Examining the Effectiveness of Child Endangerment Laws

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Background

Number of children physically or fatally injured annually <u>while driven by a drinking adult</u>:

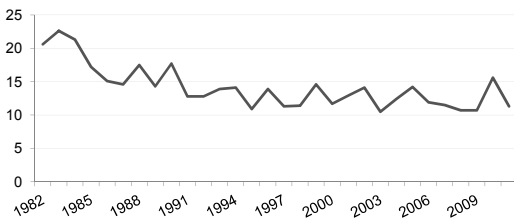| **Physically injured: 3,615**	**Fatally injured: 177 to 198**
(Romano & Kelley-Baker, 2014)	(Quinlan et al. 2000; Kelley-Baker & Romano, 2014)

Background – Trends

Fatally injured children aged 0-14 years
Percent killed by a BAC ≥ .08 driver aged 21 years and over, by Year

Background – Trends

- Trends persisting over time.

- Odd because:
  - significant vehicle improvements,
  - child restraint improvements, and
  - several traffic safety laws & policies activated.

DUI Child Endangerment Laws

Laws intended to protect children from being driven by an intoxicated driver.

Law Type:
1) Enhance penalties
2) Separate offenses
3) Aggravating circumstances

DUI Child Endangerment Laws
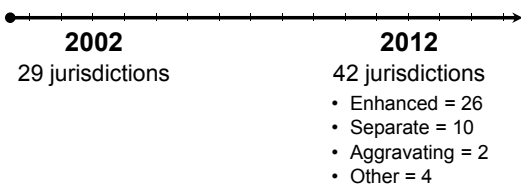
2002
29 jurisdictions

2012
42 jurisdictions
- Enhanced = 26
- Separate = 10
- Aggravating = 2
- Other = 4

State of the Law

We examined:

- Percent of children killed by drinking driver by state and type of law.
  - ✖ No patterns emerged.

- Potential strength of the law based on provisions.
  - ✖ No statistical difference among % children killed across states.

Study Aims

Aim 1: Characterize drivers transporting children while impaired (BAC ≥ .08).

Aim 2: Assess the impact of DUI Child Endangerment Laws on the prevalence of children fatally injured in motor vehicle crashes.
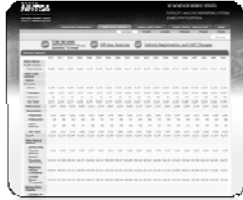
Methods

Data

- **Crash:**
  - 2002-2012 Fatality Analysis Reporting System (FARS): A census of all crashes on U.S. public roads that result in a death.

  - Driver must be 21 years old or over.

Data

- **DUI Child Endangerment Laws:**
  - Legal research via Westlaw to identify statutes across 50 states and DC.

- **Seatbelt Laws:**
  - From Insurance Institute for Highway Safety.

Analysis

Aim 1: Characterize Drivers

- Logistic regression.

- Predict the type of driver who drinks (BAC ≥ .08) and transports a child (0-14 years) by age, gender, driving situation, and prior DWI.

Aim 2: Examine Impact of Policy

Primary outcome measure:
- Percent of fatally injured passengers who were children in states that passed a DUI Child Endangerment Law.

Aim 2: Impact of Policy (Unadjusted)

- Bivariate Analyses.

- Before (pre) vs. After (post) law implementation.

Aim 2: Impact of Policy (Adjusted)

- Multinomial regression.

- Child fatality as a function of:
  - DUI Child Endangerment Laws (pre, post, no law)
  - Safety Belt Law (primary, secondary, no law)
  - Child Seat Position (front, back, rows)
  - Driver Characteristics (gender, age, race)
  - Time of Crash
  - Drivers' Speeding
  - Drivers' BAC

Results

Aim 1: Characterize BAC≥.08 Drivers

Characteristic	Odds Ratio		Characteristic	Odds Ratio
Prior DUI	4.71		Black/African American	1.27
Ref: No prior DUI			Hispanic	.90
Men	1.96		Asian	.72
Ref: Women			Native American	2.93
Age 21–24	1.21		*Ref: White*	
Age 25–29	1.36		6 AM–10 AM	.74
Age 40–49	.77		5 PM–9 PM	2.42
Age 50–59	.50		9 PM–6 AM	5.51
Age 60+	.11		*Ref: 10AM–5PM*	
Ref: Age 30–39			Weekend	1.49
			Ref: Weekday	

Odds Ratios in red indicate odds significantly different from those in the Ref level.

Aim 1: Characterize Drivers

- Compared with sober drivers, drivers transporting children and drinking and driving (BAC ≥ .08) were more likely to be:
  – Male
  – Age 30-39 years old
  – African-Americans or Native-Americans
  – Driving at night
  – Driving during the weekend
  – Had a previous DWI

Aim 2: Impact of the Law (Unadjusted)

	Before Law	Post Law
Ages covered by law	18.5%	15.7%

Aim 2: Impact of the Law (Adjusted)

- Seatbelt law
- Child seat position
- Driver age
- Driver gender
- Driver race/ethnicity
- Driver BAC
- Time of day
- Day of week

Aim 2: Impact of the Law (Adjusted)

	Before Law	Post Law
Ages covered by law	18.5%	18.3%

Summary Results

- **"Hard core" DWI male drivers are those more likely to be drinking when driving with a child.**

- However, most drivers of children are women and/or not hard-core drinking drivers, and many of them are still found driving with children after drinking.

Summary Results

- Child endangerment policies have no impact.
  - **Once all variables were added, the Child Endangerment Law was no longer statistically significant.**

- Most of the outcome is explained by:
  - where a child is seated,
  - the presence of alcohol, and
  - the driver's gender.

Conclusions

- Child Endangerment Laws are not by themselves effective. Why?
  - Lack of general public awareness.
    - Limited, if any, publicity.
  - Not well enforced.
    - Lack of policy understanding.
  - In court, often plea bargained.
    - Little strength in the policy.

Future Directions

✓ Educate the public.
  - MADD's designated driver for your child campaign.

✓ Educate law enforcement officers and court officials.

✓ Standardize policy.

Thanks!

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