broad group of adolescents and impact their work-safety behaviors. The purpose of this project was to develop, implement and evaluate a school-based occupational health and safety curriculum.

Methods: The curriculum "Work Safe Work Smart" was developed by a curriculum development team that included teaching and public health professionals. The curriculum attempts to promote changes in students that are predictive of adopting safe work-related behavior.

In January and February 2000, the curriculum was taught in required classes to all 9th and 10th grade students in five rural Minnesota schools. Six schools within the same geographic region served as controls. Pretests were administered to 9th and 10th graders in the eleven participating schools prior to implementation of "Work Safe Work Smart". Post-tests were given approximately two weeks following completion of the curriculum, and again six months later. Process evaluation in intervention schools included teacher checklist, classroom observer checklists, and teacher and student interviews.

Results: The curriculum was successfully incorporated into existing courses, such as health, social studies and career exploration during the study period. Information from implementation teachers and administrators further elucidated factors involved in institutionalization of the topic into the school curricula. Data collected from student interviews and the outcome evaluation will provide insight into the efficacy of "Work Safe Work Smart" to produce change in predictors of students' work-related safety behaviors.

Conclusion: These data will provide information on incorporating occupational safety and health curricula into existing schools curricula. It will also provide insight into the impact teaching "Work Safe Work Smart" has on students.

Session: E4.0
Title: Fatality Assessment and Control Evaluation (FACE)
Category: Injury Surveillance
Moderator(s): William Hetzler

E4.1 Identification and Evaluation of Injury Circumstances Contributing to Crane-related Occupational Fatality—Moore PH, Pratt SG

Introduction: Cranes are used in a broad range of industrial settings to hoist and transport materials. Mobile cranes used in construction, mining, and transportation move between locations, often while carrying a load. Tower cranes are used at urban building construction sites where limited maneuvering room is available. Overhead traveling cranes are a necessity in heavy manufacturing, railroad and seaport operations. This study identified injury risks for workers operating or working near cranes and developed recommendations for injury prevention.

Methods: The Census of Fatal Occupational Injuries (CFOI) was used to identify crane-related fatalities from 1992 to 1997. Results of 73 field investigations conducted by NIOSH's Fatality Assessment and Control Evaluation (FACE) program between 1982 and 1999 were evaluated to identify circumstances which contributed to each type of event.

Results: The CFOI identified 479 occupational fatalities between 1992 and 1997 for which a crane was the primary or secondary source of injury. Injury events included contact with objects and equipment (41%), falls to lower level (13%), contact with electric current (24%), and transportation incidents (10%). Injury circumstances of the fatalities investigated through FACE were 36 power-line contacts, 11 crane tip-overs, 11 rigging failures, 9 falls from cranes or suspended work platforms, 3 caught by or struck by crane components, and 2 incidents where the crane was in transport.

Conclusion: Crane fatalities can be prevented by implementation of safe work procedures including maintaining safe clearance between cranes and overhead power lines, operating within manufacturer's recommended capacities, using load monitoring instruments, and maintaining safe clearance between workers on foot and cranes.

E4.2 Work-related Fatalities in West Virginia: A Summary of Surveillance, Investigation, and Prevention Activities - July 1996 Through December 1999—Helmkamp JC, Lundstrom WJ, Williams JM

Background: From 1990 through 1995, West Virginia experienced a work-related death (WRD) rate of 8.9 deaths per 100,000 workers — the fifth highest rate among all states and twice the national rate. As a result, the West Virginia Fatality Assessment and Control Evaluation (WV FACE) program was established in 1996 to identify all WRDs, define work situations at high risk for fatal injury, investigate selected causes, and formulate and disseminate prevention strategies.

Methods: WRD surveillance and investigation data are used to describe trends and rates and identify hazardous conditions, unsafe work practices, and management-leadership problems through the use of the traditional epidemiologic model and the Haddon temporal matrix. Prevention strategies are developed and disseminated to audiences.

Results: From July 1996 through December 1999, 191 persons died from traumatic work-related injuries. The WRD rate was 7.6 per 100,000 compared to 4.7 for the U.S. (1996-98). Ninety-four percent of the victims were male and all Caucasian. Mean age at death was 43 years. Leading external causes of death included motor vehicle (48), struck by object (38), machinery-

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ABSTRACTS

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