipment and resilient surfaces. Further information about the survey and safer playgrounds is available from the National Program for Playground Safety, telephone (800) 554-7529 or on the World-Wide Web at <<http://www.uni.edu/playground>>*.

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Childhood Work-Related Agricultural Fatalities — Minnesota, 1994–1997

Agriculture is one of the most hazardous industries in the United States, with the second highest work-related fatality rate during 1992–1996 (21.9 deaths per 100,000 workers) (1). During 1992–1995, 155 deaths were reported among agricultural workers aged ≤19 years; 64 (41%) of these youths were working in their family's business (2). In Minnesota during 1992–1996, agriculture had the highest fatality rate of any industry (21.3 per 100,000 workers) (1). To characterize agriculture work-related deaths among youths in Minnesota during 1994–1997, the Minnesota Department of Health (MDH) analyzed data from the state's Fatality Assessment and Control Evaluation (FACE) program. This report presents five cases of agriculture work-related fatalities among youths in Minnesota.

Childhood Agricultural Fatalities — Continued

Since 1992, MDH has collected data about work-related fatalities through the FACE program.* Cases are identified by reviewing medical records, sheriff's reports, newspaper articles, death certificates, and Occupational Safety and Health Administration records. During 1994–1997, Minnesota FACE investigated six work-related agricultural fatalities among persons aged <19 years.

Case Reports

Case 1. On June 3, 1994, a 13-year-old boy died while attempting to divert a run-away farm wagon. A farmer was using a tractor to pull a forage chopper with the wagon hitched behind. When the tractor turned, the quick-release hitch connecting the wagon to the chopper unlatched. As the farmer maneuvered to reattach the chopper and wagon, the wagon rolled toward a garage. The boy ran in front of the wagon and attempted to pick up the wagon tongue to steer it. He was caught between the wagon and the garage wall and sustained severe chest injuries.

Case 2. On July 30, 1994, a 10-year-old boy died when the tractor he was driving overturned while turning off a public highway onto a gravel road. The tractor was towing a hay baler and loaded hayrack and was not equipped with a rollover protective structure (ROPS) and seat belt. He died from acute laceration of the brain with multiple skull fractures.

Case 3. On July 11, 1995, a 13-year-old boy died after being engulfed by corn inside a grain bin. The boy and his father were using a portable auger to unload corn from the bin into a truck. The youth uncovered the bin roof access opening and sat on the roof ladder to monitor the flow of corn. Fifteen minutes later, his father noticed the boy was no longer on the roof. He climbed to the roof but was unable to locate the boy. He shut down the auger and attempted to break open the bin with a loader-equipped tractor. Emergency personnel cut holes in the bin with power saws and extracted the youth. He was transported to a medical center but died two days later from complications of anoxic encephalopathy.

Case 4. On August 17, 1995, a 17-year-old boy died after he was struck by a front-end loader bucket. The boy was riding in a tractor with the farmer and dismounted the tractor to open a gate to allow the farmer to drive through. He then climbed into the bucket, which had been improperly secured. The farmer raised the bucket and proceeded down the driveway. The tractor struck a bump, bouncing the loader arms and disengaging the bucket. The boy fell and was struck by the falling bucket. He died from skull fracture and massive fracture of the cervical spine.

Case 5. On September 13, 1997, a 13-year-old boy died when he was run over by a grass seeder being towed by a tractor on sloped land. The youth was riding on the frame of the seeder and using his hand to ensure even seed flow when he lost his balance, fell from the seeder, and was run over. He died from severe chest and head trauma.

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Editorial Note: The fatalities described in this report represent common farm injuries and indicate that children who work on farms are exposed to the same injury risks as adults. In 1991, an estimated 1.2 million children aged ≤19 years resided on farms and

*Through cooperative agreements with CDC's National Institute for Occupational Safety and Health, 15 states maintain multiple-source networks to identify traumatic occupational fatalities, conduct site investigations of selected incidents (including machinery deaths and falls from elevations), and disseminate injury-prevention information.

Childhood Agricultural Fatalities — Continued

ranches in the United States (3). Although the proportion of such children engaging in agricultural work is uncertain, a Minnesota survey indicated that approximately 40% of boys and 10% of girls in grades 10–12 who reside in rural areas had done some type of agricultural work during the preceding year (4). During 1992–1996, an estimated 300,000 youth aged 15–19 years were employed in the U.S. agricultural production and services sector (U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, unpublished data, 1998).

In the agricultural industry, children may perform tasks that are prohibited in other industries (5), be exposed to workplace hazards at an early age, and perform tasks that are inappropriate for their age (6). Compared with adults, youth may lack work experience, physical size, and attention to task. The ability of youth to operate equipment safely may be compromised by cognitive abilities that are less well developed than in adults, by diminished visibility from operators' cabs designed for adults, and by control layouts that may not accommodate their reach. In addition, they may have limited influence in business and operational decisions such as equipment purchases, work practices, and work assignments.

Safety requirements of the Occupational Safety and Health Act of 1970 are not enforceable on 95% of U.S. farms. As a result, most farm owners lack the direction provided by mandatory safety standards to address the complex problem of controlling risk for both adult and youth workers (5). In addition, children engaged in agricultural work as family members are not covered by provisions of the Fair Labor Standards Act of 1938 (7), which prohibits youth aged <16 years employed outside their family farm from performing hazardous agricultural tasks such as operating machinery, working from ladders >20 feet high, and working in confined spaces. However, youth aged 14 and 15 years who have received safety training on specific topics through specialized programs may perform work activities otherwise prohibited for minors aged <16 years, and youth aged ≥14 years may perform tasks other than those declared hazardous. Efforts are under way to develop consensus guidelines for developmentally appropriate tasks for children in agriculture (5).

The fatalities described in this report could have been prevented by adherence to standard safety practices applicable to workers of all ages (e.g., using of ROPS and seat belts, properly securing attachments, and operating at safe speeds). However, before allowing children to perform farm work, especially tasks involving operation of equipment, parents and farm managers should evaluate additional factors that may expose youth to increased risk for injury (8). CDC's National Institute for Occupational Safety and Health recommends that parents and farm managers carefully consider the following questions before assigning work tasks to youth:

- Does the youth possess the physical capacity to perform the task safely?
- Does the youth have sufficient and appropriate training and experience?
- Can the youth recognize and control potential hazards?
- Can the youth read and understand safety instructions in operating manuals and on signs?
- Is the youth mature enough to exercise good judgement?
- Has the youth been trained to cope with emergencies?
- Do work procedures accommodate physical characteristics of the youth?

Childhood Agricultural Fatalities — Continued

- Is adult supervision available?

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Update: Outbreak of Nipah Virus — Malaysia and Singapore, 1999

During March 1999, health officials in Malaysia and Singapore, in collaboration with Australian researchers and CDC, investigated reports of febrile encephalitic and respiratory illnesses among workers who had exposure to pigs (1). A previously unrecognized paramyxovirus (formerly known as Hendra-like virus), now called Nipah virus, was implicated by laboratory testing in many of these cases. Febrile encephalitis continues to be reported in Malaysia but has decreased coincident with mass culling of pigs in outbreak areas. No new cases of febrile illness associated with Nipah virus infection have been identified in Singapore since March 19, 1999, when abattoirs were closed. This report summarizes interim findings from ongoing epidemiologic and laboratory investigations in Malaysia and Singapore.

Malaysia

As of April 27, 1999, 257 cases of febrile encephalitis were reported to the Malaysian Ministry of Health (MOH), including 100 deaths. Laboratory results from 65 patients who died suggested recent Nipah virus infection. Since April 4, new encephalitis cases have been reported in the states of Negeri Sembilan and Selangor. However, the number of new cases reported decreased from a peak of 46 during March 13–19 to four during April 10–16 (Figure 1).

The apparent source of infection among most human cases continues to be exposure to pigs. Of 65 serologically confirmed cases of Nipah virus-associated encephalitis in Negeri Sembilan, 56 (86%) case-patients reported touching or handling pigs before onset of illness. Of the 56 case-patients, 36 (64%) reported contact with pigs that appeared to be ill.

Human-to-human transmission of Nipah virus has not been documented. In a survey of nurses and physicians who cared for encephalitis patients during the outbreak