



UMTRI

**Graduated Driver Licensing:
What we know
What we need to do**

Jean T. Shope

Australasian Road Safety Research
Policing and Education Conference October 2006

UNIVERSITY OF MICHIGAN
TRANSPORTATION RESEARCH INSTITUTE

Acknowledgements



- **CARPS**
- **NHTSA, NIAAA**
- **Colleagues: Pat Waller, Allan Williams, Rob Foss, Dan Mayhew**

Overview

■ What we know

- ❑ Young driver “problem”
- ❑ What contributes to problem
- ❑ Graduated licensing as a solution

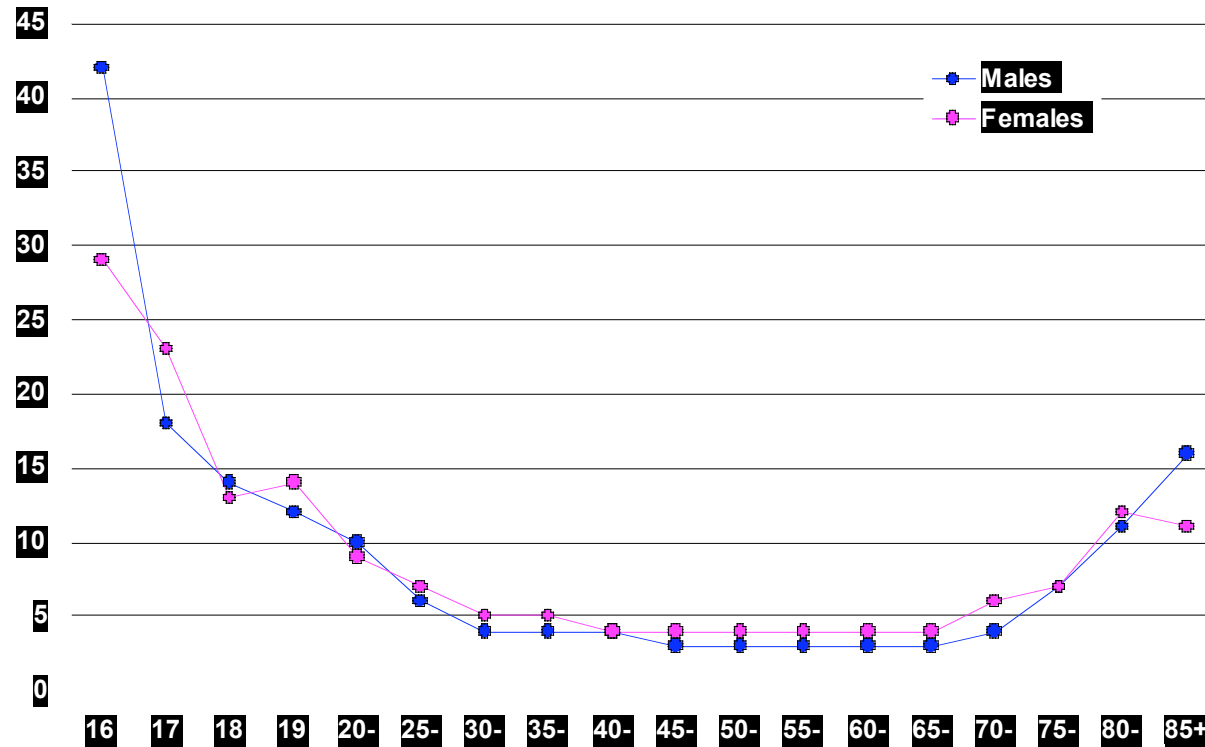
■ What we need to do

- ❑ Understand local problem
- ❑ Ensure/enhance/implement graduated licensing
- ❑ Evaluate, revise, re-evaluate

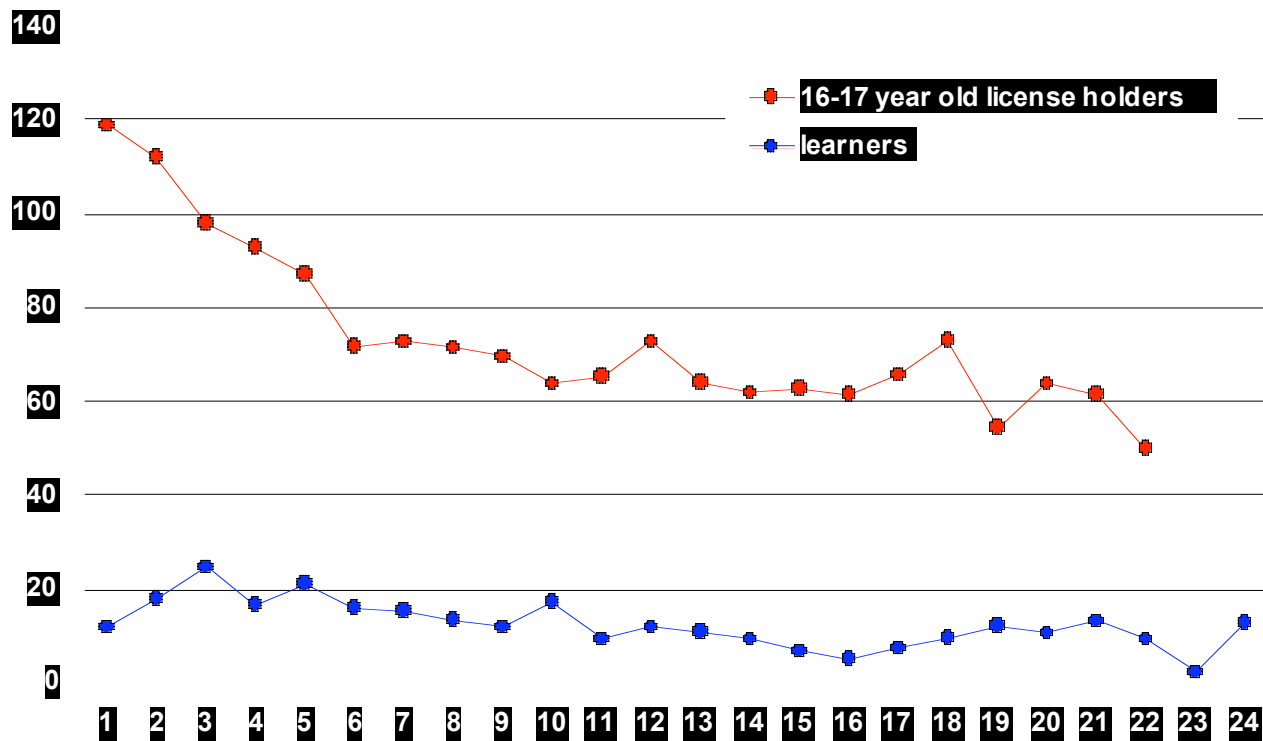
What do we know about young drivers?



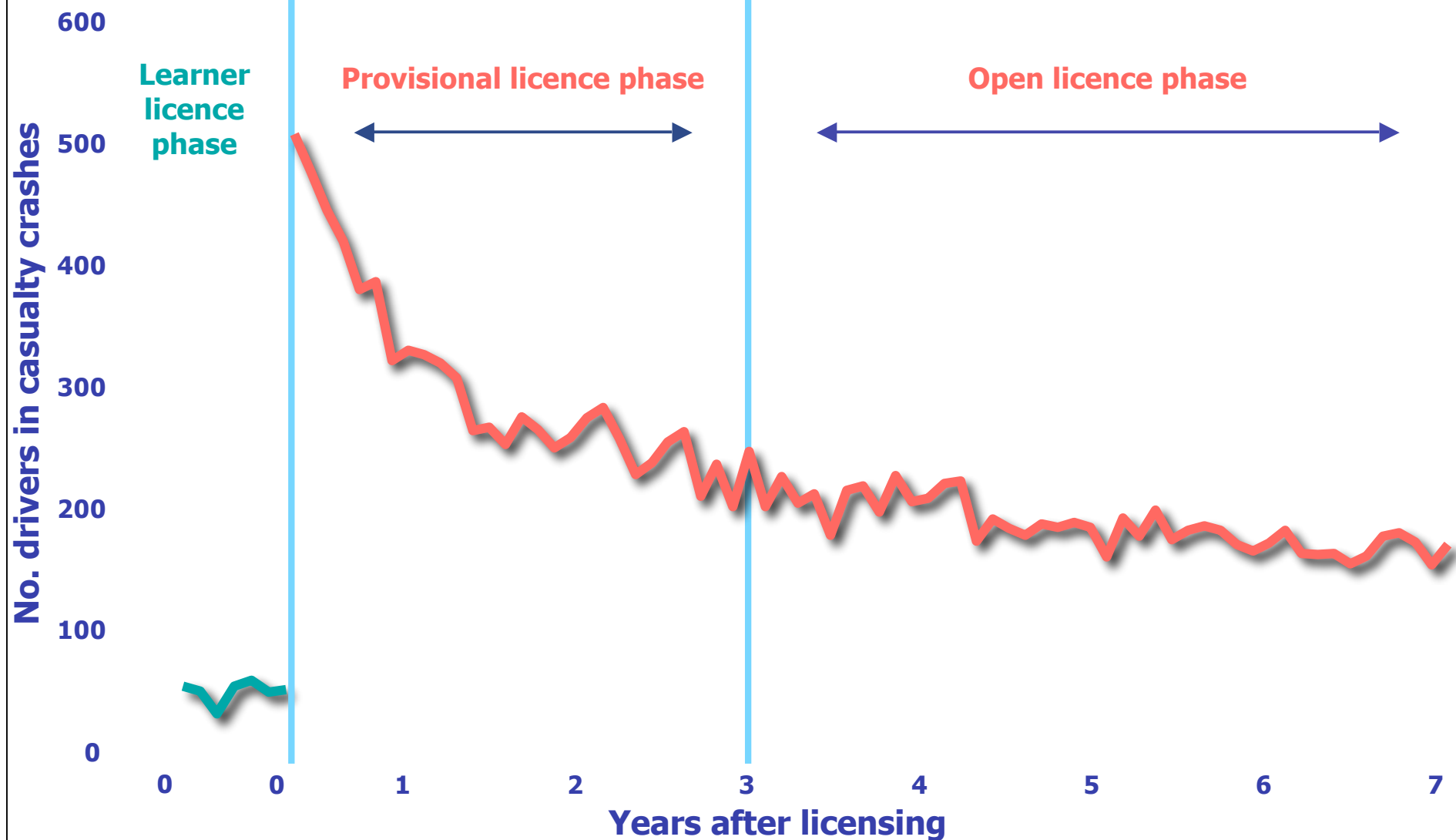
Driver Crash Involvements per Million Miles Travelled by Age (IIHS)



Nova Scotia Crashes per 10,000 Drivers by Month of Licensure (TIRF)



Queensland Casualty Crashes by Learner/Provisional/Open Driver Licensees



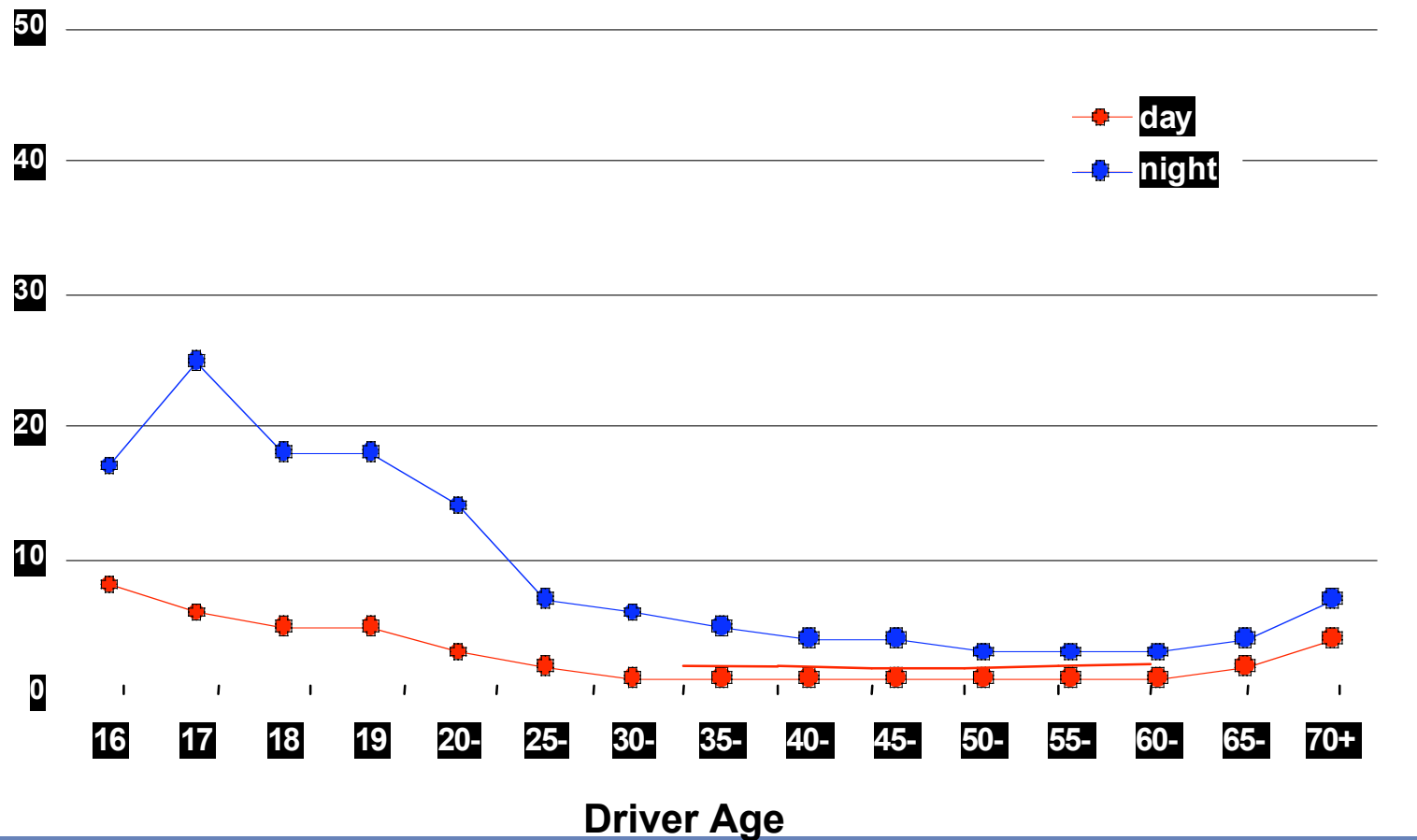
Source: Queensland Transport, 2005, Queensland youth on the road and in

What contributes to the problem?

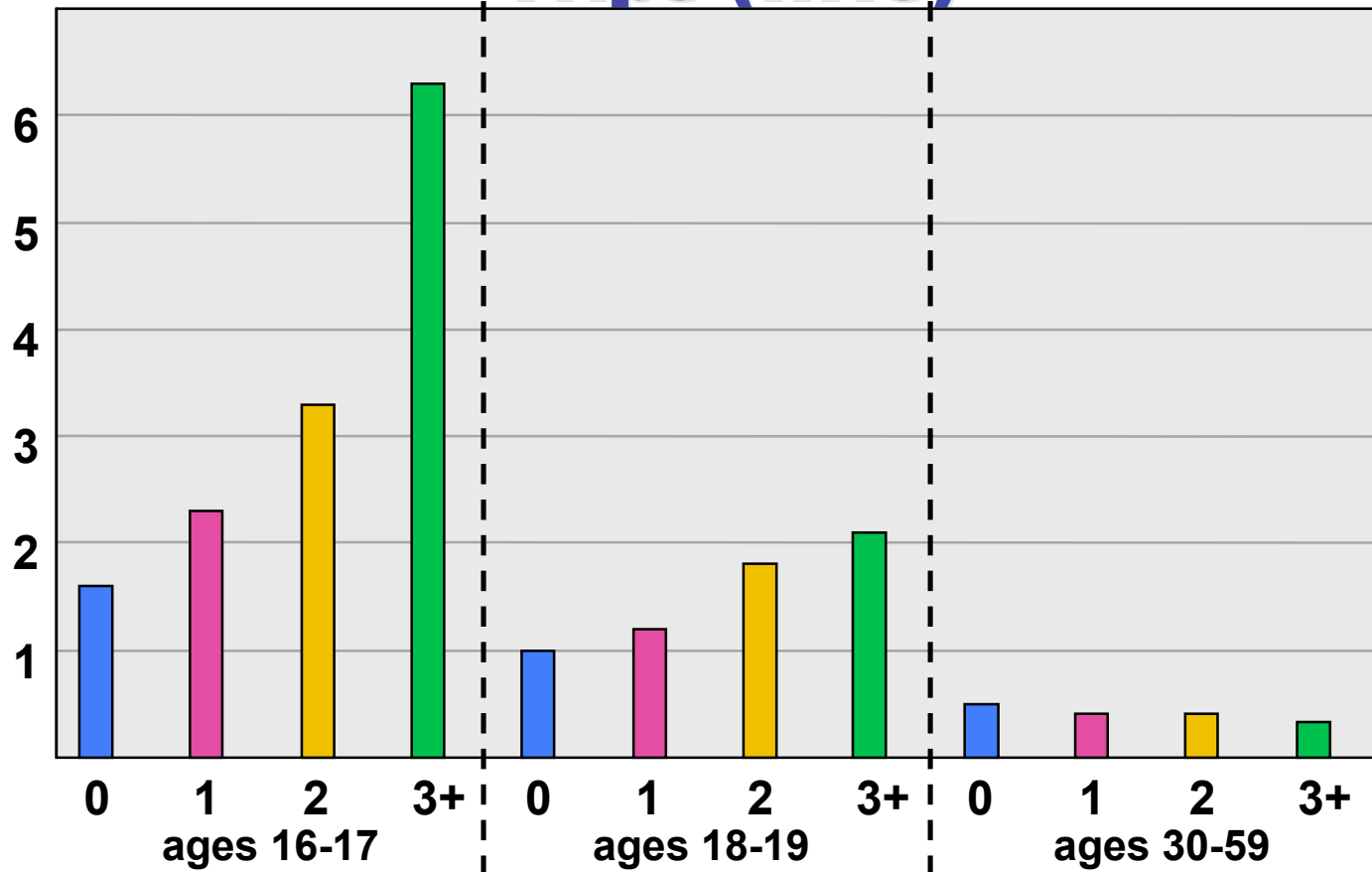
- **Driving independently for first time**
- **Night**
- **Passengers**
- **Alcohol**
- **Low belt use**

Fatal crashes per 100 million miles

Day vs. night, by driver age, 2001- 02 (IIHS)



Crash Rates by Driver Age and Number of Passengers per 10,000 Trips (IHS)



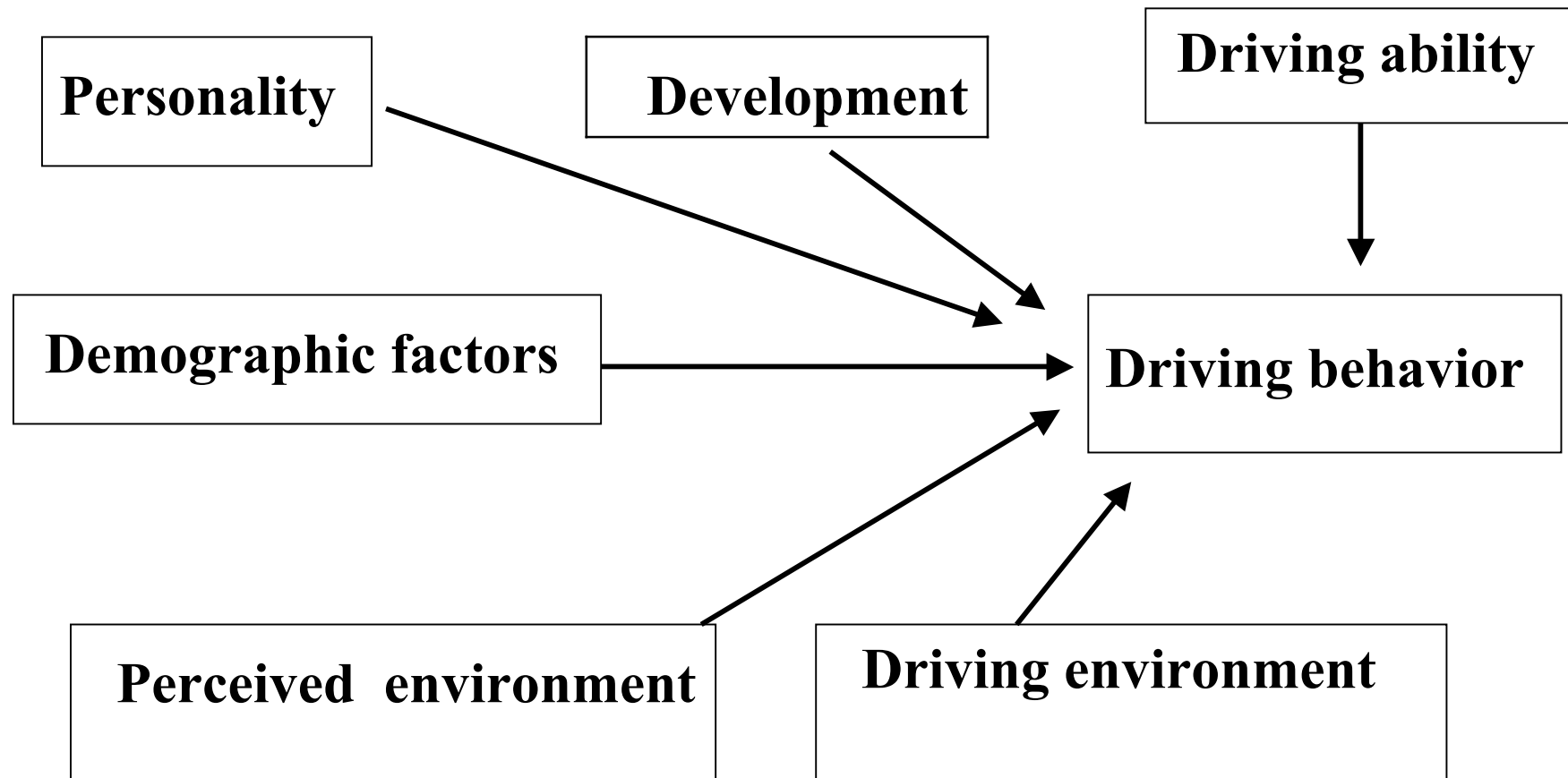
Young Drivers and Alcohol

- Less likely to drive after drinking, but crash risk higher when they do
- 16-20 year old drivers with BACs .05-.08 are more likely than sober drivers to be killed in single vehicle crashes
 - Men 17 times
 - Women 7 times

Young Drivers and Safety Belts

- Teen drivers have lowest belt use rates
- As passengers with adult drivers, teens were belted
 - 50% men, 56% women
- As passengers with teen drivers, teens were belted
 - 42% men, 52% women

Influences on Teen Driving Behavior



What has been done?

- Driver education and training
- School health education
- Safety programs
- Graduated licensing

Graduated Licensing

- Addresses teens' first solo driving
- Novice drivers need experience
- Start with low-risk conditions, graduate
- Earn more privileges
- Protect, but not punish teens
- Delay until older
- Safety-mobility trade-off

Graduated Licensing

- **Learner stage: 6 month minimum; parent certify at least 50 hours practice**
- **Intermediate stage: drive alone except at night or with young passengers**
- **Full license: age 17 or 18**

Who Has Graduated Licensing?

- New Zealand
- Canada
- USA
- Australia?

US Graduated Licensing 1995-2006

	Number of 50 states	
	1995	2006
Learner stage at least 6 months	0	44
At least 30-50 hours of certified practice	0	30
Nighttime restriction	8	45
Passenger restriction	0	35

Graduated Licensing Evaluations

	Age group	Crashes reduced
British Columbia	16-18	16%
California	16	22%
Florida	15-17	9%
Michigan	16	29%
North Carolina	16	34%
Nova Scotia	16	23-37%
Ohio	16-17	23%

16 Year Old Driver Crash Results

	Crashes Reduced	
	Night (restricted)	Day (unrestricted)
Florida	16%	9%
Michigan	59%	32%
North Carolina	43%	20%
Nova Scotia	49%	5%

Parental Acceptance

- **Michigan (6 month learner with 50 required hours; night restriction):**
 - 96.9% good or very good experience
 - 75.3 hours average practice
- **California (6 month learner; night and passenger restrictions):**
 - 79% strongly support
 - 18% somewhat support

Enhancing Graduated Licensing

- Zero tolerance for alcohol use
- Ensure safety belt use
- Adequate learning and practice
- Vehicle choice
- Parental limitations and monitoring
- School and community support
- Implementation and enforcement

What do we need to do?



Understand the Problem

- Examine local data
- Identify the problem
- Identify contributing factors
- Learn from others' work
- Adapt solutions to fit local problem

New Program or System

- **Consider options; obtain input**
- **Determine best approach**
- **Legislate change**
- **Inform public**
- **Implement change**
- **Enhance compliance**
- **Enforce program**

Evaluate New Program

- Design and carry out evaluation
 - Careful
 - Thorough
- Examine the results
- Compare with others' results
- Determine next steps

Revise or Refine Program

- Implement changes, improvements
- Re-evaluate
- Aim for constant progress

Consider Enhancements

- Safety belts, alcohol
- Parent, community approaches
- Determine other research needs
- Consider other approaches and possibilities
 - ITS/smart license or key fob
 - Electronic monitoring by parents

Summary

- **What do we know?**
 - ❑ Highest risk is when teens start driving solo
 - ❑ Night time and passengers increase risk
 - ❑ Graduated licensing works
- **What do we need to do?**
 - ❑ Implement best program possible
 - ❑ Evaluate program well

Conclusion

- We know quite a bit
- Do what we can with that knowledge
- Protect our young people and our future
- Good luck and thank you for your road safety efforts!

jshope@umich.edu

Influences on Young Driver Behavior

Personality
Risk-taking propensity
Hostility/aggressiveness
Tolerance of deviance
Susceptibility to peer pressure

Development
Physical
Hormones, energy, brain
Psychosocial
Emotional, social (identity, sexuality)
Transitions

Driving ability
Knowledge
Skill
Experience



Demographic factors
Age, Sex
Marital status
Parental status
Employment
Education

Driving behavior
Speeding
Unsafe passing
Tailgating
Failure to yield
Impaired driving
Lack of safety belt use

Perceived environment
Parents' norms, behavior expectations
Parental involvement, monitoring
Peers' norms, behavior expectations
Partner's norms, behavior expectations
Risk perception
Community norms
Cultural norms
Media-advertising, entertainment

Driving environment (physical and social)
Night/dark
Weather and road conditions
Vehicle availability, type
Passengers (age, sex, substance use)
Trip purpose