# Motor vehicle safety

By Amy Stewart

#### Before you begin

Ask your participants these questions: How safe is the operation of your motor vehicle? What are typical causes of motor vehicle crashes, incidents and events? What do we check to prevent motor vehicle problems?

## Introduction

## Warm-up exercise – group discussion

List types of undesirable motor vehicle events and how we compensate for them, or how we can improve in these three categories.

## **Category 1: Vehicle condition prevention**

Possible answers include: Preventive maintenance; repairs; vehicle abuse; vehicle assignments; clearance; collisions; routine maintenance; vehicle cleanliness; care, pride, policy/procedures/training; reflective markings, reflectors, and lights; daily, weekly, monthly, quarterly or annual inspections; vandalism, ventilation, securing loads for transport; radio and communication devices working.

# **Category 2: Driver/operator condition**

Possible answers include: Self-care; well rested; well nourished; groomed; uniformed; proper training for the vehicle; route is established/planned in advance; safety-belt use; safe lifting/handling; slips/falls; strains/ sprains. Other answers may include: Speeding; distractions, fatigue, courteous, abides by rules of the road as well as organizational policies, procedures and protocol; mindful of traffic, congestion, other drivers, other vehicles and pedestrians; vandalism; weather; care for vehicle from documented inspection and log to ensure vehicle is maintained.

## **Category 3: Environment**

Possible answers include: Traffic density; signs; lights; markings; parking areas; communications; detours; construction zones; other drivers and vehicles; nonmotorized traffic users, including animals, pedestrians and bicycles – non-licensed or off-road; vehicles, such as yard equipment, forklifts and lift trucks; weather.

## Discussion question: What can we do to prevent accidents?

## Group discussion #1 (Vehicle condition)

- **Q**. What are the leading causes of fatalities for motor vehicles?
- A. Brakes; other vehicles; speed; alcohol; space management
- **Q**. What contributing factors lead to these events and what can we do to keep them from happening?
- A. Routine inspections; preventative maintenance; following policies and procedures; education and training; enforcement and engineering
- **Q**. What can we do about our responsibilities for vehicle conditions?
- A. Drive vehicles only if they are in working condition. Inspect and maintain vehicles.
   Make repairs as needed. Keep them in top shape.
- **Q**. Discuss newer designs of vehicles. What hazards do these new designs create or do you believe they contribute to crash prevention?

A. Air-ride seats; computer feedback, global positioning system and new technologies

## Group discussion #2 (driver/operator condition)

- O Describe ways to inform drivers and operators of motor-vehicle safety (federal, state and local laws, and ANSI Z15.1 standard).
- O Discuss contributing factors to fatalities from the perspective of driver condition and how to prevent them.
- O From your organization's trend reports, share a typical motor-vehicle crash scenario, and discuss how the accident could have been prevented. If not preventable, draw real experiences from the group members.
- O Discuss the feasibility of having a crash and injury review team at your facility and acknowledge the benefits and disadvantages.

# Group discussion #3 (environment)

- **Q**. What are ways to use communication in the traffic/transportation/motor-vehicle environment?
- A. Signage, colors, audible/visual alarms, signals, markings, traffic patterns and gestures
- **Q**. What are some environmental factors that contribute to motor-vehicle crashes?
- A. Engineering design, road surface, lack of warning, road construction, the human element and weather
- **Q**. What can we do as drivers to ensure motor-vehicle safety and survive on the road?
- A. Concerns range from aggressive or distracted driving, mobile-telephone use and impaired drivers. Be courteous. Take care of yourself and your vehicle. Disengage and keep adequate space away from hazards. Follow driving rules and regulations.

# Check list/guidelines for motor-vehicle safety

- 1. Pre-trip Vehicle is clean, fueled and maintained.
- 2. Document completed maintenance schedule for operations and maintenance.
- 3. Look for damage or vandalism and report it when it is appropriate.
- 4. Ensure employees recognize their own driving conditions and strive to be safe.
- 5. Realize environmental changes are a part of motor-vehicle safety, and be alert for:
  - o Traffic density;
  - o Non-motorized highway users;
  - o Signs, lines, markings and lights;
  - o Clues to the environment that can cause crashes.

# Methods and strategies

Through group discussion, the participants will raise awareness of hazards for motor vehicles; incorporate hazard identification into the workplace through safety committees; peer-to-peer feedback and employee suggestions. The leader will offer feedback on employee suggestions to upper management when appropriate and support job hazard analysis, as well as crash and injury review when applicable.

# **Concluding action**

Workers must not only be mindful of what they are doing, but they should be aware of the actions of those around them. Raise the awareness of the dangers surrounding motor vehicles in order to identify opportunities for improvement. Resources are available internally, locally, statewide and through federal agencies to support the direction of motor-vehicle safety. Your time, level of enthusiasm and energy are the only limitations. Determine the greatest exposure to your organization, search for factual information to support solutions for preventing motor-vehicle accidents and work with employees to identify what works best for your organization.

# **Group actions**

**Safety committee** – Design a list of improvements that you can make in your organization's motor vehicle area. Prioritize these suggestions beginning with those that are of minimal cost to those that are substantial. Get upper management actively involved. Instill a "not on my watch" attitude about these improvements.

Tailor an orientation-training program for employees who operate motor vehicles in any capacity. Include procedures, rules and guidelines for keeping your company injury/fatality/damage-free. Continue with refresher and follow-up training that includes analysis and review of incident rates to give feedback to those on the front lines who may benefit from risk-exposure information.

**Amy Stewart** is the project director for a federal Safe Schools/Healthy Students grant at Highland Local Schools through the Department of Education, Health and Human Services and the Justice Department. She is a certified safety professional and has more than 20 years experience in designing fleet-safety training and emergency-response programs.

## References

Regulations

- 49 CFR
- ANSI/ASSE Z-15.1, Safe Practices for Motor Vehicle Operations
- Digest of Ohio Motor Vehicle Laws, www.bmv.ohio.gov;
  Responsible Driver Handbook, www.publicsafety.ohio.gov

## Publications

 National Institute for Occupational Safety and Health. Work Related Roadway Crashes, Who's At Risk? NIOSH Publication No. 2004-137, March 2004.

## Web sites

- American Society of Safety Engineers (ASSE):
  www.asse.org
- National Institute for Occupational Safety and Health: http://www.cdc.gov/niosh/homepage.html
- National Safety Council (NSC): www.nsc.org
- US Department of Transportation: www.dot.gov

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