Published in final edited form as:

Health Behav Policy Rev. 2014 July 1; 1(4): 265–277. doi:10.14485/HBPR.1.4.2.

Transporting Young Passengers While Impaired: The State of the Law

Sue Thomas, PhD,

Senior Research Scientist, Pacific Institute for Research and Evaluation, Santa Cruz, CA

Tara Kelley-Baker, PhD,

Senior Research Scientist, Pacific Institute for Research and Evaluation, Calverton, MD

Eduardo Romano, PhD,

Senior Research Scientist, Pacific Institute for Research and Evaluation, Calverton, MD

Ryan Treffers, JD, and

Associate Research Scientist, Pacific Institute for Research and Evaluation, Santa Cruz, CA

Carol L. Cannon, MA

Research Scientist, CDM Group, Redwood City, CA

Abstract

Objective—This study sought to expand public health knowledge about the legal and policy aspects of DUI-child endangerment laws, and analyze the extent to which jurisdictions give priority to the protection of children.

Methods—We performed original legal research to locate and code driving-under-the-influence (DUI)-child endangerment laws across the 50 states and the District of Columbia, enabling us to compile a baseline legal dataset.

Results—Only 42 of the 51 jurisdictions address DUI-child endangerment in their statutes. Of the jurisdictions that do, the most comprehensive policies and those most protective of the safety of child passengers are not available in many jurisdictions. However, we found no significant relationship between the strength (comprehensiveness) of DUI-child endangerment laws and the proportion of child fatalities by a driver with a BAC .08.

Conclusions—Additional work needs to be done to improve state laws on DUI-child endangerment. The 9 jurisdictions that do not directly address this public health harm can enact laws to do so, and the 42 jurisdictions that already have laws can enhance their approaches to prioritize the protection of children. We suggest that future research include a close examination of the impact of DUI-child endangerment laws.

Correspondence Dr Thomas; thomas@pire.org.

HUMAN SUBJECTS APPROVAL STATEMENT

The project did not involve human subjects research as defined in 45 CFR 46.102 and therefore was not subject to IRB approval. PIRE IRB Federalwide Assurance number is FWA00003078.

Keywords

alcohol laws; alcohol policy; DUI-child endangerment; public health policy; public policy

Child endangerment laws are intended to protect children from physical or emotional abuse, including being put in harm's way. Driving impaired with a child in the vehicle meets this definition, and there is evidence to suggest that such behavior continues to be a serious problem. According to the National Highway Traffic Safety Administration (NHTSA),^{1,2} an estimated 46 to 102 million drunk-driving trips are made every year with children younger than 15 years of age in the vehicle, and one in 20 (5%) drinking drivers had at least one passenger younger than 15 on their most recent drinking-driving trip. Despite such clear evidence, research on children being endangered by their drivers has been lacking. Some of the most influential pieces of research were published more than a decade ago.³⁻⁵ Research conducted by this research team found that between 1982 and 2011, approximately 40% of children fatally injured in a vehicle crash involved an adult (ie, aged 21 or older) drinking driver.¹⁶ Most of those drivers (80%) were at or above the .08 illegal BAC limit. A total of 5133 children were involved in a fatal crash where their own driver was alcohol-positive. Compared with studies published about a decade earlier,³⁻⁵ our estimates indicate that the prevalence of child fatalities is almost unchanged.

Despite the development and implementation of technological advancements such as improved restraints and other vehicle technologies that have improved the safety of vehicle occupants, little progress has been made preventing these young fatalities. It raises concern about the effectiveness of current child endangerment laws as instruments to deter the exposure of children to traffic-related risks.

Although all states have enacted child endangerment laws, there are many types ranging from mandatory reporting of parental or guardian physical abuse to manufacturing drugs in the presence of a child. Of special interest to this research project is driving while intoxicated with a child in a motor vehicle. Achieving an understanding of the differences among DUI-child endangerment statutes, particularly with regard to comprehensiveness and stringency, is crucial to an appropriate evaluation of the efficacy of these laws. Given the devastating contribution of alcohol to motor vehicle crashes (MVCs), of particular relevance is evaluation of child endangerment laws specifically applied to deter driving-under-the-influence violations (or DUI-child endangerment for short). Unfortunately, and to our knowledge, no systematic evaluation of these laws in the US is available.

The goals of this study were to: (1) provide a systematic analysis of DUI-child endangerment laws in the US; (2) examine the extent to which each jurisdiction gives priority to protection of children within DUI statutes to assess the strength of extant DUI-child endangerment laws in each of the 50 states and the District of Columbia; and (3) relate the strength of DUI-child endangerment laws in a state with the number of children killed while riding with a drinking driver (BAC .08). Meeting these 3 goals is essential in setting the foundation for future evaluations of DUI child endangerment laws.

METHODS

Systematic Description of DUI-Child Endangerment Laws in the US

We performed original legal research via the online legal research tool—Westlaw—to identify every relevant extant statute across the 50 states and the District of Columbia. In the summer of 2012, we collected the most up-to-date data in Westlaw for each state (hereinafter, “state” is used to connote the 50 US states and the District of Columbia). To accomplish our task, we used a 2-stage process. First, a trained and experienced legal research scientist searched Westlaw using a sophisticated and tested search string (contact authors for specific search string), and recorded all relevant statutory citation information across the jurisdictions. Then, quality control was performed by a second trained and experienced legal research scientist who duplicated the process (see also ^{6–8} for additional discussion of the legal data-gathering methods used by the team).

In the second stage, we analyzed each of the statutes in all of the 51 jurisdictions identified during the first phase of research to construct a dataset of nine specific elements found in the states’ DUI-child endangerment laws (details of which are discussed below and presented in Table 1). That is, a structure was not imposed on the details of statutes. Rather, the 9 elements emerged from reading of the laws. Additionally, our data searches were conducted across the states’ legal codes so that nothing pertaining to DUI-child endangerment was omitted. The DUI-child endangerment dataset that resulted from our 2-stage data-gathering process contained statutes that address the operation of a motor vehicle by a DUI driver (no relevant data were found in the child endangerment portions of states’ legal codes. It is important to note that the location of these provisions connotes nothing about legal importance or strength).

The resulting dataset contains state statutes that specifically criminalize the operation of a motor vehicle by a driver who was under the influence of alcohol and had a child passenger. Statutes with general language that *might* be interpreted to prosecute a driver under these conditions were not included, as there can be no consistent identification and analysis of individual *ad hoc* prosecutorial decisions across states. In all, 9 policy elements were identified across the states, some of which were dichotomous presence or absence variables, and some of which consisted of a range of variables. Table 1 presents these policy elements and variables.

As Table 1 indicates, the first policy element is the Type of Law, a distinction that is frequently made in the policy literature. A statute was coded as “Enhanced” if a penalty can be imposed for having a child passenger in the vehicle at the time of the offense in addition to the penalty for the underlying DUI. For example, a state that imposed a penalty of 6 months jail time for a DUI offense and an additional 3 months jail time for having a child passenger in the vehicle at the time of the offense would be coded as “Enhanced.” A statute was coded as “Separate” if the penalty for having a child passenger was combined with the DUI into an offense that was separate from a DUI offense alone. For example, a state that imposed a 9-month jail sentence for a DUI offense that *included*, as an element of the offense, the presence of a child passenger, and a separate 6-month jail sentence for a DUI *without* a child passenger would be coded as “separate.” Finally, a statute was coded as

“Aggravating” if a court can consider the presence of a child passenger when determining the penalty for the DUI offense. For example, a state that granted a judge the discretion to increase the penalties imposed for a DUI offense because of the presence of a child in the vehicle at the time of the offense would be coded as “aggravating.”

The second and third DUI-child endangerment policy elements pertain to how each state defines the relationship between driver and passenger. The Driver Minimum Age and Passenger Maximum Age variables represent how a state defines this relationship, and establishes the scope of the law. In most jurisdictions, this is defined by a minimum age for the driver, a maximum age for the passenger, or both. The lower the age of the driver specified in a state’s statutory law, the larger the number of instances to which the law will apply. Conversely, the higher the specified age of the passenger, the larger number of instances to which the law will apply. As the passenger’s age increases and driver’s age decreases, the scope of the law and number of situations to which child penalties (CP) apply increase. For example, a law that only imposes CP in DUI situations involving drivers who are 21 and over with passengers who are 14 and under will be more limited in its application than one that imposes CP in DUI situations where the driver is 18 and older with passengers who are 16 years of age and under. CP laws with a broader application are favored as having the possibility of being as a stronger deterrent.

The Child Endangerment/Child Neglect Classification policy element identifies states that either mandate reporting the DUI with CP offense to child protective services or consider a violation as child endangerment or child abuse. Several policy elements pertain to penalties. First, the Felony Penalty Attaches policy element identifies whether a DUI with CP offense is specifically classified as a felony in the state. Another DUI-child endangerment policy element relating to penalties is Mandatory Child Passenger Minimum Penalty, which indicates that a state statute(s) mandates the imposition of a minimum penalty for a first-time DUI with a CP offense (such as a fine between \$1000 and \$5000). This policy element differentiates between statutes that limit prosecutorial and judicial discretion in imposing penalties for a DUI with CP offense and statutes that do not.

The Penalty Multiplier policy element indicates states that increase the penalties applied to a first-time DUI with CP offense by applying a multiplier to the underlying DUI offense (such as cases in which the penalty is doubled). The Penalty Increase with Additional Factors policy element indicates a state’s statute(s) that increases a penalty or imposes additional penalties in the presence of multiple factors (eg, a second offense or injury to a child). The Penalty Types policy element denotes specific penalties applied to a first-time DUI with CP offense, and these offenses are divided into 5 variables: Jail; Fine; License Suspension; Ignition Interlock; and Other (eg, alcohol education courses or community service). These can be applied individually or together (such as jail and a fine). Some may be mandatory on the part of judges and others may be optional.

Three caveats are in order when interpreting the meaning of specific policy elements. First, the Felony Penalty Attaches policy element does not mean that the offense is never a felony, even if a state does not mandate a felony penalty under these circumstances. Instead, it means that the DUI-child endangerment statutory language used for coding the variable did

not explicitly speak to whether the offense was a felony. Similarly, and more generally across penalty policy elements, the absence of any particular penalty coding in a state's DUI-child endangerment statutes does not necessarily mean that a state imposes no penalty or does not impose a specific type of penalty.

A second caveat pertains to the Child Endangerment/Child Neglect Classification policy element. For example, if a state's statute(s) does not explicitly mandate reporting that does not mean that no reporting ever happens. It may be reported *ad hoc*.

A third caveat is also necessary regarding the Type of Law policy element. These data illuminate the different ways that states address this public health harm. For example, a state that imposes a Separate penalty of 6 months jail time appears, on its face, to have a stronger penalty than a state that imposes an Enhanced penalty of 3 months of jail time. However, if the underlying DUI offense in the Enhanced state carries 9 months of jail time, the overall penalty could then be 12 months jail time, thereby making the second state's penalty greater than the penalty in the first. Consequently, categories of this policy element may *not* be directly comparable across states. For that reason, in our subsequent analysis, we treat the Type of Law policy element differently than the rest of the elements.

Strength of Extant DUI-Child Endangerment Laws in Each of the 50 States and the District of Columbia

Following alcohol policy ratings literature that encourages comprehensive analyses of laws rather than their presence or absence only,^{6–13} we created a points system to reflect the presence of policy elements and variables within each jurisdiction's laws on DUI-child endangerment. In our system, which is detailed in Table 2, each policy element within each child-endangerment DUI statute was assigned 1 point if present and 0 if absent (Felony Penalty Attaches, Child Endangerment/Child Neglect Classification, Mandatory CP Minimum Penalty, Penalty Multiplier, Penalty Types, and Penalty Increase with an Additional Factor). For the Minimum Age of Driver policy element, 2 points were assigned if the drivers' age variable was not restricted; 1 point was assigned for drivers from 18 through 20 years of age, and 0 was assigned if the law was attached to a driver age 21 or older. The highest total was given to unrestricted age statute(s) because those provide for the most extensive protection for child passengers. Using the same logic, for the Maximum Age of Passenger policy element, 1 point was assigned to laws protecting passengers aged 15 years and younger, and 2 points were assigned for those aged 16 years and older.

Relate the Strength of DUI-Child Endangerment Laws in a State with the Severity of the Child Endangerment Problem

To fulfill our third goal, we merged information on the strength of the DUI-child endangerment laws in each state, with the proportion of children killed by a drinking driver in that state. The latter came from the 1982–2011 Fatality Analysis Reporting System (FARS). Maintained by NHTSA, the FARS is a record system for all police-reported MVCs on public roadways that result in the death of at least one road user within 30 days of the event. We defined a child as a passenger younger than 15 years old. Passengers with no information on age were discarded. Because we were interested in children killed by their

own drinking driver, we limited our sample by excluding buses, vans, farm equipment, snowmobiles, and construction vehicles. Only passenger vehicles, minivans, pickup trucks, and sport utility vehicles were kept. We also excluded from the file, drivers who were mentally challenged, died while driving from a non-driving condition (eg, a heart attack), police chases, and nonmoving traffic violations. The FARS also informs about the drivers' blood alcohol concentration (BAC). Only a fraction of the drivers are tested for alcohol (65% in 2002).¹⁴ For those with no measure available, the FARS provides imputed BAC measures developed using a multiple imputation technique by Subramanian.¹⁵ When the driver was not tested for alcohol, we used the imputed measure.

To test the hypothesized relationship between the strength of the law (number of provisions) and the proportion of children aged 0–14, and adult passengers aged 19 and over that were fatally injured while riding with a BAC .08 driver we estimated and compared 95% confidence intervals (CIs). These prevalence estimates were compared by estimating and examining their 95% confidence intervals. We used SAS 9.3® (Cary, NC) software. To accommodate for the multi-imputation design in the FARS database (10 BAC measures per driver), we applied the SAS *proc surveymeans* and *proc mianalyze* procedures.

RESULTS

Systematic Description of DUI-Child Endangerment Laws in the US

Forty-one states and the District of Columbia have DUI-child endangerment statutes. Nine are “no law” states (ie, states with no DUI-child endangerment statutes): Alaska, Colorado, Connecticut, Indiana, Iowa, Mississippi, New Mexico, South Dakota, and Vermont. Table 3 presents frequency data for the policy elements and variables across the 42 jurisdictions with such laws.

The 2 policy elements central to protection of child passengers in motor vehicles driven by alcohol-impaired adults are “Driver Minimum Age” and “Passenger Maximum Age.” The scope of the law and number of situations to which CP penalties apply increases as the passenger's age increases and the driver's age decreases. Table 3 shows that 30 of the 42 states with DUI-child endangerment statutes do not restrict the age of a driver with a child passenger who can be convicted of a DUI offense, and 17 jurisdictions include child passengers younger than age 18. In both instances, these laws have a greater reach and apply to a greater number of situations than those in the eight states in which there is both a restriction on the age of the driver, and children are defined as those individuals under the age of 16.

Much variation exists across states regarding the general penalties imposed for a DUI-child endangerment violation. The most frequent penalty is jail time, and the least mandated penalty is ignition interlock. Only the statutes of 6 states—Arizona, Florida, Hawaii, Tennessee, Washington, and West Virginia—stipulate ignition interlock. A related policy element, Penalty Increase with Additional Factors, is present in 20 jurisdictions and represents those that increase a penalty or impose additional ones for second offenses or injuries to a child.

In this and subsequent analyses, we highlight 3 policy elements—Felony Penalty Attaches, Child Endangerment/Child Neglect Classification, and Mandatory Child Passenger Minimum Penalty—for particular attention. These 3 policy elements, more than any others, permitted us to identify the jurisdictions that emphasize or give a higher priority to harm to children resulting from riding with alcohol-impaired drivers. Because they are the most stringent penalties that can be imposed on offenders, we argue that making this offense an automatic felony, ensuring the violation is classified as child endangerment, and imposing a minimum penalty for violation, are the strongest direct actions that have been taken by the 42 states that address this public health harm to children in statutory codes. It also should be noted that our determination is based on knowledge of the nature of the law rather than empirical evidence from the policy literature. That literature does not address this issue directly. The frequencies provided in Table 3 indicate that a violation of DUI-child endangerment for which the crime is automatically a felony is present only in 4 jurisdictions, (Arizona, New York, Oklahoma, and Texas), and only 10 of the 42 jurisdictions classify violations of these statutes as child endangerment or child neglect. More encouragingly, 25 jurisdictions have a mandatory minimum penalty for having a child passenger in the vehicle of an alcohol-impaired driver.

The final item in Table 3 is the information about the Law Type policy element. Frequency data are presented to illuminate how DUI crimes are structured within states. Ten of the 42 states with DUI-child endangerment laws take a Separate approach, 26 mandate an Enhanced approach; and 2 use an Aggravating approach.

The Strength of Extant DUI-Child Endangerment Laws in Each of the 50 States and the District of Columbia

Table 4 presents the results from application of the points system. The purpose of the point system is to illustrate the DUI-child endangerment approach in each state and to obtain a comparative perspective across states. However, this system is not suitable for rendering absolute judgments about “best” or “worst” states on approaches to DUI-child endangerment crimes because not all the penalty variables are mutually exclusive or additive. In addition to the policy elements and variables details of every state, Table 4 presents a Sum per State column, which shows the number of relevant provisions present in each state. The range of the “Sum” variable across jurisdictions was from 3 to 10. Combined with the data in Table 5, which depicts how many states achieved each sum per state integer, of the 42 jurisdictions with DUI child-endangerment statutes, the largest number of states (18) achieved a total of 7 or 8 of the 14 possible points. The state with the highest total, Tennessee, was the only jurisdiction to receive 10 points. It received 2 points each for the driver and passenger age policy elements; using the DUI-child endangerment classification; mandating a minimum penalty for violation of this crime; and providing for jail, fines, license suspension, and ignition interlock penalties. Even with this array of positive policy elements to address the harms caused by alcohol-impaired driving with a child passenger, including 2 of 3 we deem essential for prioritizing the safety of children riding in motor vehicles, Tennessee does not mandate an automatic felony for the crime.

In contrast, Alabama, Minnesota, Nebraska, and Nevada all earned 3 points each. Alabama achieved 1 point for the passenger age policy element, one point for the multiplier penalty, and one point for the mandatory minimum penalty, the latter of which is the only one of the 3 policy elements we deemed most crucial to prioritizing child safety in motor vehicles. Minnesota earned one point each for driver and passenger age policy elements and one for “other” penalties. Both Nebraska and Nevada achieved 2 points for having a driver minimum age and one point for a passenger maximum. Neither state’s laws addressed any of the other variables, including none of the 3 we identified as central to child safety.

Additional information about those policy elements most relevant to prioritizing the protection of child passengers in motor vehicles with adult drivers (ie, aged 21 or older) who are impaired by alcohol was examined next. As noted, we placed particular emphasis on 3 policy elements of the DUI-child endangerment laws across the United States: Felony Penalty Attaches, Child Endangerment/Child Neglect Classification, and Mandatory Child Passenger Minimum Penalty. Augmenting the frequency data from Table 2, which detail how many states’ provisions contain these policy elements, and the first part of Table 4, which presents information about the states that employ statutory language specific to them, we added 4 additional columns to Table 4 to place additional emphasis on states with one or more of these 3 policy elements. These additional columns of data make the influence of the presence of the most important policy elements readily apparent.

Specifically, the final 4 columns of Table 4 assigns additional points to each jurisdiction’s “Sum per State” total for those jurisdictions with mandates for attaching the felony penalty, classifying violations as child endangerment/child neglect, and setting a mandatory minimum penalty for child passengers. In other words, each jurisdiction is now represented by up to 3 additional points for the presence of one or more of the relevant policy elements. Then the total (1–3) is added to the original “Sum per State” totals.

The results, presented in Tables 4 and 5, show first that the enhanced range of totals per state is from 4 to 12. Five jurisdictions earned 4 points each, 2 earned 12 points each (Oregon and Tennessee), and 9 jurisdictions earned 9 points each. Most importantly, only 4 states (Arizona, Louisiana, Massachusetts, and Tennessee) have 2 of the 3 policy elements in their DUI-child endangerment statutes, and only 2 states (New York and Oklahoma) have all 3 of these key elements. In Arizona, the 2 policy elements are: (1) having a mandatory minimum penalty for having a child passenger while driving under the influence; and (2) assigning a mandatory felony attached to the crime. For Louisiana, Massachusetts, and Tennessee, the 2 policy elements are: (1) having a mandatory minimum penalty for having a child passenger while driving under the influence; and (2) classifying the crime as child endangerment/child neglect.

Relate the Strength of DUI-Child Endangerment Laws in a State with the Severity of the Child Endangerment Problem

Table 6 shows the percent of children aged 0–14 killed by a drinking driver (BAC .08) in each state, by the strength of the law. An examination of Table 6 suggests no specific pattern. Table 7 provides a statistical evaluation of the impact that CEDL has on the percentage of children aged 0–14 who were killed in motor vehicle crashes with an adult

driver (aged 21 or more) driver at BAC .08. The outcome of the ANOVA yielded no statistically significant difference among the percentages of children aged 0–14 who were killed in motor vehicle crashes while riding with an adult (aged 21 or more) driver at BAC .08 across states with different strength of the law. Although not shown in Table 6, the percentage of these fatally injured children in states with and without a DUI-child endangerment law also was not statistically different: 12.9% and 13.6%, respectively.

DISCUSSION

Our study examined how the US states have addressed the issue of DUI-child endangerment through their laws. An important finding of this effort is that states vary widely in the way they have addressed their concern for child endangerment. Only 42 of the 51 jurisdictions (each state plus the District of Columbia) address DUI-child endangerment in their statutes. Of those jurisdictions that do, our analysis indicated that the most comprehensive policies and those most protective of the safety of child passengers are not available in many jurisdictions. For example, in 8 states with DUI-child passenger statutes, there are restrictions on the age of the driver, and children are defined as being younger than age 16. Statutes without those age restrictions can potentially protect more children from the harms associated with riding in motor vehicles driven by alcohol-impaired adults.

Additionally and critically, the extent to which states have enacted any or all of the 3 most important policy elements for protection of child passengers is still limited. Although 25 jurisdictions have mandated a minimum penalty for driving under the influence with child passengers, few jurisdictions (only 4) have stipulated that a violation brings a mandatory felony penalty, and only 10 have explicitly classified the violation as child endangerment/child neglect. Moreover, only 4 states have 2 of the 3 policy elements and only 2 have all 3. Thus, considerable additional work needs to be done to improve state laws on DUI-child endangerment and to reduce the harms associated with alcohol-impaired driving with a child passenger. The 9 jurisdictions that do not directly address this public health harm can enact laws to do so, and the 42 jurisdictions that already have laws can enhance their approaches to prioritize the protection of children.

How does such a legal variation relate to child fatalities? Our analysis shows that despite the large legal variation shown in DUI-endangerment laws across states, these laws have little impact on the prevalence of child fatalities killed by a BAC .08 driver. This finding, however, must be considered cautiously. The lack of statistical significance we found does not necessarily negate a positive public health influence of these laws, nor does it mean that laws with more provisions have a larger beneficial impact than their counterparts. First, analysis of additional datasets beyond the fatal injury dataset, including ones that detail numbers of injuries that are not fatal may provide additional guidance to the effects of DUI child endangerment laws. Further, it is possible that the unaccounted presence of confounding factors such as level of law enforcement apparently nullifies the benefits of the DUI child endangerment laws. A thorough evaluation of these laws that takes into account the presence of other confounding factors, in particular if studied under a time series format would be required (ie, an “intervention” model that accounts for pre- vs post-law enactment changes over time). Future research needs to clarify the findings of this effort.

This study has a number of limitations. First, these data cannot be the final word on how states deal with DUI child endangerment. We collected data pertaining to statutes that address DUI-child endangerment *only*. Therefore, it was impossible to ascertain those states that may have other statutes (eg, either child endangerment statutes that do not explicitly mention DUI situations, or general penalty statutes) that may afford prosecutors the flexibility to charge defendants who have committed this type of crime. Additionally, our research catalogs the state of the law with respect to penalties; it says nothing about how they are applied by representatives of the judicial system or the discretion they are given to impose penalties.

Notwithstanding the complexity and contingencies of the law our primary aim was to explore and analyze the extent to which each state's statute(s) prioritize protecting children within the context of criminalizing adult DUI violations. Toward that aim, the most relevant statutory information is whether states mandate specific policy elements, most particularly those that serve to prioritize the safety of child passengers. This effort provides a useful systematization of the legal framework that regulates the safety of children while being transported by adults. As such, it constitutes a necessary step to address the persistent problem of children endangered by their adult drivers on US roads. Additional research is needed to evaluate fully the efficacy of the different legislative approaches to deter child endangerment in the traffic safety arena. Future research may incorporate key elements that lie beyond the scope of this article (eg, level of enforcement and media campaigns) to examine how the different legal approaches translate into reduction in DUI-child endangerment.

In conclusion, this research demonstrates that 82% of the 51 US jurisdictions have addressed DUI-child endangerment in their statutes. But, impact studies of the effect of differences in policies within or across jurisdictions that use the law as an independent variable would much more informative. For example, states with certain laws or combination of laws can be compared with states without these laws on outcome factors, such as crash fatalities or other injuries. The current study aligns us with the opportunity for conducting such research. Ultimately, to help prevent the harms to children associated with alcohol-impaired driving with a child passenger, jurisdictions with and without such laws can do a great deal more to improve public health.

By introducing and describing a crucial aspect of the child endangerment problem (ie, its legal environment) while providing a glimpse of the extent of the impact this environment has on children's safety, this effort constitutes a necessary first step to the understanding and solution of the problem. From this initial effort, more comprehensive studies (ie, including behavioral, cultural, demographic, socioeconomic, other legal, and advances in vehicle safety over time) must follow.

Acknowledgments

This article was funded by the U.S. National Institutes of Health, National Institute on Alcohol Abuse and Alcoholism, Grant No. R21AA020277.

References

1. National Highway Traffic and Safety Administration. Traffic Safety Facts, 2010 Data: Children. Washington, DC: U.S. Department of Transportation, National Highway Traffic and Safety Administration; 2012.
2. Royal, D. National survey of drinking and driving: Attitudes and behavior: 1999 (Findings: Vol. 1). Washington, DC: U.S. Department of Transportation, National Highway Traffic Safety Administration; 2000.
3. Quinlan KP, Brewer RD, Sleet DA, Dellinger AM. Characteristics of child passenger deaths and injuries involving drinking drivers. JAMA. 2000; 283(17):2249–2252. [PubMed: 10807383]
4. Margolis LH, Foss RD, Tolbert WG. Alcohol and motor vehicle-related deaths of children as passengers, pedestrians, and bicyclists. JAMA. 2000; 283(17):2245–2248. [PubMed: 10807382]
5. Centers for Disease Control and Prevention. Child passenger deaths involving drinking drivers-United States, 1997–2002. MMWR. Feb 6; 2004 53(4):77–79. [PubMed: 14762331]
6. Thomas S, Paschall MJ, Grube JW, Cannon C, Treffers R. Underage alcohol policies across 50 California cities: An assessment of best practices. Substance Abuse Treatment, Prevention, and Policy. 2012; 7:26.
7. Tremper C, Thomas S, Wagenaar AC. Measuring law for evaluation research. Eval Rev. 2010; 34(3):242–266. [PubMed: 20479214]
8. Tremper, C.; Thomas, S.; Wagenaar, AC. Measuring law for public health research. Princeton, NJ: Robert Wood Johnson Foundation Public Health Law Research Program; 2010.
9. Brand DA, Saisana M, Rynn LA, Pennoni F, Lowenfels AB. Comparative analysis of alcohol control policies in 30 countries. PLoS Medicine. 2007; 4(4):e151. [PubMed: 17455992]
10. Paschall MJ, Grube JW, Kypri K. Alcohol control policies and alcohol consumption by youth: A multi-national study. Addiction. 2009; 104(11):1849–1855. [PubMed: 19832785]
11. Ringwalt CL, Paschall MJ. The utility of keg registration laws: A cross-sectional study. J Adolesc Health. 2011; 48(1):106–108. [PubMed: 21185533]
12. Fell JC, Fisher DA, Voas RB, Blackman K, Tippetts AS. The relationship of underage drinking laws to reductions in drinking drivers in fatal crashes in the United States. Accid Anal Prev. 2008; 40:1430–1440. [PubMed: 18606277]
13. Fell JC, Fisher DA, Voas RB, Blackman K, Tippetts AS. The impact of underage drinking laws on alcohol-related fatal crashes of young drivers. Alcohol Clin Exp Res. 2009; 33(7):1208–1219. [PubMed: 19389192]
14. Hedlund, JH.; Ulmer, RG.; Northrup, VS. State laws and practices for BAC testing and reporting drivers involved in fatal crashes. Washington, DC: U.S. Department of Transportation, National Highway Traffic Safety Administration; 2004.
15. Subramanian, R. Transitioning to Multiple Imputation - A New Method To Estimate Missing Blood Alcohol Concentration (BAC) Values in FARS. Washington, DC: Mathematical Analysis Division, National Center for Statistics and Analysis, National Highway Traffic Safety Administration, U.S. Department of Transportation; 2002.
16. Kelley-Baker T, Romano E. Child passengers killed in reckless and alcohol-related motor vehicle crashes. Journal of Safety Research. 2014; 48:103–10. [PubMed: 24529098]

IMPLICATIONS FOR HEALTH BEHAVIOR OR POLICY

Work remains to be done to improve state laws on DUI-child endangerment. There are several US states that do not directly address this public health harm and can enact laws to do so. Further, jurisdictions that already have laws can enhance their approaches to prioritize the protection of children.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Table 1**DUI-Child Endangerment Policy Elements**

1	Type of Law: Enhanced; Separate; Aggravating
2	Minimum Age of Driver: Unlimited; age 20 and younger; age 21 and older
3	Maximum Age of Passenger: Age 15 and younger; age 16 and older
4	Felony Penalty Attaches: Yes/No
5	Classifies Violation as Child Endangerment/Child Neglect Reporting: Yes/No
6	Mandatory Child Passenger Minimum Penalty: Yes/No
7	Penalty Multiplier: Yes/No
8	Penalty Types: Jail; Fine; License Suspension; Ignition Interlock; Other
9	Penalty Increase with Additional Factor: Yes/No

Table 2**DUI-Child Endangerment State Points**

1	Minimum Age of Driver
a.	+2 - Unrestricted
b.	+1 – 18 to 20 years
c.	0 – 21 years or older
2	Maximum Age of Passenger
a.	+1 – 15 years or younger
b.	+2 – 16 years or older
3	Felony Penalty Attaches
a.	+1 – Yes
b.	0 – Not addressed
4	Child Endangerment/Child Neglect Classification
a.	+1 – Yes
b.	0 – Not addressed
5	Mandatory Child Passenger Minimum Penalty
a.	+1 – Yes
b.	0 – Not Mandatory
6	Penalty Multiplier
a.	+1 – Yes
b.	0 – Not addressed
7	Penalty Types
a.	Jail +1 – Yes
b.	Fine +1 – Yes
c.	License Suspension +1 – Yes
d.	Ignition Interlock +1 – Yes
e.	Other +1 – Yes
8	Penalty Increase with Additional Factor
a.	+1 – Yes
b.	0 – Not addressed

Table 3**DUI-Child Endangerment Policy Element Frequencies**

Total # of States with DUI-Child Endangerment Statutes	42
Policy Element	Frequency
Law Type	
Aggravating (only)	2
Enhanced (only)	26
Separate (only)	10
Two types	4
Driver/Passenger	
Unrestricted Driver Age	30
Passenger up to age 18	17
Restrict Driver Age & Passenger younger than 16	8
Felony Attaches	4
Child Endangerment Classification	10
Multiplier	2
Mandatory Child Passenger Minimum Penalty	25
Increase Additional Factors	20
Penalties	
Jail	28
Fine	23
License Suspension	10
Ignition Interlock	6
Other penalties	13
0	5
1	9
2	16
3	9

Table 4

Passenger Maximum	Felony	CE Classifications	Multiplier	Mandatory Child Passenger Minimum	Increase – Additional Factors	Jail	Fine	License Suspension	Ignition Interlock	Other	Sum Per State	Extra Point for Mandatory Child Passenger	Extra Point for CE Classif. (w/o Extra Point for Mand. CP)	Extra Point for Felony	Extra Points for CE + MCP + Felony
1	0	0	1	1	0	0	0	0	0	0	3	1			4
1	1	0	0	1	1	1	0	1	1	0	8	1		1	10
1	0	0	0	0	1	1	0	0	0	1	5				5
1	0	0	0	1	0	1	0	0	0	0	5	1			6
2	0	0	0	1	1	0	1	0	0	1	8	1			9
2	0	0	0	1	1	0	1	0	0	1	8	1			9
2	0	0	0	1	1	1	1	0	1	0	9	1			10
1	0	1	0	0	1	1	1	0	0	0	7		1		8
1	0	0	0	1	1	1	1	1	1	0	8	1			9
2	0	1	0	0	1	1	1	0	0	0	7		1		8
1	0	0	0	1	1	1	1	0	0	1	8	1			9
1	0	0	0	1	0	1	0	0	0	0	5	1			6
1	0	0	0	1	1	1	0	0	0	0	6	1			7
1	0	1	0	1	1	1	0	0	0	0	7	1	1		9
2	0	0	0	1	0	1	1	1	0	0	8	1			9
2	0	0	0	0	0	0	0	0	0	0	4				4
1	0	1	0	1	1	1	1	1	0	0	9	1	1		11
1	0	0	0	1	1	1	1	0	0	1	8	1			9
1	0	0	0	0	0	0	0	0	0	1	3				3
2	0	1	0	0	0	0	0	0	0	0	5		1		6
1	0	0	0	1	1	1	1	0	0	0	7	1			8
1	0	0	0	0	0	0	0	0	0	0	3				3

State	Law Type	Driver Minimum	Passenger Maximum	Felony	CE Classifications	Multiplier	Mandatory Child Passenger Minimum	Increase – Additional Factors	Jail	Fine	License Suspension	Ignition interlock
NV	Aggravating	2	1	0	0	0	0	0	0	0	0	0
NH	Enhanced	2	1	0	0	0	1	0	0	0	1	0
NJ	Separate	0	2	0	0	0	0	0	0	0	1	0
NY	Enhanced	2	1	1	1	0	1	0	1	0	0	0
NC	Enhanced	2	2	0	0	0	1	1	1	1	0	0
ND	Separate	0	2	0	0	0	0	0	1	1	0	0
OH	Enhanced	2	2	0	1	0	0	0	0	0	1	0
OK	Enhanced & Separate	1	2	1	1	1	1	0	1	1	0	0
OR	Enhanced	1	2	0	0	0	0	0	0	1	0	0
PA	Separate	2	2	0	0	0	1	1	0	1	0	0
RI	Enhanced	1	1	0	0	0	0	1	1	0	1	0
SC	Separate	1	1	0	1	0	0	0	1	1	1	0
TN	Enhanced	2	2	0	1	0	1	0	1	1	1	1
TX	Separate	2	1	1	0	0	0	0	1	1	0	0
UT	Enhanced	2	2	0	0	0	0	0	1	0	0	0
VA	Enhanced	2	2	0	0	0	1	0	1	1	0	0
WA	Enhanced	2	1	0	0	0	1	1	0	0	0	1
WV	Enhanced	2	1	0	0	0	1	0	1	1	0	1
WI	Enhanced & Aggravating	2	1	0	0	0	1	1	1	1	0	0
WY	Enhanced	1	1	0	0	0	0	1	1	1	0	0

Thomas et al.

Note: The shaded columns are those variables within DUI-child endangerment laws on which we placed particular emphasis: Felony Penalty Attaches, Child Endangerment/Child Neglect Classification, and Mandatory Child Passenger Minimum Penalty.

Additionally, Driver Min and Passenger Max refer to the variables: Minimum Age of Driver and Passenger Maximum Age of Passenger.

Table 5

Frequencies of Sum per State

Frequencies: Sum per States Only		Frequencies: Sum per States - with Additional Points for Three Variables Critical to DUI-Child Endangerment	
Points	Frequency	Points	Frequency
3	4	4	5
4	4	5	4
5	7	6	4
6	4	7	3
7	9	8	7
8	9	9	9
9	4	10	4
10	1	11	1
N/A	N/A	12	2

Table 6

Percent of children aged 0–14 killed by a drinking driver (BAC .08) by State, Type of Law (2007–2011)

State	Strength	% Children 0–14 killed while driving with an adult BAC .08 driver
Alabama	4	11.5%
Alaska	NO	6.7%
Arizona	10	10.3%
Arkansas	5	8.3%
California	6	6.9%
Colorado	NO	10.8%
Connecticut	NO	31.0%
Delaware	9	11.1%
Florida	10	11.9%
Georgia	8	9.7%
Hawaii	9	21.7%
Idaho	8	9.0%
Illinois	8	19.5%
Indiana	NO	7.4%
Iowa	NO	3.3%
Kansas	6	11.8%
Kentucky	7	3.0%
Louisiana	9	7.3%
Maine	9	11.1%
Maryland	4	16.1%
Massachusetts	11	13.6%
Michigan	9	6.2%
Minnesota	3	13.5%
Mississippi	NO	16.9%
Missouri	6	12.8%
Montana	8	11.4%
Nebraska	3	10.3%
Nevada	3	3.7%
New Hampshire	7	10.2%
New Jersey	4	15.3%
New Mexico	NO	12.6%
New York	10	7.2%
North Carolina	10	22.5%
North Dakota	4	9.1%
Ohio	8	8.5%
Oklahoma	12	17.3%
Oregon	4	16.3%
Pennsylvania	9	50.0%

State	Strength	% Children 0–14 killed while driving with an adult BAC .08 driver
Rhode Island	5	15.1%
South Carolina	8	5.0%
South Dakota	NO	8.7%
Tennessee	12	17.0%
Texas	7	5.7%
Utah	5	16.7%
Vermont	NO	16.1%
Virginia	8	11.9%
Washington	7	6.1%
West Virginia	8	5.4%
Wisconsin	9	11.4%
Wyoming	5	16.1%

“% Children 0–14 killed while driving with an adult BAC .08 driver” denote the percent of all children aged 0–14 killed in a motor vehicle crash that was riding with a BAC .08 adult driver. An “Adult” driver denotes a driver aged 21 or older. “NO” denotes states with no DUI Child Endangerment law. Strength denotes the number of provisions (a proxy for the strength of the law) / “Sum per state” indicated on Table 4. Because of the small number of cases in the District of Columbia the resulting estimated prevalence for DC was deemed unreliable and therefore excluded from this table.

Table 7

Percent of children (aged 0–14) and adult (aged 19 and over) passengers killed by a drinking driver (BAC .08) by Strength of the Child Endangered Law (2007–2011)

		CEDL in place				
		No CEDL in place				
		Low Strength	Medium Strength	High Strength		
Children aged 00–14	%	12.4%	10.0%	12.4%	9.5%	
	95% CI	9.6% 15.2%	7.6% 12.4%	10.6% 14.2%	6.8% 12.2%	
	%	26.7%	25.5%	27.7%	25.6%	
Adults aged 19 and over		95% CI	25.2% 28.2%	24.2% 26.7%	26.4% 28.9%	24.2% 26.9%

CEDL stands for Child Endangerment Driving Law. Strength denotes the number of provisions (a proxy for the strength of the law). Low, Medium, and High Strength denotes 3–5, 6–9, and 10–13 number of provisions, respectively