

Influences on Teen Driving and Related Interventions

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Young Driver Crash Risk

- **Young drivers' high crash rates**
- **More complex driving environment**
- **More cars, congestion, aggressive driving**
- **Enforcement not optimal**
- **Need to understand influences on driving**
- **Then target interventions toward influences**

Presentation Outline

- **Problem of young driver crashes**
- **Multiple influences: conceptual framework**
- **How can we reduce young driver crashes?**
 - **Interventions based on framework**
- **Evaluation of interventions**

Teen Driver Crash Problem in US

- **Youngest drivers at greatest risk**
- **Fatalities high (especially teen boys)**
- **Injuries higher**
- **Higher crash risk at night**
- **Higher crash risk with passengers**
- **Higher crash risk with alcohol**

Teen Crash Risk from Alcohol

- **Crash risk increases with increased BAC**
 - **Steeper for teens**
- **At all BAC levels, crash risk higher for teens**
 - **Especially at low and moderate BAC**
- **Teens relatively inexperienced at drinking, driving, and drink/driving**

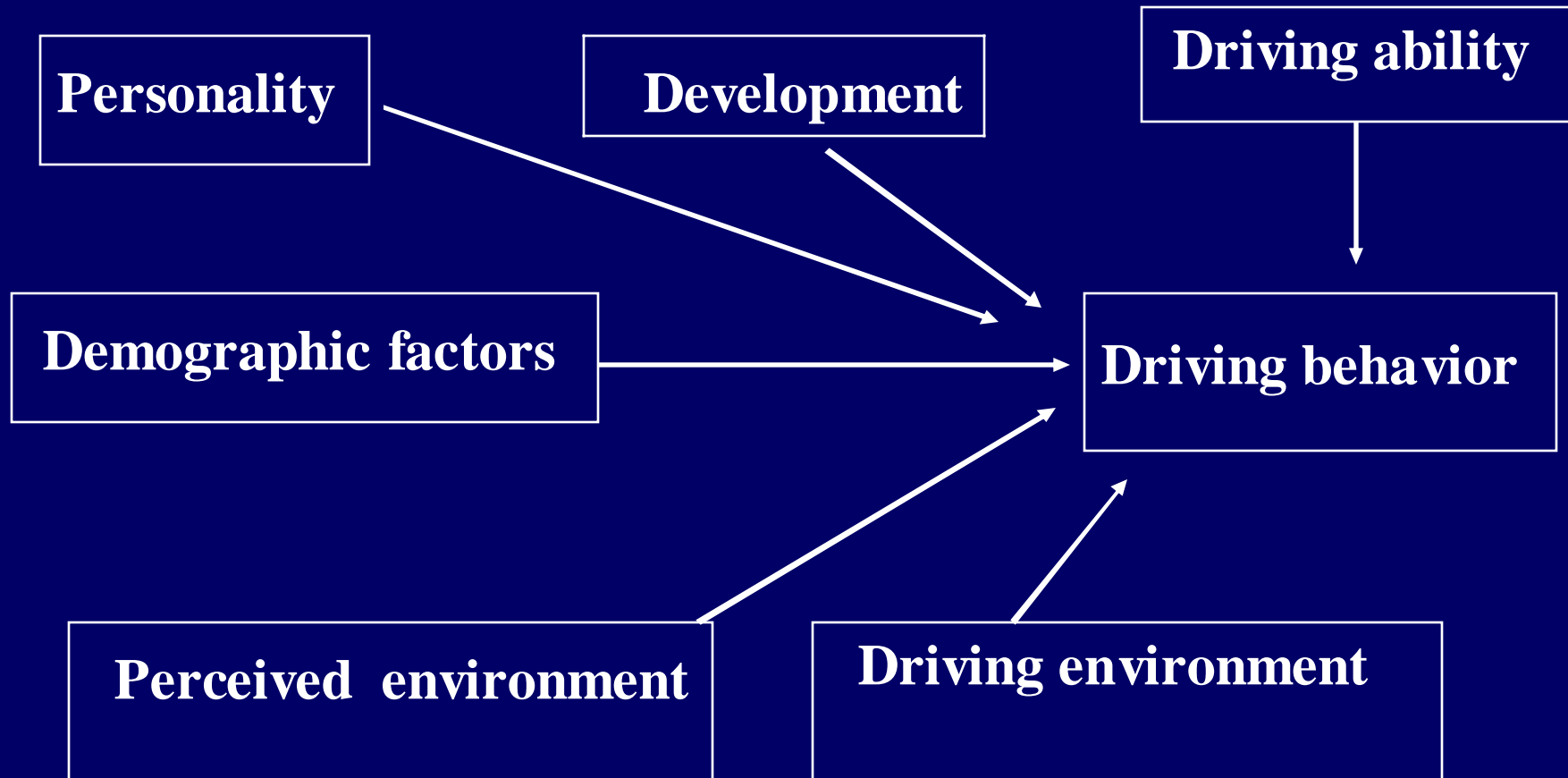
Conceptual Framework Needed

- **Serious, complex public health problem**
- **Need to understand big picture**
- **To change behavior, ground interventions in behavioral science theory**
 - **Social Learning Theory**
 - **Problem Behavior Theory**
 - **Ecological models**

Conceptual Framework

Driving Behavior → **Crash** → **Injury** → **Fatality**

Influences on Teen Driving Behavior



Influences on Teen Driving Behavior

Driving behavior

Speeding

Unsafe passing

Tailgating

Failure to yield

Impaired driving

Lack of safety belt use

What interventions might affect teens' driving behaviors?

Driving behavior

Speeding

Unsafe passing

Tailgating

Failure to yield

Impaired driving

Lack of safety belt use

Driving Behavior Interventions

- **Set policy**
- **Pass legislation, laws**
- **Enforce the laws (certain, swift, consistent)**

Influences on Teen Driving Behavior

Personality

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

Driving behavior

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

What interventions might affect teens' personality factors?

Personality

Risk-taking propensity

Hostility/aggressiveness

Tolerance of deviance

Susceptibility to peer pressure

Personality Factor Interventions

- **Not likely to be amenable to change**
- **Parents should consider teens' personality in decisions about driving**

Influences on Teen Driving Behavior

Personality

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

Development

Physical

Hormones, energy, brain, sleep

Psychosocial

Emotional, social (identity, sexuality)

Transitions

Driving behavior

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

What interventions might affect teens' development?

Development

Physical

Hormones, energy, brain, sleep

Psychosocial

Emotional, social (identity, sexuality)

Transitions

Developmental Factor Interventions

- **Brain development: GDL restrictions**
- **Maturity: readiness to drive (parents)**
- **Sleep: GDL restrictions; school start times**

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Transitions

Driving behavior

Speeding
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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

What interventions might affect teens' perceived environment?

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

Perceived Environment Interventions

- **Change norms, behaviors, expectations of parents, peers, partners**
- **Encourage parental involvement, monitoring**
- **Change community, cultural norms**
- **Change media, norms**
- **Publicize enforcement**

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Transitions

Demographic factors

Age, Sex
Living situation
Marital/parental status
Employment
Education

Perceived environment

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What interventions might affect teens' demographic factors?

Demographic factors

Age

Sex

Living situation

Marital/parental status

Employment

Education

Demographic Factor Interventions

- **Age: GDL restrictions**
- **Sex: ?**
- **Education: ?**

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Driving environment (physical and social)

Night/dark
Weather and road conditions
Vehicle access, type, interior familiar/safe
Passengers (age, sex, substance use)
Trip purpose

What interventions might affect teens' driving environment?

Driving environment (physical and social)

Night/dark

Weather and road conditions

Vehicle access, type, interior familiar/safe

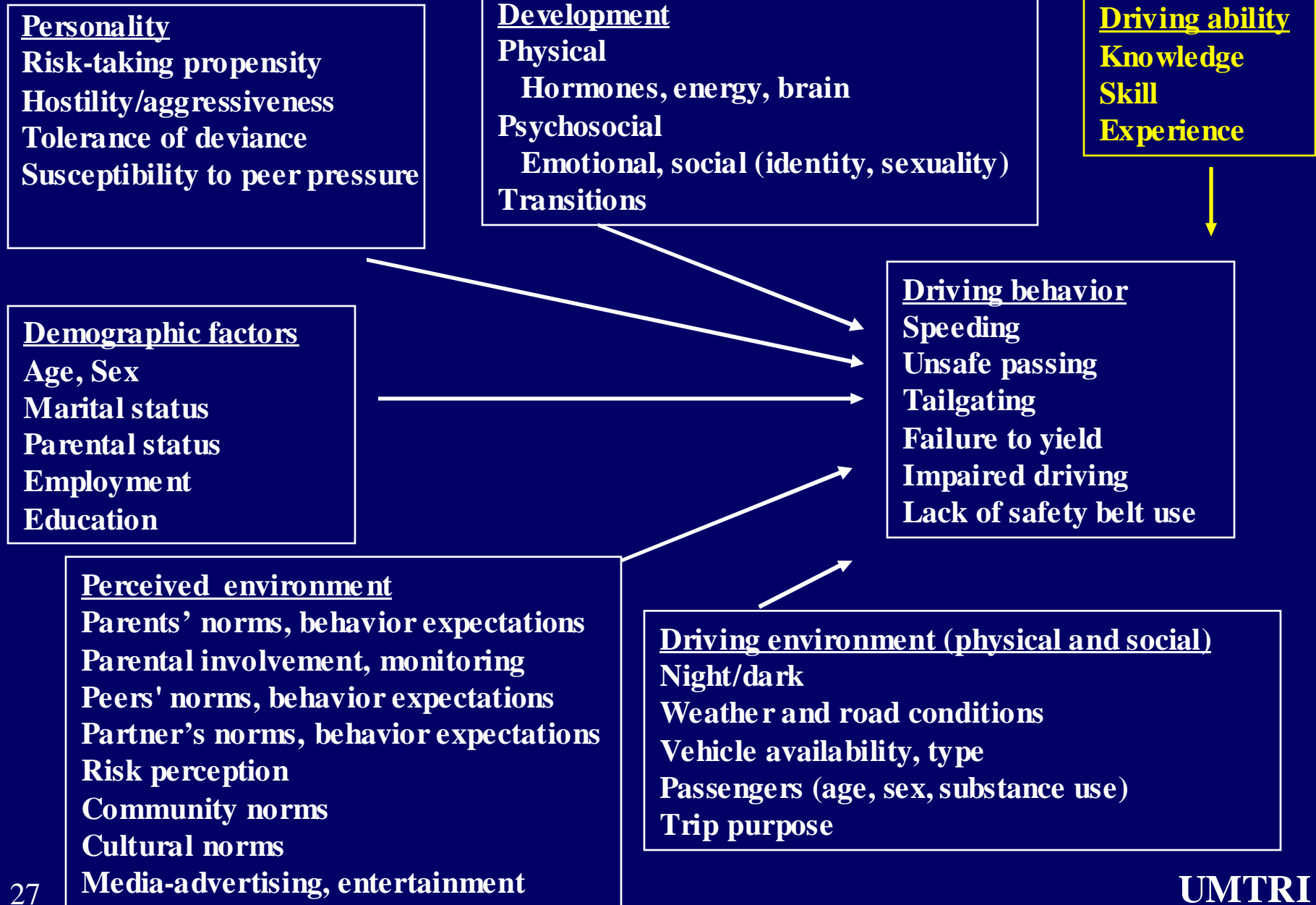
Passengers (age, sex, substance use)

Trip purpose

Driving Environment Interventions

- **Restrict novice teen drivers' exposure (night, passengers, trip purpose)**
- **Restrict teens' access to alcohol**
- **Encourage/educate about vehicle availability and type**
- **Technology to manage electronic distractions**

Influences on Teen Driving Behavior



What interventions might affect teens' driving ability?

Driving ability

Knowledge

Skill

Experience

Driving Ability Interventions

- **Identify/require adequate training**
- **Identify/require adequate practice, experience**
- **Educate about fatigue, distraction, impairment**
- **Incorporate graduated system, with competence demonstrated and privileges earned (state policy and parental oversight)**

Are we intervening where it counts most?

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

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

Driving ability
Knowledge
Skill
Experience



Demographic factors
Age, Sex
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Parental status
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Education

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

Successful Interventions

- **Framework can suggest, guide interventions**
- **There are no simple fixes**
- **Sound basis more likely to succeed**
- **Based on young drivers' input**
- **Clarify intent/outcome of intervention**
- **Can direct intervention at intermediate factor**
- **Effective interventions must be ongoing**

Evaluation of Interventions

- **Evaluation essential**
- **Process, impact, outcome**
- **Ongoing research and program evaluation adds to/refines framework**
- **Watch for unintended consequences**

Summary

- **Understand teens' driving behavior and influences**
- **Base interventions on research results**
- **Implement well (compliance)**
- **Evaluate well**
- **Parental involvement (restrictions, contracts)**
- **Community involvement**
- **Enforcement**

Think about your proposed program.

How might you want to revise it?

What questions do you have?

**We wish you powerful programs,
rewarding results, and safer teen drivers!**

Thank you