

# Transportation Safety Policy and Injury Prevention

**Ann M. Dellinger, Ph.D., M.P.H.**

Division of Unintentional Injury Prevention  
National Center for Injury Prevention and Control



# Why Transportation Safety?

Why is the **Injury Center** interested in traffic safety?

Motor vehicle injury is the leading cause of death among children and young adults.



# Age of Motorization in the USA

In 1900

8000 registered vehicles

1 death/100,000 pop

In 1937

30,000,000 vehicles

30.8 deaths/100,000 pop

Today

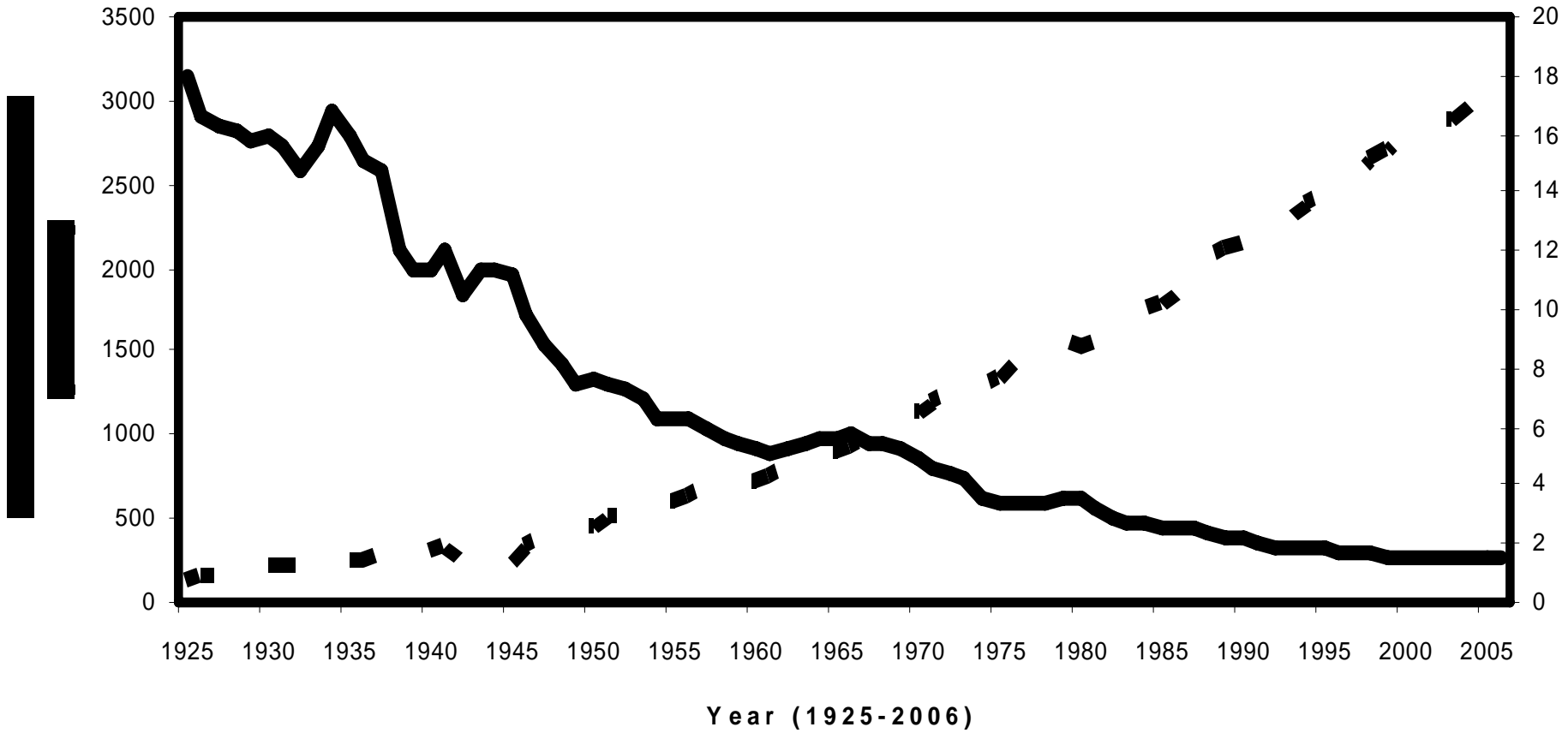
250,000,000 vehicles

15.1 deaths/100,000 pop



# Annual Vehicle Miles Traveled and Motor Vehicle-Related Deaths, United States 1925-2006

Data source: National Safety Council, Injury Facts, 2008



# Motor Vehicle Injury how big a problem?

Responsible for:

- **>42,000 deaths per year (15.1 per 100,000 pop)**
- **Leading killer of children, adolescents, young adults**
- **500,000 hospitalizations & 4 million ED visits**
- **3<sup>rd</sup> leading cause of emergency department visits**
- **50-60% of serious head & spinal cord injuries**
- **10% of all YPLL from all causes (over 1 million/yr)**

# What has been pushing this death rate down?

- Roads
- Vehicles
- Behaviors

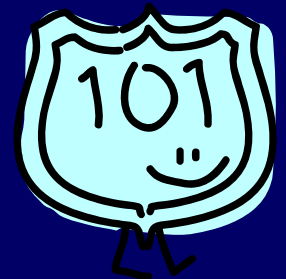


# Vehicles

- Steering columns
- Airbags
- Safety belts
- Shatter-resistant windshields
- Dual brakes
- Head rests

# Roads

- Divided traffic
- Controlled Access
- Crash absorbing barriers
- Wide shoulders
- Guard rails

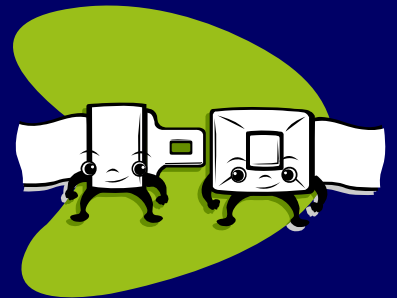


# National Maximum Speed Limit

- In 1974 saved 3000-5000 lives
- 2000-4000 each year through 1983
- Instituted to save fuel but safety consequences.

# Safety Belt Laws

- Estimated to save >5,000 lives/year
- 45-50% effective in decreasing risk of death or serious injury in a crash



# Child Safety Seat Laws

- Infants 71% risk of death
- Toddlers 54% risk of death
- Booster 59% risk of injury compared to belts

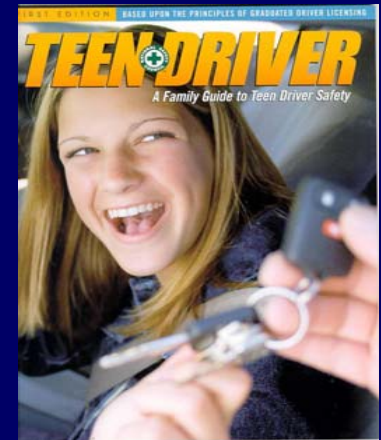
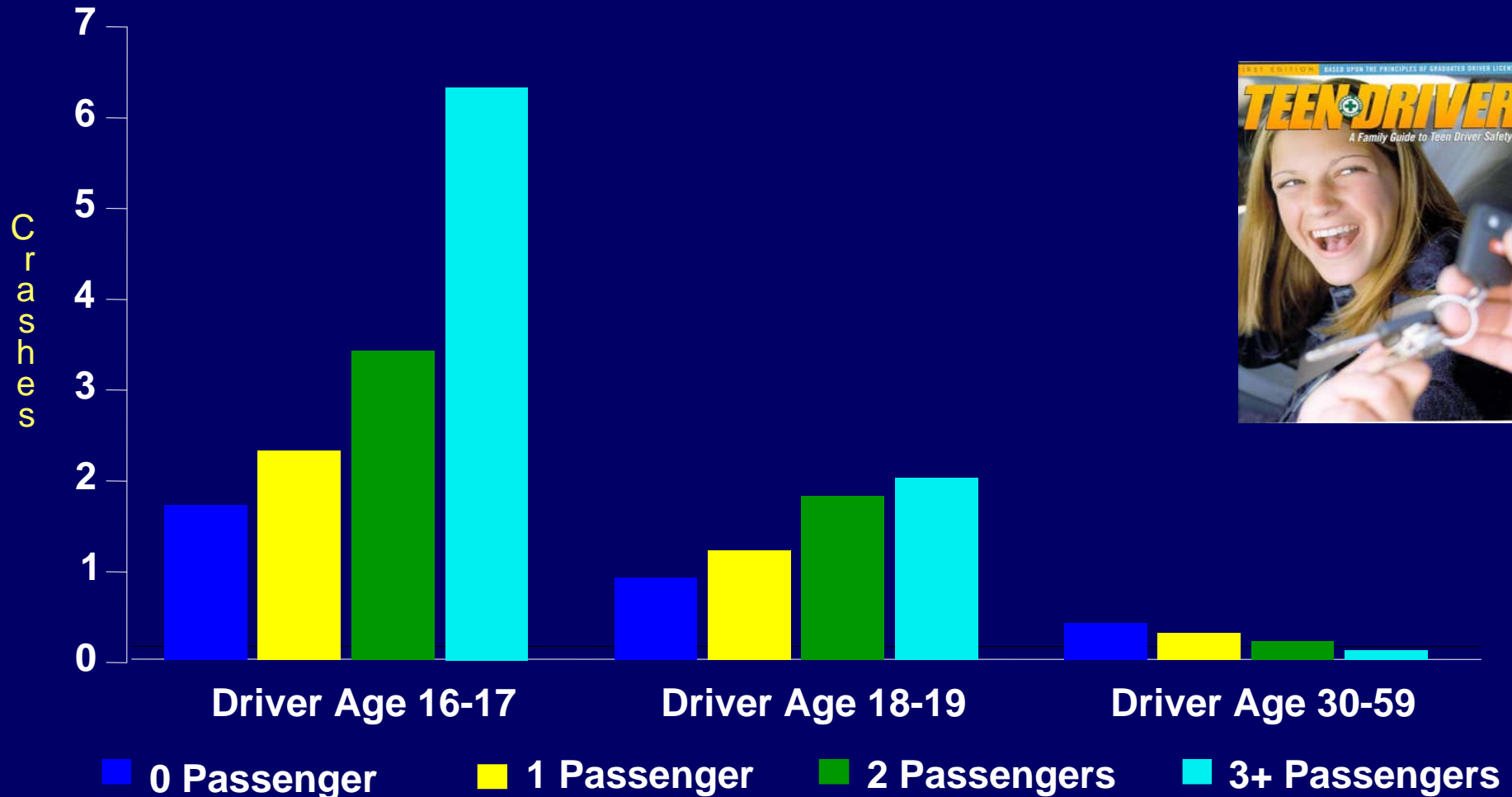


# Graduated Drivers License

- Largest change - **38%** reduction in fatal crashes and **40%** reduction in injury crashes with most restrictive requirement;
- No increase crash risk for 17 or 18 year-olds



# Passengers and Crashes (per 10,000 trips)



# Alcohol-Impaired Driving

.08 BAC

MLDA

Zero Tolerance



# Mandatory Motorcycle Helmet Laws

- Universal laws – 100% use
- Age-specific laws – 50% use
- 37% effective risk of death
- 72% effective risk of head injury
- Decreased deaths -> repeals -> increased deaths





[adellinger@cdc.gov](mailto:adellinger@cdc.gov)

