What Do We Know About High BAC Pedestrians and What Can We Do About Them?

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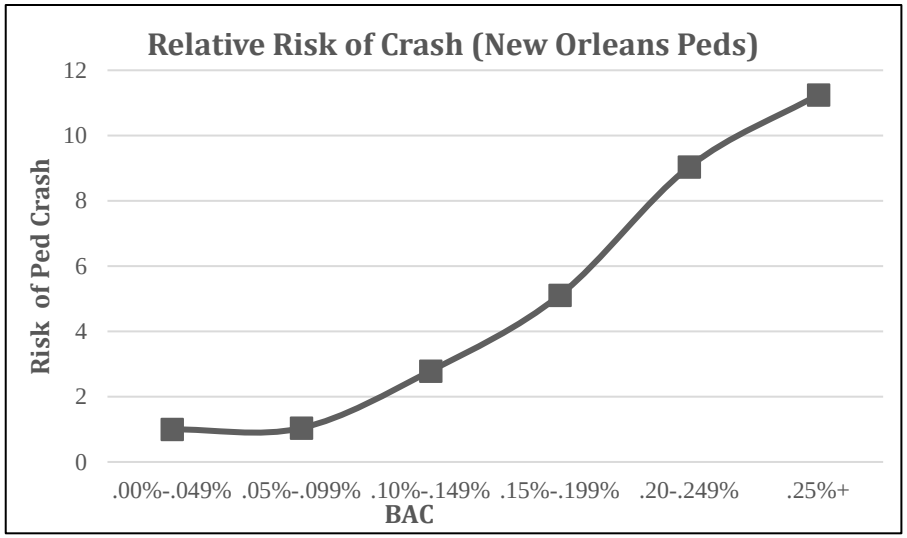
A Deadly Cocktail: How Speed and Impairment Affect Vulnerable Roadway Users

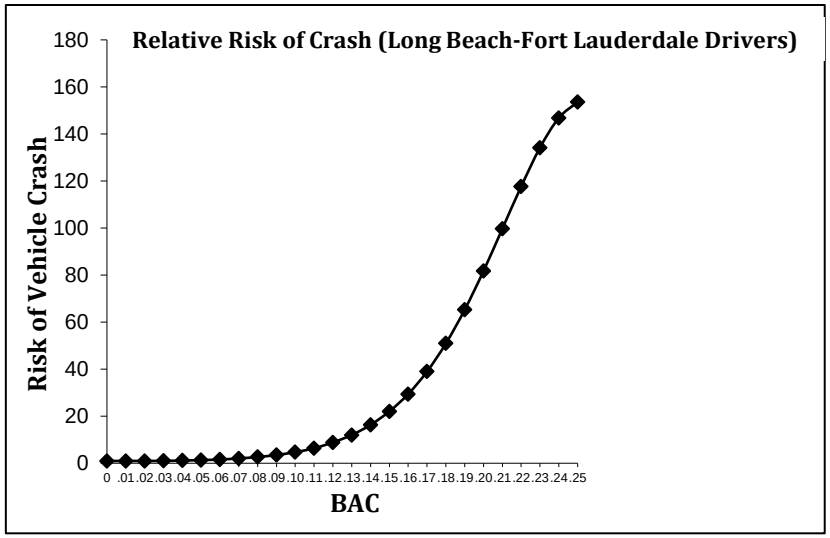
The Problem

- **6,205 pedestrians killed in 2019 (268 in NY)**
- **36% had a positive BAC**
- **31% had a BAC of .08+**
- **Crash risk goes up sharply with BAC**
  - ***New Orleans Study* for peds**
  - ***Long Beach/Ft. Lauderdale Study* for drivers**

Background

Risk from Alcohol Use Similar for Crash Peds and Drivers





Background

The *New Orleans Study*

Suggested that high BAC peds in crashes could be DUIs/DWIs prevented from driving

The *Walk Smart Baltimore Study*

- Reinforced evidence that ped crash victims with high BACs might be former DUI/DWI-convicted drivers
- Over ½ of interviewees were unlicensed, and >20% of those admitted to being suspended/revoked

The *High BAC Ped* Study Questions

1. Do DUI/DWI offenders ("dismounted drivers") represent a significant proportion of impaired pedestrians killed in motor vehicle crashes?

2. If so, what strategies and program activities may be useful in preventing these pedestrian fatalities?

Approach to Question 1

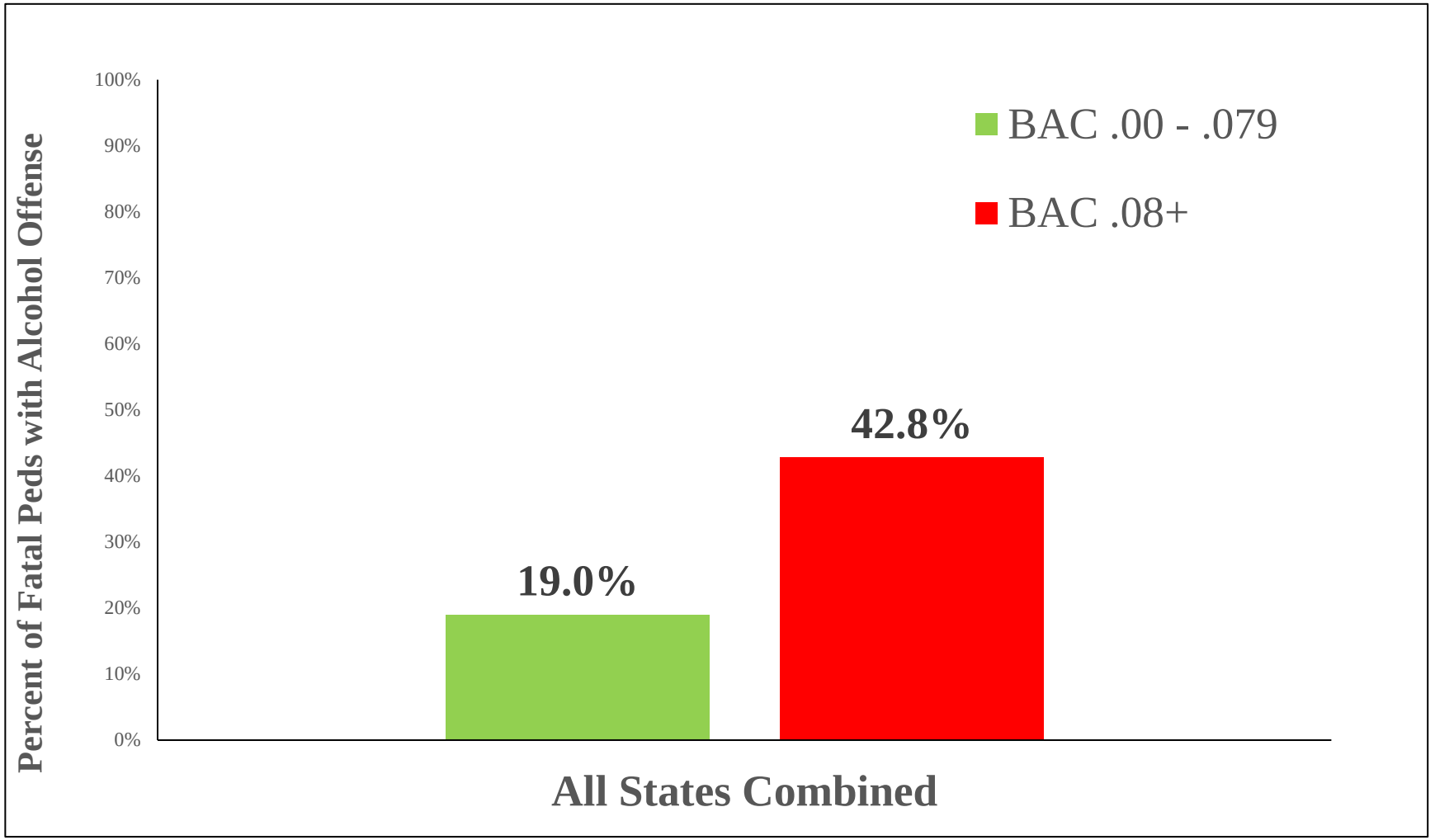
- Merge fatal crash and driver record data
- 5 States
  - Florida
  - Massachusetts
  - Tennessee
  - Texas
  - Washington

Availability of BAC, Age, and Driver Record

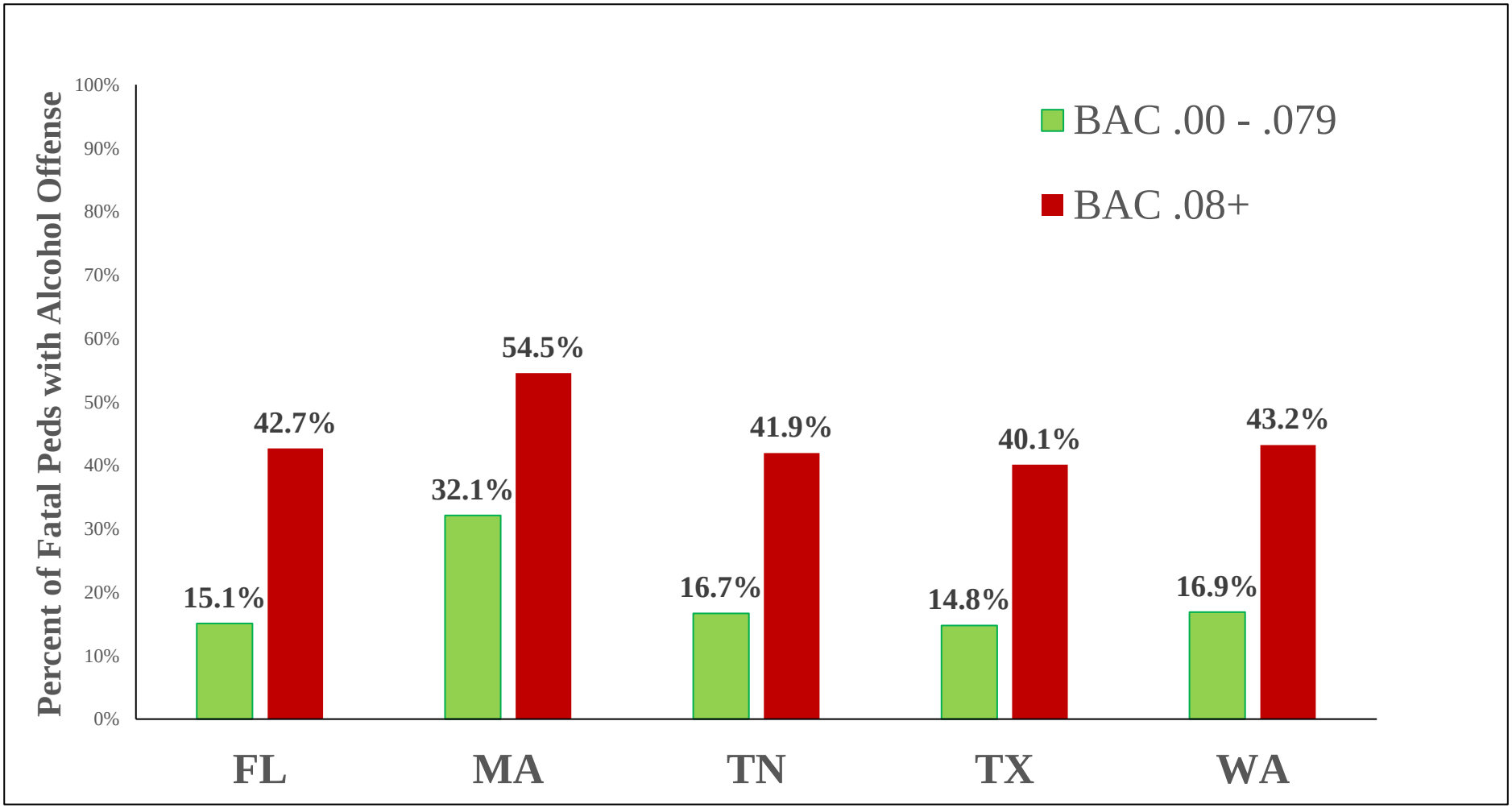
State	Measured BAC and Age Available (% FARS)	Driver Record Available (% of those with BAC available)
Total	1,972 (43.9)	1351 (68.5)
Florida	542 (24.7)*	424 (78.2)
Massachusetts	253 (68.0)	198 (78.3)
Tennessee	103 (37.6)	73 (70.9)
Texas	614 (53.5)	377 (61.4)
Washington	460 (90.2)	279 (60.7)

*A sample of 550 reports all with known measured BACs were randomly selected for Florida out of the total 2193 fatalities in that State. Eight of these reports did not contain the age of the pedestrian. The actual rate of measured BACs recorded on reports in Florida is unknown. All other States utilized the entire samples of pedestrian fatalities during the selected timeframes.

% With Alcohol Offense



% by State

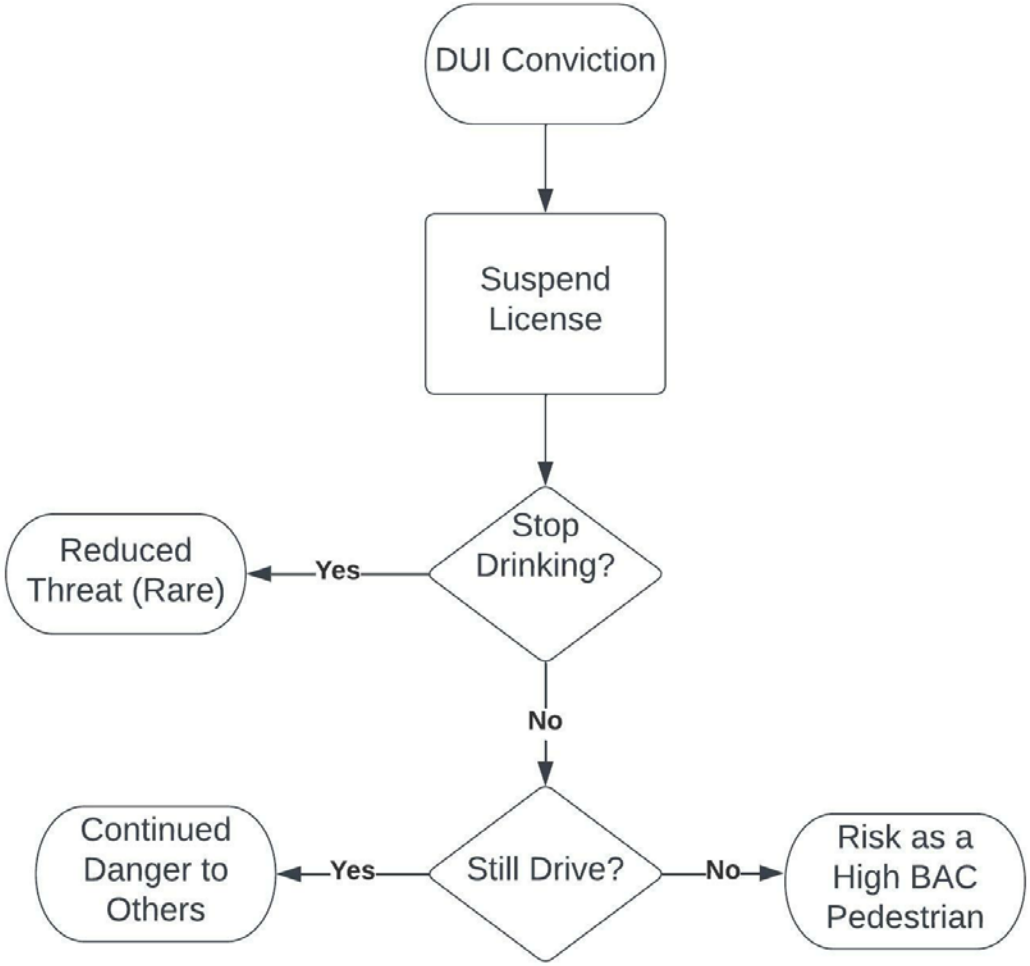

Percent of Fatal Peds with Alcohol Offense
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
BAC .00 - .079
BAC .08+
15.1%
42.7%
32.1%
54.5%
16.7%
41.9%
14.8%
40.1%
16.9%
43.2%
FL
MA
TN
TX
WA

Data Summary

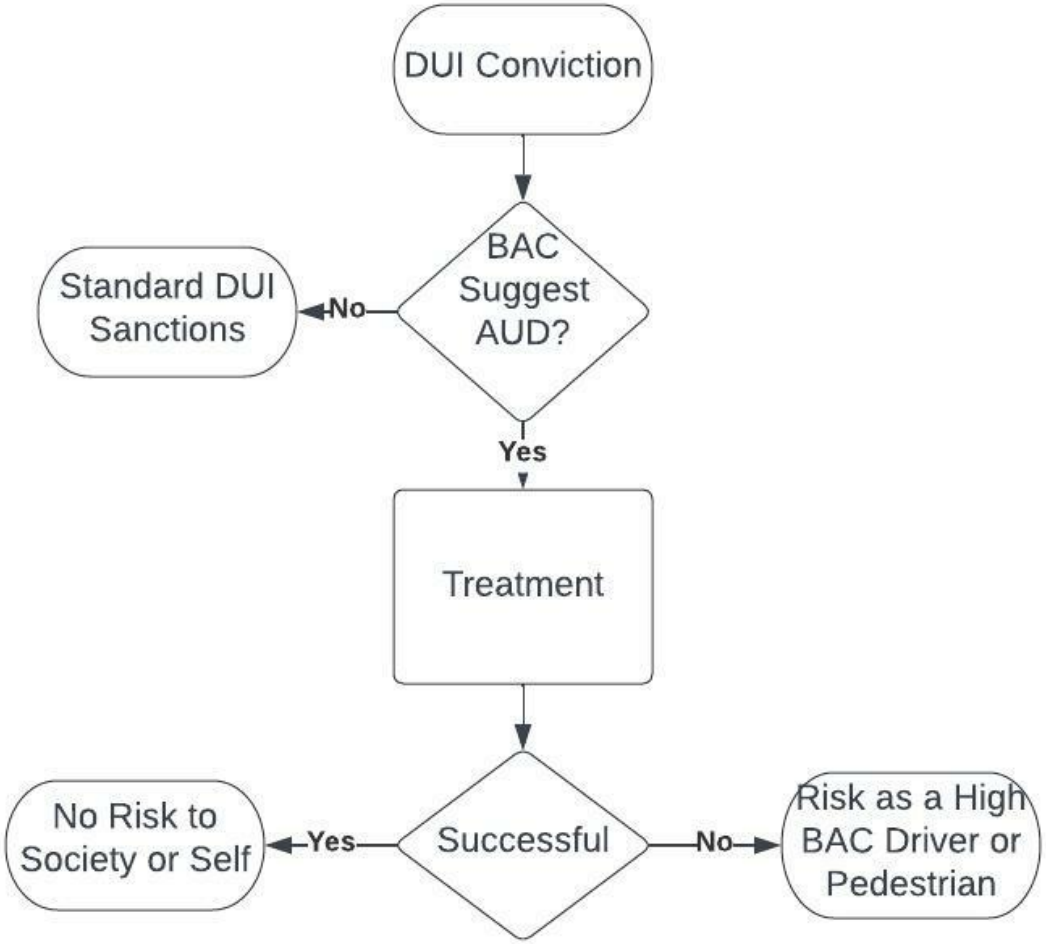
- DUIs/DWIs are highly overrepresented among fatal ped crash victims
- BACs are high and indicative of an alcohol use disorder (AUD)—Avg. of those ≥ .08 = 0.23
- Suggests benefit from multi-disciplinary countermeasure approaches (Safe Systems?)
- Just preventing high BAC individuals from driving is not sufficient (and is difficult anyway)

How Can Safe Systems Help?

The Current Model



A Safe Systems Model



What Do We Gain?

- More likely to get at the **root cause** of the problem not just the symptom
- Protect the “system” not a “territory” within it
- Improve quality of life
- Reduce cost to society
- ?

How Do We Do It?

- Start by looking across disciplines
- Look for global and local solutions
- Be positive
- Don’t be afraid of “bad ideas” or apparent “obstacles”
- Don’t expect immediate results
- PLAN—Understand the present condition, set your endpoint high, and **spend more time on your transition plan than your mission statement**

How Did We Start?

- Group of 8 SMEs
  - Law enforcement
  - Courts
  - Probation
  - Medical
  - Social services
  - Hospitality
  - Research
  - Employers

Countermeasure Generation

- Creative think within and across disciplines
- Freewheeling/no evaluation
- Evidence not required
- No need to develop details

Goal was a set of ideas from which to start working

Basic Approach Areas Suggested by SMEs

- Reduce or prevent alcohol use (8)
- Prevent or limit walking after high alcohol consumption (13)
- Interventions by medical and social service personnel (3)
- Interventions by law enforcement, courts, and probation (10)
- Third party (intermediary) interventions (3)
- Increased awareness of the problem (5)
- General pedestrian and traffic safety (8)

50 Ideas Total – Only 8 covered root cause directly
It's Tough!

Some Examples in Each Area

Illustrative not Evaluative

Reduce or Prevent Alcohol Use

- DUI/DWI Sentencing requirement for complete abstention
  - Monitoring devices
  - Testing during probation visits
- Conditional license as a motivation not to drink
  - Issuance upon treatment-based criteria
  - Include abstention from alcohol

Prevent/Limit Walking/Driving at High BAC

- Statewide Coordination of DUI/DWI Case Responses
  - Un-silo the various organizational points of contact for individuals who have an alcohol issue and drive
  - Form a committed partnership
- "Walking Lifeguard"
  - Officer calls for a trained "Walking Lifeguard"
  - Intercept the high BAC ped and walk with them
  - Can deliver a brief intervention on alcohol
  - Can call a ride service if the ped is too impaired to walk

By Medical and Social Service Personnel

- Modification of Screening, Brief Intervention, and Referral to Treatment (SBIRT)—Educate providers/counselors to include advice about dangers of impaired walking

- Focused medical education—Required education for all clinicians, not only physicians and nurses but also dentists, physical therapists, and social workers, on the early identification of an AUD

By Law Enforcement, Courts, and Probation

- MVA/DMV Involvement in Sanction Process
  - Use input from police and medical or family reports
  - Licensing authority determines if the driver is at risk of being a high BAC ped
  - Recommend AUD treatment and counseling
- ID Check at Point-of-sale
  - Police check ID of persons buying alcohol
  - Officers can inform the ped of risks or remove ped to place of safety

Third Party Interventions

- Bartender Training
  - Existing bartender training focuses almost totally on DWI
  - Extend training to include dangers of walking at high BACs and identification of ride alternatives
- Ride Service Terminals in Bars and Restaurants
  - Terminal or sign-on to web site
  - Call a ride (e.g., Uber, Lyft) to take a high BAC ped home
  - Payment automatically added to the person's tab

Increased Awareness of the Problem

- Public Awareness Campaign on Impaired Peds
  - Pamphlets, social media, and other low-cost information approaches
  - Distributed by courts, probation/parole, medical personnel, mental health counselors, and employers to warn of the problem
- Revise the Alcoholic Beverage Labeling Act
  - Increase the labeling requirements
  - Include risks of driver and ped crashes

General Pedestrian and Traffic Safety

- Targeted Crosswalk Enforcement in Alcohol Service Areas
  - Use decoy peds to enforce crosswalk laws
  - Deploy at times high BAC pedestrians may be crossing
- "Keep Your Head on a Swivel" Safety Sign Campaign
  - Post "Keep Your Head on a Swivel" signs at crosswalks and at non-crosswalk locations where intoxicated individuals frequently cross streets
  - Warn that cars may come from many directions

Discussion

- Fatal peds with a BAC ≥ 0.08 much more likely to have a prior DUI/DWI on driving record than peds killed at BAC < 0.08
  - Consistency across 5 States leaves little doubt
  - Convenience sample precludes estimate of magnitude
- Possible that the "DUI/DWI system" is adding to the ped risk when DUI/DWI drivers comply with sanctions
- Average BAC of *0.23* suggests people with AUD
- High BACs linked to other problems, e.g., falls

Final Thoughts

- The DUI/DWI problem and the high BAC ped problems, specifically, are linked
- Preventing high BAC individuals from driving may protect others, but the “dismounted driver” is still at risk
- The situation requires a ***safe systems*** approach
  - Policy/laws
  - Engineering
  - Education
  - Enforcement

Thank You!

Final Report:

Blomberg, R. D., Wright, T. J., & Thomas, F. D. (2019, June). *DWI history of fatally injured pedestrians* (Report No. **DOT HS 812 748**). National Highway Traffic Safety Administration.

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