

# WORKING P A P E R

---

## Auto Liability in Nevada Compared to Other States

Testimony for Nevada Auto Theft  
and Insurance Fraud Task Force

PAUL HEATON, ERIC HELLAND

WR-595-NATIFTF

July 2008

This product is part of the RAND Institute for Civil Justice working paper series. RAND working papers are intended to share researchers' latest findings and to solicit informal peer review. They have been approved for circulation by the RAND Institute for Civil Justice but have not been formally edited. Unless otherwise indicated, working papers can be quoted and cited without permission of the author, provided the source is clearly referred to as a working paper. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. **RAND**® is a registered trademark.



INSTITUTE FOR CIVIL JUSTICE

## PREFACE

This research was funded by the RAND Institute for Civil Justice. It was presented at a meeting of the Nevada Auto Theft and Insurance Fraud Task Force in Las Vegas on July 22, 2008.

### THE RAND INSTITUTE FOR CIVIL JUSTICE (ICJ)

The mission of RAND Institute for Civil Justice (ICJ) is to improve private and public decisionmaking on civil legal issues by supplying policymakers and the public with the results of objective, empirically based, analytic research. ICJ facilitates change in the civil justice system by analyzing trends and outcomes, identifying and evaluating policy options, and bringing together representatives of different interests to debate alternative solutions to policy problems. ICJ builds on a long tradition of RAND research characterized by an interdisciplinary, empirical approach to public policy issues and rigorous standards of quality, objectivity, and independence.

ICJ research is supported by pooled grants from corporations, trade and professional associations, and individuals; by government grants and contracts; and by private foundations. ICJ disseminates its work widely to the legal, business, and research communities and to the general public. In accordance with RAND policy, all ICJ research products are subject to peer review before publication. ICJ publications do not necessarily reflect the opinions or policies of the research sponsors or of the ICJ Board of Overseers.

Information about ICJ is available online (<http://www.rand.org/icj/>). Inquiries about research projects should be sent to the following address:

Fred Kipperman, Acting Director

RAND Institute for Civil Justice

1776 Main Street

P.O. Box 2138

Santa Monica, CA 90407-2138

310-393-0411 x6698

Fax: 310-451-6979

[Fred\\_Kipperman@rand.org](mailto:Fred_Kipperman@rand.org)

Slide 1



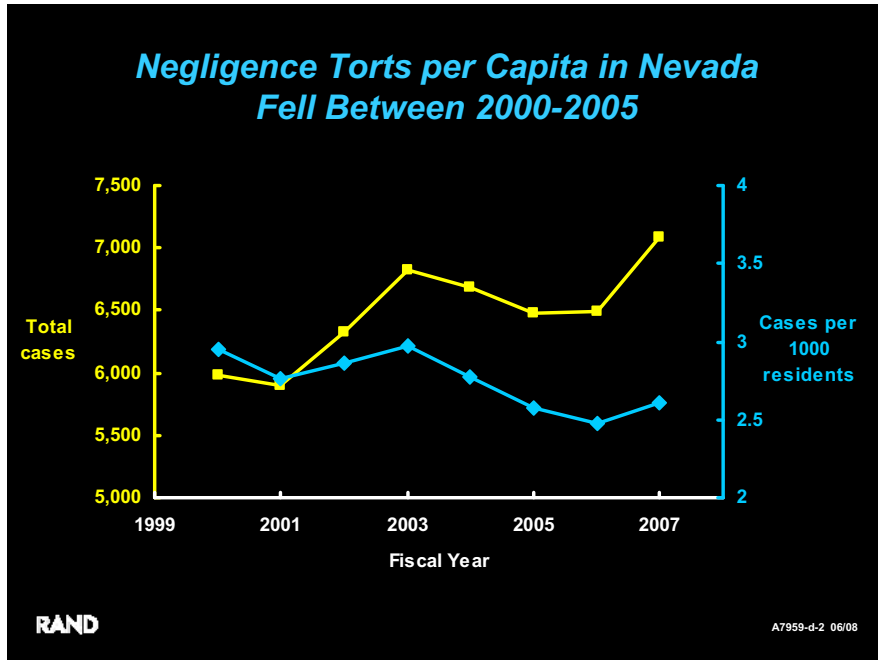
**RAND INSTITUTE FOR CIVIL JUSTICE**

***Auto Liability in Nevada Compared  
to Other States***

**Testimony for Nevada Auto Theft and Insurance Fraud Task Force**

**Paul Heaton and Eric Helland  
RAND Corporation  
July 22, 2008**

This briefing extends previous ICJ research and findings by focusing on the liability situation in Nevada. The briefing was prepared as testimony for the Nevada Auto Theft and Insurance Fraud Task Force and is intended to inform the Task Force about Nevada's liability situation relative to other states.

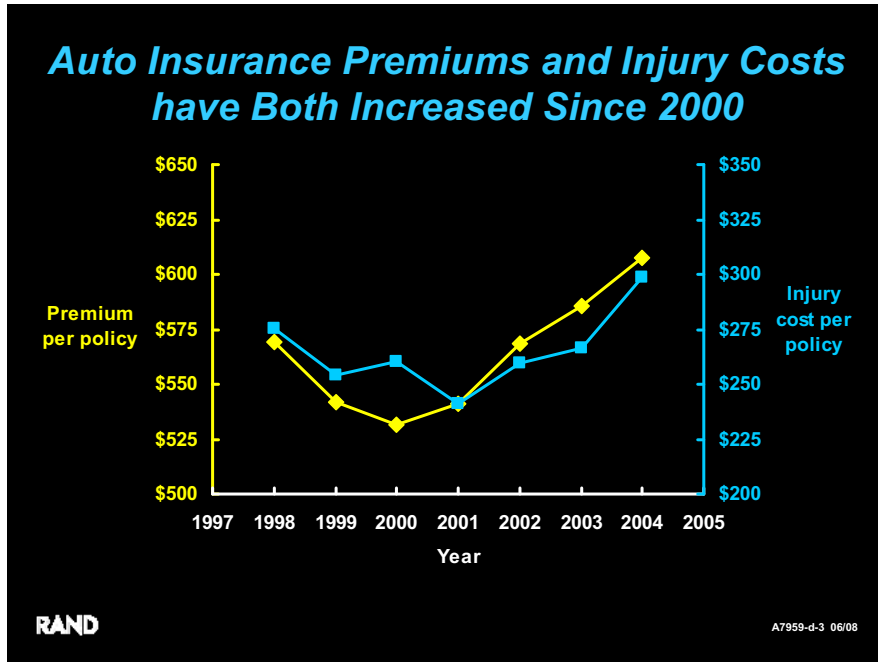


Source: Annual Reports of the Nevada Judiciary

The volume of auto-related cases handled in civil courts provides one simple indicator of the functioning of the auto insurance system. We compiled caseload statistics from publicly available reports of the Nevada Judiciary in order to examine caseload patterns in recent years. Because most injuries are handled administratively or settled out of court, case statistics could remain steady even in an environment in which fraud is rising or falling. However, significant changes in caseloads over time would suggest that some underlying feature of the insurance market is likely also changing.

This slide presents the trend in negligent torts. Negligent torts are a category of torts defined by the Nevada Judiciary that includes auto, medical/dental, and premises liability. Although auto torts are not specifically reported in Nevada, based on national data from the 2001 Civil Justice Survey of State courts, we expect that roughly 60% of these torts are auto cases. Construction defect, property-related torts, product liability, employment and other torts are included in separate categories. The number of negligent torts has been increasing since 2000. The growth in negligent torts, however, appears to be driven by population growth.

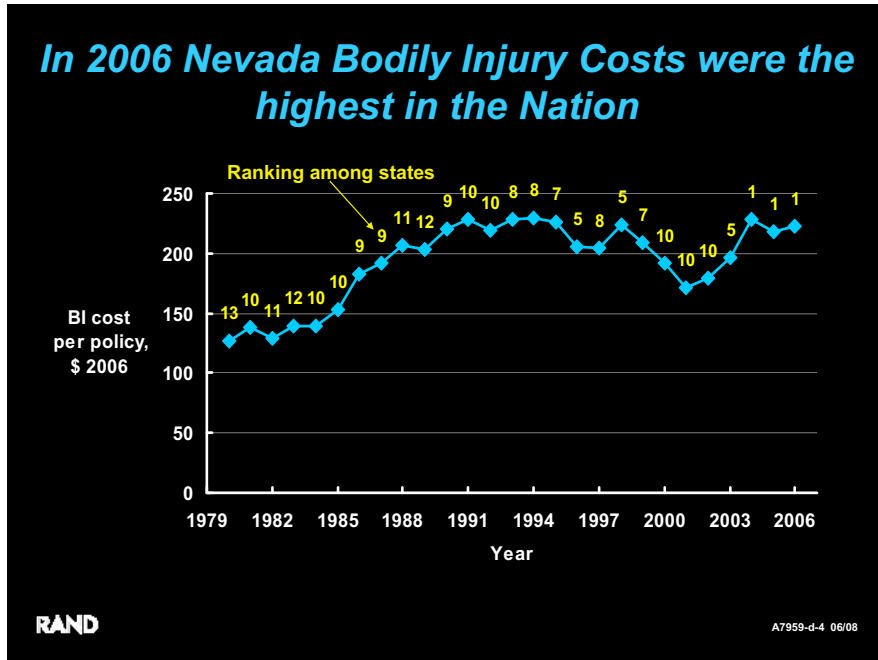
Slide 3



Source: Trends in Auto Injury Claims 2008, Insurance Research Council

Note: Data are available only through 2004 because large claims against policies that are several years old are often still undergoing adjudication.

Although the number of cases per capita has not increased, the injury cost per policy is increasing. Moreover, the rising injury cost per policy is highly correlated with the growth in premiums per policy. The \$66 increase in average premiums between 2001 and 2004, for example, was matched by a \$58 increase in average costs over the same period. Thus, one potential explanation for rising Nevada premiums is that increases in costs are being passed through to the consumer. However, these data alone cannot rule out other explanations for rising insurance premiums in Nevada. Since injury costs are merely one input in premiums and we do not control for other facts, it is not possible to determine exactly how changing the injury cost associated with policies will affect premiums.



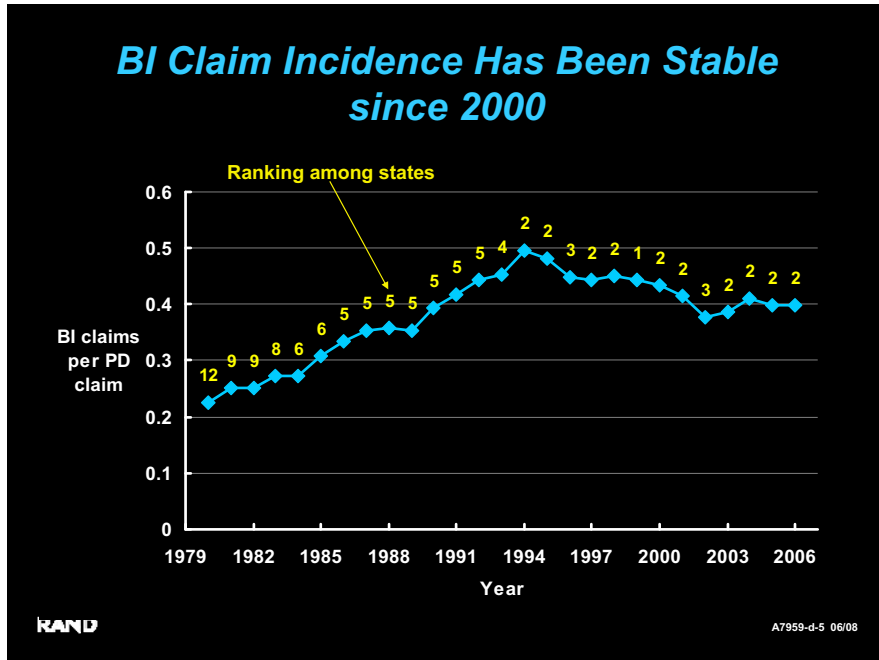
Source: Trends in Auto Injury Claims 2008, Insurance Research Council

The bodily injury (BI) cost per policy increased appreciably between 1980 and 1991 in most states, including Nevada, but in recent years Nevada’s BI cost per policy has grown more rapidly than that of other states. Nationwide, real BI loss costs fell by roughly 17% between 2000 in 2006, a fact that partly explains Nevada’s increased ranking. Since 2003 Nevada has the highest BI cost per policy of any state. Historically, Nevada has been in the top 10 among states, but its current position having the highest BI claims in the nation is a new phenomenon.

There are several reasons why BI claims may differ across states. The most obvious are policy changes to the states insurance laws or changes to its tort system. Nevada has made several changes to its tort system since 1980 but most of the changes apply only to medical malpractice cases. The main exception occurred in 1989 when Nevada placed a cap on punitive damages (Avraham, 2007). Given that punitive damages are rare in auto cases this is unlikely to have had an impact and, if the cap was binding, should have lowered BI costs.

During this time period Nevada had one of the lowest minimum insurance liability limits of any state. Both of these factors would tend to reduce BI claims in Nevada, if they had any effect at all and do not seem to provide an explanation of

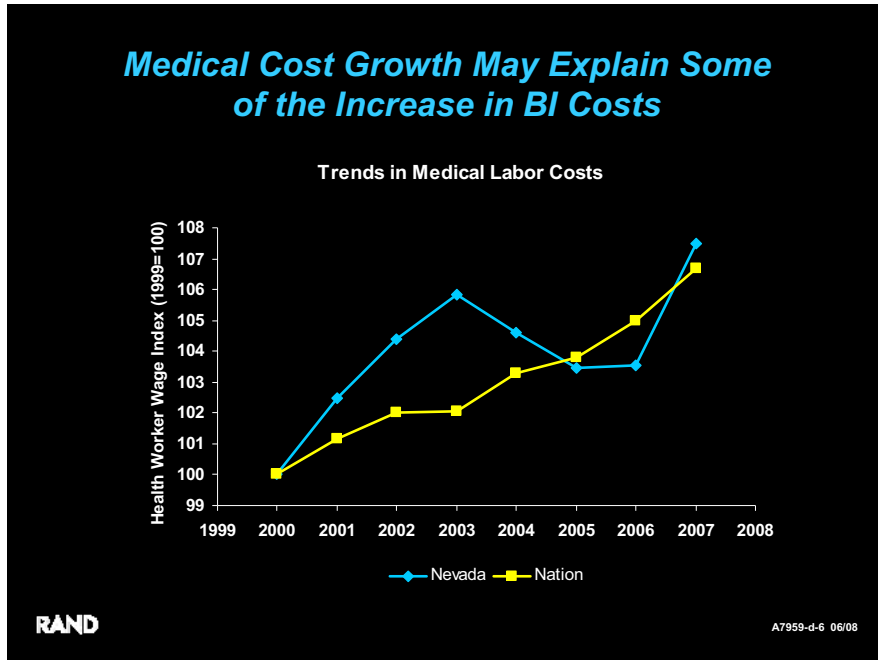
Nevada's status at the top of the BI cost index. Finally policy limits in Nevada appear to be declining rather than increasing (which would also suggest lower not higher BI costs per policy).



Source: Trends in Auto Injury Claims 2008, Insurance Research Council

This increase in BI costs does not appear to result from increased incidence of BI claims. The fact that BI incidence has been flat since 2000 suggests that the rise in BI costs per policy is not a function of increasing BI claims.





Source: Bureau of Justice Statistics

One factor that may contribute to rising BI costs is general medical cost inflation. Unfortunately, data comparing overall medical costs across states and over time is relatively limited. In this slide, we examine recent trends in labor costs for health workers, which we use as one proxy for medical costs. Our labor cost index is constructed using data collected by the Bureau of Labor Statistics on average wages for healthcare practitioners and healthcare support professionals. It incorporates differences across areas in employment by medical specialty. Costs are measured using 2000 as the base year, so an index value of 105 represents 5% cost growth relative to 2000.

The chart indicates that general medical cost growth, at least as measured by this index, was higher in Nevada between 2000 and 2003 relative to the entire nation but has moderated somewhat since 2003. If other medical costs rose at rates similar to labor costs, then medical cost inflation can explain only about 3% of the roughly 33% increase in BI costs observed in Nevada between 2000 and 2006. Additionally, the recent increase in Nevada’s BI cost ranking among states does not appear to have arisen due to generally higher than average medical cost inflation in Nevada.

***Are Soft Tissue Injuries more common in Nevada?***

- **Soft tissue injuries claims (sprains, strains, etc.) are difficult to objectively verify and thus are more susceptible to fraud**
- **We model the likelihood a claim involves soft tissue injuries to examine whether there appears to be higher incidence of such claims in Nevada**
- **Our data: Drawn from a sample of 34,000 closed BI claims collected in 2001 (most current data)**

**RAND** A7959-d-7 06/08

Having established that BI premiums and costs per claim are both rising, we now turn to evidence on whether fraud is at least in part responsible for these increases. We cannot answer this question directly since fraud by its nature is difficult to detect. Instead we focus on whether soft tissue injuries are more common in Nevada and whether injury treatment is systematically different.

Previous research at RAND has examined the prevalence of soft tissue injuries as a measure of fraud. Soft tissue injuries include sprains and strains of the neck, back, or other parts of the body. These injuries are typically more difficult to verify relative to other injury types because there are few available objective methods for their diagnosis. However, after accounting for driver and accident characteristics, we would expect the incidence of true soft tissue injuries to be relatively similar across jurisdictions. For example, there is no reason to expect that an individual in Nevada would be more likely to sustain a soft tissue injury in an accident than an individual in Idaho with similar characteristics involved in a similar type of accident. Thus, higher soft tissue claim rates in Nevada relative to other locations would provide evidence of overclaiming.

A similar logic applies to different types of treatment. Since non-traditional treatments such as aromatherapy do not generally have an agreed upon course of treatment, fraudulent use of such services is harder to detect (Spitzer, 2006).

***Soft Tissue Injuries Are More Common  
in Las Vegas***

- **Adjusted soft tissue injury rates:**
  - Nation: 81.5%
  - Nevada: 78.9%
  - Las Vegas: 84.0%
  - Michigan: 64.1%
- **Thus, Nevadans were slightly less likely to file soft tissue claims compared to other states**
  - **But the difference is not statistically significant**
- **Las Vegas is an exception: controlling for population density, accident victims there are 5% more likely than other Nevadans to claim soft tissue injuries**

**RAND** A7959-d-8 06/08

Building on this logic we estimated a probit regression model of the likelihood that a claim would include soft tissue injuries controlling for driver characteristics (age, gender, marital status, seatbelt use, seat positioning) and accident characteristics (impact severity, time of day, number of vehicles, and urban/rural location). Data were drawn from a sample of 34,000 closed BI claims collected in 2001, the most current available year.

Compared to accident victims with comparable demographics and accident circumstances, Nevadans were slightly less likely to file soft tissue claims, although this difference was not statistically significant. However, even after controlling for population density, accident victims in Las Vegas were 5% more likely than other Nevadans to claim soft tissue injuries, a difference that is statistically significant ( $p=.08$ ).

Clearly there are a number of reasons why urban and rural areas might differ in frequency of soft tissue injuries and treatment types. For example, wealthier urban dwellers may be more likely to claim a soft tissue injury than those in rural areas either because there are more chiropractors in urban areas and/or because claimants in urban areas are more likely to be represented by attorneys. Given that our regressions allow for the possibility that soft tissue claim rates may differ in areas with higher population

density, the results indicate that Las Vegas appears different even from other urban areas.

Slide 9

***This Difference Understates the Extent of Overclaiming***

- **Overclaiming is also likely in most of the comparison states**
- **Michigan PIP claims may be a useful benchmark for the likely “true” incidence of soft tissue injuries**
  - **A strict verbal threshold reduces incentive for claiming of non-existent soft tissue injuries**
- **The comparison to Michigan suggests roughly 15-20% of overclaiming for soft tissue injuries**

**RAND** A7959-d-9 06/08

This 5% difference probably understates the extent to which soft tissue overclaiming is a problem in Las Vegas because overclaiming is likely to exist to some degree in most of the comparison states. Michigan PIP claims potentially provide a useful alternative benchmark for assessing the likely “true” incidence of soft tissue injuries because the strict verbal threshold in Michigan removes much of the incentive for claiming of non-existent soft tissue injuries (see Carroll, Abrhamse, and Vaiana 1995). Specifically of all the states Michigan has the most clearly defined verbal threshold, and soft tissue injuries will not get you over the threshold meaning there is much less incentive to fake soft tissue injuries in Michigan, since you can only have your documented medical costs reimbursed, not general damages.

Comparing Nevada to Michigan suggests that roughly 15-20% of soft tissue claims in Nevada are due to excess claiming. In a separate analysis, we examined hard tissue claims; as expected the rates of hard tissue claiming in Nevada and Las Vegas were comparable to the rest of the nation after controlling for the factors listed above. We also compared soft tissue claiming in Nevada and Utah, another no-fault state that is more similar to Nevada than Michigan in terms of geography and size, and obtained very similar results to those presented on this slide.

***The Estimated Costs of Excess  
Soft Tissue Claims***

- **Marginal cost of soft tissue claim: \$1669**
- **Excess soft tissue claims**
  - **With national benchmark: 425**
  - **With Michigan benchmark: 3000**
- **Annual costs: \$700K to \$5 M**  
**\$20 to \$125 per accident**

**RAND** A7959-d-10 06/08

Using the national cost of soft tissue claims and national or Michigan soft tissue claims as a benchmark, we can estimate how much excess claiming costs Nevada.

We estimated the marginal cost of a soft tissue claim in the 2002 closed claim data by regressing the log of total economic losses on an indicator for soft tissue injury, other types of injuries (burns, lacerations, scarring, knee injuries, shoulder injuries, disc injuries, fractures, internal organ damage, concussion, brain injury, amputation, paralysis, psychological trauma, loss of feeling/senses, headache, pregnancy-related injury, temporomandibular joint injury, other), the demographic and accident controls listed previously, and state fixed effects. Coefficients thus represent our estimate of the additional losses that would be reported by individuals with soft tissue injuries as compared to individuals with otherwise similar demographics, accident circumstances, and other injuries. Our cost estimate of \$1,669 (2008 dollars) is highly statistically significant ( $p < .001$ ).

To reach our estimate of annual cost of excess claiming we need the number of bodily injury claims. According to Fast Track data at the state and insurance territory levels, there were approximately 17,000 bodily injury claims in Nevada in 2006, roughly half of which originated in Las Vegas. Multiplying yields an annual cost of \$700,000 to

\$5 million. This translates to between \$20 and \$125 per motor vehicle accident, and does not include the administrative costs associated with handling the excess claims.

Slide 11

**Do Nevada BI Claimants use different Medical Providers?**

Provider Type	% of claimants utilizing in:	
	Nation	Nevada
General Practitioner	38.7	35.7
Radiologist	11.8	14.1
Emergency Room	43.4	36.1*
Orthopedist	11.8	8.5*
Physical Therapist	21.5	15.8*
Alternative	35.1	42.9*
Chiropractic	33.4	42.6*
Other	3.7	1.3*

**RAND**      \* = Difference from national utilization rate is significant at 5% level      A7959-d-11 06/08

Another potential indicator of fraud is non-traditional treatment methods. As noted above because non-traditional treatments such as aromatherapy do not generally have an agreed upon course of treatment, fraudulent use of such services is harder to prove. This is not to suggest that non-traditional care is not effective or useful, merely that because it does not have an agreed course of treatment for most injuries, proving fraudulent over-claiming in court is much more difficult for these types of care than for other treatment methods.

To ascertain whether alternative therapies are more common in Nevada we estimated probit regression models of the likelihood that an injured party would utilize a particular type of medical provider controlling for demographics, accident characteristics (see note for slide 6), and injuries (see note for slide 7). Each table row presents results from a distinct regression. The values in the table show how medical utilization would differ among individuals in Nevada compared to other individuals with similar injuries and other characteristics. Nevada claims are less likely to involve therapy by some types of traditional providers and more likely to involve chiropractic care. Use of non-chiropractic alternative providers such as aromatherapists, hypnotists, massage therapists, and herablists was very uncommon, however.

**Do Nevada BI Claimants receive different Medical Care?**

Care Type	% of claimants in:	
	Nation	Nevada
Visited hospital	57.1	48.1*
Used ambulance	17.6	19.4
Visited pain clinic	10.4	6.8*
Pharmacy use	19.7	18.6
Any diagnostic tests	58.8	60.5
X-rays	52.8	59.5*
MRI/CT	19.9	16.0

**RAND**      \* = Difference from national utilization rate is significant at 5% level      A7959-d-12 06/08

We do not see large differences in other types of treatment, although Nevada BI claimants are less likely to visit the hospital or a pain clinic but are more likely to have x-rays.

See notes for Slide 8 for a description of the statistical methods used to produce this table.

***Nevada BI Claimants do not utilize care more frequently***

Care Measure	Average for those with at least one visit/test in:	
	Nation	Nevada
Total visits to medical providers	14.3	13.5
Total visits to alternative providers	22.5	20.4
Total diagnostic tests	2.06	2.00

**RAND** \* = Difference from national utilization rate is significant at 5% level A7959-d-13 06/08

We do not find large differences in the frequency of care for Nevada patients relative to other states. To compute adjusted care averages, we estimated negative binomial regression models of the number of care episodes controlling for demographics, accident characteristics (see note for slide 6), and injuries (see note for slide 7). Our analysis is limited to individuals utilizing a particular type of care at least once. Each table row presents results from a distinct regression. The values in the table thus show how medical utilization would differ among individuals in Nevada comparing them to other individuals with similar injuries and other characteristics. None of the differences between Nevada and other jurisdictions are statistically significant.

To be clear, our analysis does not link the rise in BI costs to elevated levels of soft-tissue claims or the use of chiropractic care. To establish causation we would need a more complicated model than the analysis presented here.



**Conclusions**

- **Recent premium growth appears to reflect rising BI costs**
  - Nevada ranks high nationally in number and cost of BI claims
- **Excess claiming for soft tissue injuries is likely a factor**
- **Utilization of medical care for auto injuries in Nevada differs from other states**
  - **Less use of some types of physicians, more use of chiropractors**
  - **Alternative providers are involved in only a small proportion of Nevada claims (except for chiropractors)**

**RAND** A7959-d-14 06/08

Our analysis suggests that recent premium growth in Nevada appears to reflect rising per claim bodily injury costs. Nevada’s BI cost per claim is consistently among the highest in the nation although Nevada’s incidence of BI claiming has been stable in recent years. Factors other than general medical cost inflation appear to have contributed to Nevada’s recent increases in BI costs.

One factor contributing to these high BI costs is a high proportion of soft tissue injuries. Our estimates place the cost in Nevada of this type of fraud alone between 700,000 and 5 million dollars a year.

Another factor that may contribute to high BI costs in Nevada is use of different types of treatment for auto-related injuries. Relative to other states, in Nevada we observe less use of traditional physicians and greater use of chiropractic care.