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RESEARCH ARTICLE

Utah's Move From 0.08 to 0.05 Blood Alcohol Concentration Per Se Policy: Effects on Driver Crash Fatalities Compared With Contiguous States

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Introduction: The aim of this study was to assess the early effects of Utah's 0.05 g/dL blood alcohol concentration per se law—passed in 2017 and enacted in 2018—on crash fatalities by comparing Utah with its 6 contiguous states.

Methods: Using data from the Fatality Analysis Reporting System, the authors conducted a difference-in-differences analysis comparing prelaw (2016) and postlaw (2019) outcomes, crash fatalities across 5 blood alcohol concentration levels (<0.01, ≥0.01, ≥0.05, ≥0.08, and ≥0.15 g/dL) between Utah and contiguous states. Eleven-year trends (2013−2023) in crash fatalities per 100 million vehicle miles traveled were displayed. Data were analyzed in 2025 using SAS, Version 9.4, for data preparation and statistical analyses.

Results: Utah experienced significantly larger reductions in crash fatalities than contiguous states, with difference-in-differences estimates ranging from −0.67 to −1.17 (all $p<0.05$). The largest decrease was observed for crashes involving drivers with blood alcohol concentration ≥0.01 (difference-in-differences = −1.17, 95% CI= −1.88 to −0.46). For nonalcohol-related crashes (blood alcohol concentration <0.01), both Utah and adjoining states experienced decreases, but the differences were not statistically significant for fatalities (p=0.96).

Conclusions: Utah's 0.05 blood alcohol concentration law was associated with meaningful decreases in alcohol-related crash fatalities, strengthening the evidence supporting the public health importance of evidence-based policy and strongly supporting broader adoption of 0.05 blood alcohol concentration limits nationwide.

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INTRODUCTION

Driver's blood alcohol concentration (BAC) is a well-established risk factor for motor vehicle crashes.[1,2] Present data on the societal economic burden, fatalities, and injuries resulting from alcohol-impaired driving crashes in the U.S. emphasize the stagnation of reductions or the rise in fatalities over the past decade. In 2023, 12,429 crash fatalities involved at least 1 alcohol-impaired driver (BAC≥0.08 g/dL). Over the last decade of available U.S. crash data (2014−2023), both the number of alcohol-impaired driving crash fatalities and the corresponding fatality rate have increased by 25% and 15%, respectively.[3] Throughout this period, alcohol-impaired driving crashes have consistently accounted for 28%−32% of all annual traffic fatalities in the U.S.

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International research has consistently demonstrated that lowering the legal BAC limit to 0.05 g/dL effectively reduces alcohol-related crash injuries and fatalities by 11% or more,[4] as shown in countries such as The Netherlands, Australia, and Japan.[5−7] In the U.S., Utah is the only state to have adopted a 0.05 BAC per se limit, whereas all other states continue to enforce a 0.08 threshold. A National Highway Traffic Safety Administration (NHTSA) evaluation of Utah's 0.05 BAC per se law, enacted in 2018, revealed notable declines in fatal crash rates and fatality rates of 19.8% and 18.3%, respectively, in 2019—the first full year of implementation—compared with those in 2016 (the first full year before the law was passed).[8] Although the NHTSA evaluation confirmed these substantial reductions relative to national trends, it was conducted at the state level and relied on a single pre−post comparison (2016 vs 2019), limiting its ability to control for broader temporal and regional factors.[8] This leaves open the possibility that broader trends or unobserved state-level confounders could have influenced the estimates.

Although the NHTSA evaluation descriptively compared fatal crash and fatality rates between Utah and 3 contiguous states (Colorado, Arizona, and Nevada),[8] the exclusion of the other adjoining states—Idaho, New Mexico, and Wyoming—may limit the representativeness and generalizability of the findings. Furthermore, the reliance on state-level data constrains the ability to conduct robust statistical comparisons between Utah and its surrounding regions. To address these gaps, a county-level (i.e., all counties from contiguous states that border Utah's state lines) difference-in-differences (DiD) analysis comparing Utah with all 6 contiguous states would allow for a more rigorous evaluation and stronger causal inference.

Despite documented lifesaving policy benefits in Utah and other nations and strong endorsement from the National Transportation Safety Board, political resistance, public misunderstanding, and cultural norms remain barriers to adopting a national 0.05 BAC limit.[7−9] Each year of delay in enacting this policy represents a lost opportunity to prevent thousands of fatalities among drivers, passengers, and all road users.

This study examined county-level changes in driver crash fatalities across 5 BAC levels (<0.01, ≥0.01, ≥0.05, ≥0.08, and ≥0.15 g/dL) in Utah compared with those in its contiguous states (Arizona, Colorado, Idaho, Nevada, New Mexico, and Wyoming). The county-level focus allowed for more precise control of regional variations, an assessment of county-specific policy effects, and an evaluation of fatal crashes. Because Utah is the only U.S. state to have implemented a 0.05 BAC per se limit, these findings provide critical U.S.-based evidence on the incremental but meaningful benefits of lowering BAC thresholds, complementing international findings and informing future state and national alcohol-impaired driving policy.

METHODS

Study Sample

Annual data on fatal injuries from motor vehicle traffic crashes were obtained from the Fatality Analysis Reporting System (FARS), a nationwide census maintained by NHTSA's National Center for Statistics and Analysis. FARS includes all qualifying fatal crashes that occur on public trafficways in the 50 states, the District of Columbia, and Puerto Rico. To be included, a crash must involve a motor vehicle traveling on a publicly accessible roadway and result in at least 1 death, either a vehicle occupant or nonmotorist, within 30 days of the incident.

The system offers NHTSA, Congress, and the public reliable annual data for monitoring national roadway safety. For this study, FARS data from 2013 to 2023 were used to assess state-level trends in alcohol- and nonalcohol-related fatalities. County-level data from 2016 and 2019 were analyzed using a DiD approach to evaluate the impact of Utah's 0.05 BAC law relative to those of its 6 adjoining states.

Vehicle miles traveled (VMT) data were drawn from the Federal Highway Administration's monthly Traffic Volume Trends reports.[10] Monthly VMT values were summed for each year to generate the annual VMT totals used to calculate fatality measures.

This study used publicly available, deidentified data from the FARS. As such, it was exempt from IRB oversight.

Measures

A driver's BAC was obtained from tested values or, when missing, imputed using a validated multiple imputation technique.[11] This imputation method estimates BAC from other crash variables and has been shown to produce results that closely match measured BACs.[11] Drivers were divided into 5 groups: BAC<0.01, 0.01≤BAC<0.05, 0.05≤BAC<0.08, 0.08≤BAC<0.15, and BAC≥0.15 g/dL. This study included all drivers involved in fatal crashes in Utah and 6 contiguous states from 2013 to 2023. For the DiD analysis, a subsample including only crashes that occurred in 2016 and 2019 was used.

One outcome variable, nonalcohol- and alcohol-related crash fatality, was derived from the FARS Injury Severity variable, which includes 8 categories (CA1−CA8): (1) fatal injury, (2) suspected serious injury, (3) suspected minor injury, (4) possible injury, (5) no apparent injury, (6) injured—severity unknown, (7) died prior to crash, and (8) unknown/not reported. For this study, injury severity was recoded into a dichotomous driver fatality measure: 1=fatality (CA1) and 0=nonfatality (CA2−CA6). CA7 and CA8 were excluded as missing. The resulting dichotomous variable was aggregated to the county level to create county-level nonalcohol- and alcohol-related fatality counts. To examine effects across varying impairment levels, 5 fatality outcomes were generated on the basis of driver BAC levels: <0.01, ≥0.01, ≥0.05, ≥0.08, and ≥0.15 g/dL.

The other outcome variable was the nonalcohol- and alcohol-related crash fatality rate. County-level fatality counts were summed at the state level and divided by each state's annual VMT to calculate fatality rates, expressed as fatalities per 100 million VMT. Rates were generated for the 5 BAC levels listed earlier.

Independent variables included policy exposure, prepolicy/postpolicy, and race/ethnicity. Cases from Utah served as the exposure group because the state enacted a 0.05 g/dL BAC policy in 2018, whereas cases from the 6 contiguous states served as the comparison group because their BAC policy remained at the 0.08 g/dL level. Pre/post was set as a dummy variable, with 0 indicating observations before the effective date of the law (December 31, 2018) and 1 indicating observations after this date.

Fatally injured FARS drivers were categorized into 4 racial/ethnic groups: White, Hispanic/Latino, African American, and other (Asian, American Indian or Alaska Native, and Native Hawaiian or other Pacific Islanders). Race and ethnicity were coded in FARS on the basis of death certificates.

Statistical Analysis

Data preparation and statistical analyses were performed using SAS, Version 9.4 (SAS Institute Inc., Cary, NC). Descriptive statistics (means, medians, frequencies) were used to characterize demographic variables of drivers involved in FARS crash cases. Fatality rates were used to create figures illustrating trends in alcohol-related crash fatalities per 100 million VMT among drivers of all ages across 5 BAC levels (<0.01, ≥0.01, ≥0.05, ≥0.08, and ≥0.15 g/dL) in Utah and 6 contiguous states from 2013 to 2023.

To formally assess the parallel prepolicy trends assumption underlying the DiD design, an estimated prepolicy event-study specification that included interactions between the policy exposure (i.e., Utah versus non-Utah) and prepolicy year indicators (2013−2016) using the PROC MIXED procedure was examined.

Crash fatality outcome was examined using a DiD approach to estimate the effect of Utah's 0.05 BAC law before and after its implementation. The DiD design compared changes in the outcome across the 4 alcohol-related BAC thresholds as well as <0.01 outcomes between Utah (treatment) and contiguous states (comparison), isolating policy effects from broader regional or temporal influences. The DiD model was

$$\mu_{ct} = \beta_0 + \beta_{\text{PrePost}} + \beta_{\exp}\text{Exposed} + \beta_{\text{Interaction}}(\text{PrePost} \times \text{Exposed}) + \varepsilon_{ct}.$$

Here, μct denotes the continuous county-level outcome; PrePost was coded as 0 before December 31, 2018 and 1 after, with 2016 and 2019 representing the analytic pre- and postpolicy years. The term Exposed identifies Utah counties (1) versus comparison counties (0), and the interaction term estimates the policy effect. A sensitivity analysis was conducted, including longer periods before (2013−2016) and after (2019, 2021−2023) policy implementation (refer to the results in the Appendix Materials, available online).

The significance level was set at α=0.05 (2 sided). Because policy effects across multiple BAC thresholds were examined, a sensitivity analysis was conducted to account for the potential inflation of Type I error due to multiple comparisons. Specifically, the Benjamini−Hochberg false discovery rate procedure[12] was applied within the outcome family (i.e., fatalities) to adjust *p*-values across BAC thresholds by providing a balance between Type I error control and statistical power.

RESULTS

Table 1 shows the characteristics of study participants. A total of 7,930 drivers involved in fatal motor vehicle crashes between 2016 (before policy) and 2019 (after policy) were included. Of these, 741 (9.3%) were from Utah, and 7,189 (90.7%) were from 6 contiguous states: Arizona (32.0%), Colorado (21.9%), New Mexico (13.2%), Nevada (11.5%), Idaho (7.9%), and Wyoming (4.2%). The sample was evenly split across study periods (49.6% before policy and 50.4% after policy). Most drivers were aged ≥25 years (80.9%), with smaller proportions aged 21−24 (10.3%), 18−20 (6.0%), and ≤18 (2.8%) years. Utah had a slightly higher proportion of drivers aged <18 years (6.1% vs 2.5%).

Most drivers (63.6%) had a BAC <0.01 g/dL, indicating no measurable alcohol. Among alcohol-positive drivers, comprising 36.4% of all drivers, 17.1% had BACs of 0.01−0.05, 3.3% had 0.05−0.08, 5.9% had 0.08−0.15, and 10.1% had BACs ≥0.15 g/dL. Utah drivers were more frequently alcohol negative (74.9% vs 62.5%) and

Table 1. Descriptive Analysis of Drivers Involved in Fatal Motor Vehicle Crashes

	Overall		Non-Utah		Utah	
Characteristics	**N**	**%**	***n***	**%**	***n***	**%**
State, 2 groups						
Non-Utah	7,189	90.66	—	—	—	—
Utah	741	9.34	—	—	—	—
State, 7 states						
Arizona	2,540	32.03	—	—	—	—
Colorado	1,734	21.87	—	—	—	—
Idaho	623	7.86	—	—	—	—
Nevada	912	11.5	—	—	—	—
New Mexico	1,046	13.19	—	—	—	—
Utah	741	9.34	—	—	—	—
Wyoming	334	4.21	—	—	—	—
Pre/post policy						
2016 (before)	3,936	49.63	3,539	49.23	397	53.58
2019 (after)	3,994	50.37	3,650	50.77	344	46.42
Driver age groups						
<18 years	221	2.79	176	2.45	45	6.07
18−20 years	477	6.02	432	6.01	45	6.07
21−24 years	820	10.34	748	10.4	72	9.72
≥25 years	6,412	80.86	5,833	81.14	579	78.14
BAC groups						
BAC<0.01	5,046	63.63	4,491	62.47	555	74.9
0.01≤BAC<0.05	1,355	17.09	1,263	17.57	92	12.42
0.05≤BAC<0.08	262	3.3	242	3.37	20	2.7
0.08≤BAC<0.15	469	5.91	440	6.12	29	3.91
BAC≥0.15	798	10.06	753	10.47	45	6.07
Sex						
Male	5,845	73.71	5,293	73.63	552	74.49
Female	2,051	25.86	1,862	25.9	189	25.51
Not reported	31	0.39	31	0.43	0	0
Unknown	3	0.04	3	0.04	0	0
Crash fatality						
No	4,392	55.79	3,966	55.61	426	57.49
Yes	3,481	44.21	3,166	44.39	315	42.51

BAC, blood alcohol concentration.

less likely to have a BAC ≥0.08 (6.6% vs 16.6%) than non-Utah drivers.

Males accounted for the majority of drivers across all BAC levels (73.7%). Sex distributions varied by BAC category: males comprised 72.8% of drivers with BAC <0.01 g/dL, 67.0% with 0.01−0.05 g/dL, 81.7% with 0.05−0.08 g/dL, 85.3% with 0.08−0.15 g/dL, and 81.2% with BAC ≥0.15 g/dL.

Overall, 44.2% of drivers died in fatal crashes, whereas 55.8% survived. Utah had a slightly lower driver crash fatality proportion (42.5%) than adjoining states (44.4%).

Figure 1 presents annual trends in alcohol-related and nonalcohol-related crash fatality rates (per 100 million VMT) among drivers of all ages in Utah and 6 contiguous states across 5 BAC levels (<0.01, ≥0.01, ≥0.05, ≥0.08, and ≥0.15) from 2013 to 2023. Patterns were broadly similar across regions and BAC levels. Before Utah's 2018 policy change, both groups showed irregular fluctuations. Beginning in 2020, fatality rates rose in Utah and adjoining states, reflecting pandemic-related disruptions and altered travel behaviors.

The estimated prepolicy interaction coefficients were small in magnitude and statistically indistinguishable from zero across BAC thresholds (p>0.05). These findings indicate that there is no evidence of systematic divergence in outcome trends prior to policy implementation, supporting the plausibility of the parallel trends assumption (data not shown).

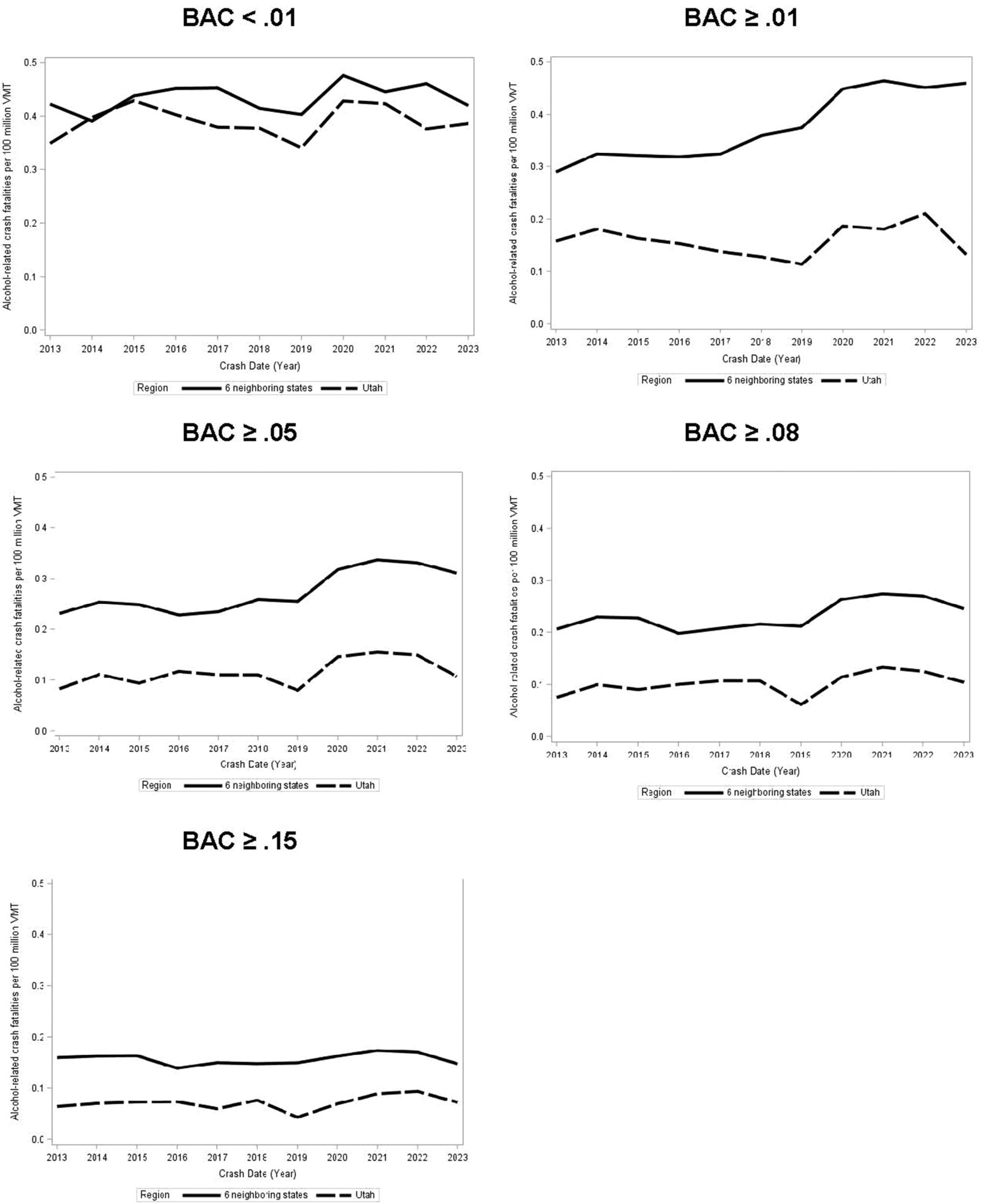

Figure 1. Trends in alcohol-related crash outcomes per 100 million VMT among alcohol- and nonalcohol-related all aged drivers across BAC levels in Utah and 6 contiguous states from 2013 to 2023.

Note: Yes=Utah and no=6 non-Utah contiguous states. VMT is the estimated VMT (in millions); 100VMT denotes per 100 million vehicle miles traveled.

VMT, vehicle-miles of travel.

Table 2. Means and Mean Differences of Crash Fatalities Among Drivers of All Ages Before (2016) and After (2019) BAC 0.05 Policy by County

		Non-Utah			Utah		
BAC		***n***	**Mean**	**SD**	***n***	**Mean**	**SD**
<0.01	Prepolicy	188	4.82	13.09	27	4.48	4.94
	Postpolicy	188	4.48	10.34	27	4.11	4.82
	Pre- and postdifference	188	−0.34	4.26	27	−0.37	3.03
≥0.01	Prepolicy	178	3.59	8.38	25	1.84	2.29
	Postpolicy	178	4.40	10.70	25	1.48	2.52
	Pre- and postdifference	178	0.81	3.73	25	−0.36	1.19
≥0.05	Prepolicy	166	2.75	6.20	23	1.52	1.50
	Postpolicy	166	3.21	6.82	23	1.13	1.84
	Pre- and postdifference	166	0.46	2.69	23	−0.39	1.12
≥0.08	Prepolicy	163	2.43	5.31	22	1.36	1.50
	Postpolicy	163	2.71	5.38	22	0.91	1.41
	Pre- and postdifference	163	0.28	2.25	22	−0.45	1.22
≥0.15	Prepolicy	149	1.87	3.48	18	1.22	0.94
	Postpolicy	149	2.09	3.49	18	0.78	1.22
	Pre- and postdifference	149	0.23	1.81	18	−0.44	0.92

Note: Prepolicy: the year 2016, 1 year before the Utah 0.05 BAC policy was enacted. Postpolicy: the year 2019, 1 year after the Utah 0.05 BAC policy was enacted.
BAC, blood alcohol concentration.

As shown in Table 2, mean alcohol-related crash fatalities decreased in Utah across all BAC levels after the implementation of the 0.05 BAC per se law, whereas contiguous states experienced slight increases. However, mean nonalcohol-related crash fatalities involving drivers with BAC <0.01 g/dL decreased in both Utah and the adjoining states.

Table 3 presents DiD estimates evaluating the effect of Utah's 0.05 BAC per se law on alcohol-related crash fatalities between 2016 (before policy) and 2019 (after policy), adjusted for county- and year-fixed effects. Across BAC thresholds (≥0.01, ≥0.05, ≥0.08, ≥0.15 g/dL), Utah experienced significantly larger reductions in crash fatalities than contiguous states, with DiD estimates ranging from −0.67 to −1.17 (all $p<0.05$). The largest decrease was observed for crashes involving drivers with BAC ≥0.01 (DiD= −1.17, 95% CI= −1.88, −0.46). For nonalcohol-related crashes (BAC <0.01 g/dL), both Utah and contiguous states experienced decreases, but the differences were not statistically significant for fatalities (p=0.96).

Adjustments for multiple comparisons using the Benjamini−Hochberg procedure did not materially alter the primary findings. Reductions in alcohol-related crash fatalities across BAC thresholds (i.e., ≥0.01, ≥0.05, ≥0.08, ≥0.15 g/dL) remained statistically significant after correction.

A sensitivity analysis was conducted to estimate the effect of Utah's 0.05 BAC per se law on alcohol-related crash fatalities by comparing longer periods before

Table 3. DiD Estimates for the Effect of Utah's 0.05 BAC Law on Alcohol-Related and Nonalcohol-Related Crash Fatalities (2016 vs. 2019)

Outcome variable	BAC	DiD estimate	95% CI		*p*-value	BH critical value
Crash fatalities	<.01	−0.04	−1.31	1.24	0.96	0.05
Crash fatalities	≥0.01	−1.17	−1.88	−0.46	<0.01	<0.02
Crash fatalities	≥0.05	−0.86	−1.46	−0.25	<0.01	<0.02
Crash fatalities	≥0.08	−0.74	−1.34	−0.13	0.02	0.04
Crash fatalities	≥0.15	−0.67	−1.18	−0.17	<0.01	<0.02

Note: Crash fatalities: alcohol-related crash fatalities. DiD estimates represent the interaction term (post × Utah) from models adjusted for county- and year-fixed effects. Negative coefficients indicate greater reductions in Utah than in the contiguous states.
BH critical value: the BH critical value was calculated as $(i/m) \times 0.05$, where i is the rank of each *p*-value among the 5 tests, and $m = 5$ is the total number of comparisons. A *p*-value less than or equal to its corresponding BH critical value (≤0.05) was considered statistically significant.
BAC, blood alcohol concentration; BH, Benjamini−Hochberg; DiD, difference-in-differences.

(2013−2016) and after (2019, 2021, 2022, and 2023; 2020 was excluded owing to pandemic-related anomalies) policy implementation. As shown in Appendix Tables 2 and 3 (available online), across 4 BAC thresholds (≥0.01, ≥0.05, ≥0.08, ≥0.15 g/dL), Utah showed larger reductions in crash fatalities than its contiguous states, with DiD estimates ranging from −0.18 to −5.63. However, these reductions were not statistically significant. Additional results are provided in the Appendix Materials (available online).

DISCUSSION

Using the data from the FARS,[13] this study examined the impact of Utah's 0.05 g/dL BAC per se law on alcohol-related crash outcomes using a DiD analytic approach. After implementation of the 0.05 limit, Utah experienced significantly greater reductions in alcohol-related crash fatalities across all BAC levels examined (≥0.01, ≥0.05, ≥0.08, and ≥0.15 g/dL) than contiguous states over time. The use of county-level data increased the number of observational units, thereby improving statistical power and precision relative to a state-level DiD analysis with a single treated unit (i.e., Utah). It also allowed the authors to account for within-state heterogeneity and control for time-invariant county characteristics through fixed effects, strengthening internal validity.

These results indicate that Utah's 0.05 BAC law had a strong deterrent effect on alcohol-related fatal crashes. Reductions across multiple BAC levels suggest that the policy influenced drivers beyond those near the 0.05 threshold, including those who might have driven at higher intoxication levels. This aligns with prior research showing that lowering per se BAC limits reduces alcohol-related fatalities, such as the U.S. shift from 0.10 to 0.08 g/dL, which lowered fatal crashes by 5%−16%, particularly among younger drivers and during nighttime crashes.[5,14] These findings extend that evidence, demonstrating that even stricter BAC limits can further enhance traffic safety.

Several mechanisms may explain the observed reductions. First, the 0.05 BAC limit likely created a general deterrent effect by increasing perceived legal risks and enforcement visibility, prompting drivers to self-regulate their alcohol consumption.[15,16] Second, the policy also promoted normative shifts (e.g., planning for a sober ride), reinforcing the social unacceptability of driving after drinking.[17,18] Extensive media campaigns and visible enforcement in Utah likely amplified these effects. In addition, hospitality and alcohol-serving establishments may have modified their serving practices in anticipation of stricter enforcement, indirectly reducing the likelihood of impaired driving.[19]

Improvements in vehicle safety, seatbelt use, and emergency response advancements may also have influenced fatality outcomes, influencing 0.05 BAC policy effects. Future studies should assess differential impacts by crash type, severity, time of day, day of week, and driver characteristics to further elucidate these dynamics.

From a policy and public health perspective, the reductions in crash fatalities observed in this study represent meaningful improvements in roadway safety. Utah's 0.05 BAC law has been a subject of national debate, with concerns raised about its necessity and potential to penalize moderate drinkers. However, the present findings provide empirical support for the policy, which achieved its intended effect (i.e., reducing alcohol-related deaths) without evidence of adverse outcomes in hospitality revenues. Importantly, the data indicate that benefits extended across the full spectrum of alcohol involvement, suggesting a shift in population-level driving behavior rather than an isolated impact among borderline impaired drivers.

These findings are also consistent with international experiences. Countries such as Australia, Austria, and France, which have adopted 0.05 BAC limits or lower, have reported sustained reductions in alcohol-related traffic fatalities.[20−22] Utah's experience thus contributes to a growing body of evidence supporting the public health benefits of lower BAC levels and may inform similar policy considerations in other U.S. states. The National Transportation Safety Board and WHO have long recommended adopting 0.05 BAC laws as part of comprehensive impaired driving prevention strategies.[23] This study adds empirical weight to these recommendations.

The lack of significant effects for those crashes indicates that Utah's 0.05 BAC law specifically targeted alcohol-related crashes. Similar reductions in nonalcohol-related crashes across Utah and contiguous states suggest that general trends were driven by other factors, such as improved vehicle safety design, infrastructure, or enforcement, rather than the BAC policy.

Limitations

Several limitations should be acknowledged. First, although the DiD design enhances causal inference by controlling for time-invariant differences between Utah and adjoining states, unmeasured confounding from concurrent policies, enforcement variations, or cultural factors may remain. Second, state- and county-level analyses may limit consideration of individual-level characteristics, such as age, sex, or prior offenses. Third, the relatively short pre- and postlaw observation period (2016 vs 2019) may limit the ability to assess longer-term effects. However, this temporally proximate window was selected to better isolate the short-term association of the 0.05 BAC law while minimizing exposure to time-varying influences unrelated to the policy. The extended 2013−2023 period showed irregular fluctuations that likely reflect multiple concurrent factors influencing alcohol-related crash trends. Expanding the DiD window across these heterogeneous years could increase exposure to unmeasured confounding. Sensitivity analyses using the longer observation period (2013−2016 vs 2019, 2021−2023) showed a similar pattern of reductions in alcohol-related fatalities in Utah relative to those in contiguous states, although the estimates were not statistically significant. Overall, the findings suggest that the shorter analytic window may provide a clearer estimate of the policy's immediate association, whereas the longer-period analysis supports the overall directional trend. Finally, despite the fact that county-level data increased statistical power and precision in the DiD analysis, the 0.05 BAC policy was implemented uniformly at the state level, limiting the ability to capture variation in treatment intensity. Therefore, inference still depends on comparisons between Utah counties and counties in adjoining states, and some unobserved state-level influences may persist.

CONCLUSIONS

This study provides timely and robust evidence that Utah's 0.05 BAC law significantly reduced alcohol-related crash fatalities across BAC levels. These findings underscore the public health importance of evidence-based policy and strongly support the broader adoption of 0.05 BAC limits nationwide. Continued evaluation of such laws, along with complementary enforcement, education, and prevention strategies, will be essential to sustaining progress toward eliminating alcohol-related roadway injuries and deaths.

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SUPPLEMENTAL MATERIAL

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