

MINUTES OF THE HOUSE COMMITTEE ON TRANSPORTATION.

The meeting was called to order by Chairman Rex Crowell at 1:30 p.m. on February 10, 1993 in Room 519-S of the Capitol.

All members were present except: Rep. S. Lloyd, Excused
Rep. K. King, Excused

Committee staff present: Tom Severn, Legislative Research Department
Hank Avila, Legislative Research Department
Bruce Kinzie, Revisor of Statutes
Donna Luttjohann, Committee Secretary

Conferees appearing before the committee: Rosalie Thornburgh, Kansas Department of Transportation
Jan Stegelman, Kansas Department of Health & Environment
Paul Matthews, Kansas Highway Users Federation
Dave Mann, ABATE
Kelly Wendeln
Victor Poe
Donald Hoffman
Eldon Gay
Ken McNeill, ABATE
Jacque Sue
Linda Mitchell

Others attending: See attached list

Chairman Crowell opened the hearing on HB 2175. He recognized Rosalie Thornburgh representing the Kansas Department of Transportation as a proponent of the bill. See Attachment 1.

Jan Stegelman testified as a proponent on behalf of the Department of Health and Environment. See her written testimony. Attachment 2.

Paul Matthews, Senior Regional Director of the Highway Users Federation also testified as a proponent of HB 2175. His written testimony is Attachment 3.

The Chairman then recognized David Mann, President of ABATE of Kansas, as an opponent of the bill. See Attachment 4 for his written testimony.

Mr. Kelly Wendeln of Chanute was recognized by the Chairman. He testified as an opponent of the bill. See Attachment 5 for his written testimony.

Donald Hoffman from Topeka, Kansas was the next to testify as an opponent of the bill. His testimony is Attachment 6.

Eldon Gay, an attorney from Topeka, Kansas, was recognized by Chairman Crowell. He testified as an opponent of the bill. See Attachment 7.

Chairman Crowell recognized Kenneth R. McNeill, representing ABATE, as an opponent of the bill. See his written testimony. Attachment 8.

Jacque Sue testified as an opponent of the bill. Statistics from the National Safety Council are in her written testimony in Attachment 9.

The Chairman then recognized Linda Mitchell, opponent of the bill, who testified briefly about the bill. See

CONTINUATION SHEET

MINUTES OF THE HOUSE COMMITTEE ON TRANSPORTATION, Room 519-S Statehouse, at 1:30 p.m. on February 10, 1993.

her written testimony Attachment 10.

Not appearing before the committee to testify, but offering written testimony in support of the bill was Chip Wheelen representing the Kansas Medical Society, see Attachment 11 and Cheryl DeBrot, Member of the Board of Directors for the Kansas Respiratory Care Society, See Attachment 12.

Chairman Crowell closed the hearing on HB 2175. The meeting was adjourned at 3:30 p.m.

The next meeting is scheduled for February 11, 1993.

** See Jan. 13, 1993 minutes for more testimony on proposed HB 2175.

GUEST LIST

HOUSE TRANSPORTATION COMMITTEE

FEBRUARY 10, 1993

Name	Address	Representing
Randy Hatch	Manhattan KS	ABATE, AMA, MRF
Chas Cox	Alma KS	ABATE
Rgn HENNEBERG	Belvue KS	ABATE
Debra Robinson	Belvue	ABATE
Quay Woodyard	Manhattan	ABATE
Ronald K. Becker	209 S. 11 th KCKS 66102	ABATE
Donise Blichmann	97 Sierra Cir Olathe, KS 66061	ABATE
Timothy J Smith	5523 Elm Shawnee KS 66203	ABATE
Justin Elliott	8618 DAKVIEW DR LEANEXA, KS 66045	ABATE
Ellana Fry	Emporia, KS	ABATE
Sunny Mahoney	Emporia KS	ABATE
Carly Harris	Kansas City KS	ABATE
Dane Faye	KCKS	ABATE
Laura Mitchell	Topeka, KS	ABATE
Eldon Gray	Topeka, KS	ABATE
Hotie Wirth	Leawards, KS.	Harley Carson Group
Hugela Wirth	" "	" "
Ronald Bureau	TOPEKA KS.	ABATE
Jerry Reed	Topeka KS	ABATE
DAVID McHenry	Baldwin city KS	ABATE
MARK S. Scott	TOPEKA, KS.	ABATE
John Tibbels	Topeka Kan	ABATE

GUEST LIST

HOUSE TRANSPORTATION COMMITTEE

FEBRUARY 10, 1993

Name	Address	Representing
Jan Stengelman	Topoka	KDHE
RS Kolb	"	None
Brian Thompson	Holtan	Taxpayers
Carl Thompson	Holtan	None
Kosche Shubert	Topoka	KDOT
Bill Watts	Topoka	KDOT
Nancy Bryana	Topoka	KDOT
Porell Burke		
Don Hale	Dept. of Aging	
Richard H. H. H.		
Charlie Bean	Winfield KS	ABATE
Dina B. B.	Winfield KS	ABATE
Bettie McNeill	Perry KS	ABATE
Thom H. H.	Chanakie	ABATE
E. S. Lusk	Baras Tongandio Kne	ABate
Donna Mann	Mcouth KS.	ABATE - SKs.
Joanuz Eze	Harder City, KS	MASSN & ABATE
Dave Powell	Americus KS.	ABATE
Joe Gilber	Americus KS.	ABATE
Jim Schleit	Belove KS	ABate & M.R.F.
Daniel Victorine	Lu, KS	ABate

George Langer

Don Hoffman

Gene Ala

Charles Skellie

Kirk A. Garrett

Randall L. Haynes

Jim Grant

William Machin

Ed Martin

OTMATT KS

Topeka, KS

Leora K.S.

Council Grove

Pomona KS

GREAT BRAD KS

GREAT BRAD KS

Edendale KS

Edendale KS

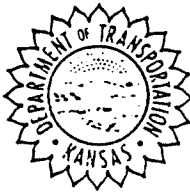
ABATE KS.

ABATE

ABATE

ABATE

STATE OF KANSAS



Michael L. Johnston
Secretary of Transportation

KANSAS DEPARTMENT OF TRANSPORTATION
Docking State Office Building
Topeka 66612-1568
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Joan Finney
Governor of Kansas

TESTIMONY BEFORE
HOUSE TRANSPORTATION COMMITTEE
REGARDING HB 2175:
REQUIRING THE WEARING OF HELMETS UPON A MOTORCYCLE
February 10, 1993
OFFICE OF TRAFFIC SAFETY

Mr. Chairman and Committee Members:

Mr. Chairman and members of the committee, I am Rosalie Thornburgh, Administrator of the Office of Traffic Safety. On behalf of the Department of Transportation, I am here today to provide testimony on the proposed legislation.

K.S.A. 8-1598 currently requires that all persons under the age of 18 operating or riding upon a motorcycle or motorized bicycle, must wear an approved helmet. The proposed legislation would extend that requirement to all ages.

Section 153 of the Intermodal Surface Transportation Act (ISTEA) of 1991 provides for the application of incentive grant funds to be used toward motorcycle safety and passenger vehicle safety upon passage of appropriate legislation. That legislation includes passage of a full helmet law. In addition, failure to pass the helmet law legislation prior to October 1, 1993, would result in a 1 1/2 percent penalty being assessed against the Department of Transportation federal highway construction funds beginning in FFY 1995 (October 1, 1994). This penalty would not be a loss of federal funds, but a diversion of funds from highway construction to the section 402 highway safety program. The diversion is to be 1 1/2 percent of certain construction funds in FFY 1995 and 3 percent in FFY 1996 and thereafter. The diversion would be approximately \$2 million in FFY95 and \$4 million in FFY96 and thereafter. The total diversion for the three years FFY95 to FFY97 is \$10 million. I have attached a synopsis of the specifications of Section 153 indicating those categories of construction funds to which the penalty is being applied.

HOUSE TRANSPORTATION
Attachment 1-1
2/10/93

Testimony on Motorcycle Helmets
February 10, 1993
Page Two

Studies by the National Highway Traffic Safety Administration (NHTSA) indicate that an unhelmeted motorcyclist is 40 percent more likely to incur a head injury and 15 percent more likely to incur a non-fatal head injury than a helmeted motorcyclist when involved in a crash. NHTSA estimates that motorcycle helmets reduce the likelihood of a fatality by 29 percent. I have attached a State Legislative Fact Sheet issued by the National Highway Traffic Safety Administration which includes these key facts.

I have also attached a Kansas Motorcycle Fact Sheet which describes the motorcycle crash picture in Kansas in 1991. Forty-nine (49) fatalities resulted from over 1,100 crashes; of those fatalities, 16 percent were wearing helmets. The fatality rate of drivers killed wearing helmets is 2.84 per 100, while the non-helmeted fatality rate is 3.47 per 100. The cost of those crashes and injuries are quantified at \$30.7 million. The fact sheet analyzes available 1991 statistics in several ways.

In summary, passage of HB 2175 would bring Kansas into compliance with Section 153 of ISTEA and would remove the possibility that KDOT would be required to divert highway construction funds to the highway safety program.

Kansas Department of Transportation
February 8, 1993

Section 153 of the Intermodal Surface Transportation
Efficiency Act of 1991
Use of Safety Belts and Motorcycle Helmets

The Intermodal Surface Transportation Efficiency Act of 1991 created a highway safety incentive grant program providing additional funding to Kansas. The funding is targeted for the use in motorcycle and passenger vehicle safety.

Program eligibility requires the adoption of:

- 1) a law which makes unlawful throughout the State the operation of a motorcycle if any individual on the motorcycle is not wearing a motorcycle helmet; and
- 2) a law which makes unlawful throughout the State the operation of a passenger vehicle whenever an individual in a front seat of the vehicle (other than a child who is secured in a child restraint system) does not have a safety belt properly fastened about the individual's body.

Kansas statutes regarding front seat passenger vehicle safety belt use complies with the program requirement. Kansas statute would require modification to bring Kansas into compliance with the helmet program requirement.

Availability of Funds:

Federal Fiscal Year (FFY) 93 and (FFY) 94

Use of Funds:

Education: public information/education about safety and use;
Involve public health agencies and other interested agencies;
Training: to train law enforcement officers in enforcement of relevant laws;
Monitoring: to monitor rate of compliance as described;
Enforcement: to enforce state laws as described.

Maintenance of Effort:

Sustain the aggregate statewide expenditures at the average level in the two years preceding enactment of this section.

Federal Share:

First year: 75% federal, 25% state
Second year: 50/50
Third year: 25/75

Limitation on Grants:

The aggregate amount of grants made to a State under Section 153 shall not exceed 90 percent of the amount apportioned to that State for fiscal year 1990 under Section 402. The amount of grants made to a State in each fiscal year shall be subject to the availability of funding for that fiscal year. Each state qualifying will receive an initial allocation based on all states qualifying. Any funds not apportioned to non-qualifying states will be reapportioned to all qualifying states on August 1 of each federal fiscal year. Currently 19 states are eligible for funding, excluding Kansas.

Initial allocation estimate for Kansas if qualifying in FFY93: \$229,176.

Compliance Criteria/Usage Rates for Subsequent Year Funding:

Second year:

A state must have had its qualifying laws in effect for the entire preceding fiscal year and must have achieved the following usage rates:

Helmet usage rate attained in first year 75%
Belt usage rate attained in first year 50%

Third year:

A state must have had its qualifying laws in effect for the entire preceding fiscal year and have achieved the following usage rates:

Helmet usage rate attained in second year 85%
Belt usage rate attained in second year 70%

Penalty Provisions:

If any state does not have in effect a conforming safety belt or motorcycle law on the first day in federal fiscal year 1994 (October 1, 1993), a penalty will be imposed in FFY 1995. Under this penalty 1 and 1/2 percent of highway construction monies apportioned to the state for fiscal year 1995 shall be diverted to apportionments under section 402. If the conforming laws are not in effect by first day in federal fiscal year 1995 (October 1, 1994) or in any fiscal year thereafter, 3 percent of highway construction funds apportioned for the succeeding fiscal year shall be diverted to the apportionment under section 402.

The programs which would be subject to the diversion are: National Highway System, Congestion Mitigation, and Surface Transportation Program. Note: Hold Harmless funds (in FFY 1994 and 1995) and Reimbursement funds (in FFY 1996 and 1997), which the state is expected to receive, have also been included, as this funding will be transferred to the state's Surface Transportation Program. The estimated amount of apportionment to Kansas and the transfer, if required, are as follows:

	1995 Apportionment	1-1/2% Transfer	1996-7 Apportionment	3% Transfer
Reim	-0-		\$ 35,000,000	
H.H.	\$ 14,500,000		-0-	
NHS	\$ 48,100,000	\$ 48,200,000
Cong. Mit	\$ 4,900,000	\$ 5,000,000
STP	\$ 51,500,000	\$ 51,500,000
Total	\$119,000,000	\$1,785,000	\$139,700,000	\$4,190,000

STATE LEGISLATIVE FACT SHEET

U.S. Department of Transportation
National Highway Traffic Safety
Administration

October 1992

MOTORCYCLE HELMET USE LAWS

The United States Department of Transportation's National Highway Traffic Safety Administration (NHTSA) strongly believes that effective, comprehensive programs encompassing motorcycle helmet usage, rider education, motorcycle operator licensing, and responsible use of alcohol have a strong positive effect on motorcycle safety. Motorcycle helmets offer motorcyclists involved in traffic crashes the best protection from head injury. The passage of helmet use laws governing all motorcycle riders is the most effective method of getting all motorcyclist to wear helmets. NHTSA encourages States to require all motorcycle riders to wear helmets.

Key Facts

- In 1991, 2,808 motorcyclists died and approximately 100,000 were injured in highway crashes in the U.S.
- Per mile travelled, a motorcyclist is approximately 20 times more likely to die in a crash than is an automobile operator.
- Head injury is the leading cause of death in motorcycle crashes.
- An unhelmeted motorcyclist is 40 percent more likely to incur a fatal head injury and 15 percent more likely to incur a non-fatal head injury than a helmeted motorcyclist when involved in a crash.
- NHTSA estimates that motorcycle helmets reduce the likelihood of a fatality by 29 percent in a crash.
- A study conducted at the University of Southern California, which investigated 900 motorcycle crashes and analyzed 3,600 traffic crash reports covering motorcycle crashes, concluded that helmet use was the single most important factor governing survival in motorcycle crashes.
- The same study found that helmeted operators and passengers experienced significantly fewer and less severe head and neck injuries than unhelmeted operators and passengers.
- From 1984 through 1991, it is estimated that helmets saved the lives of more than 5,273 motorcyclists. If all motorcycle operators and passengers had worn helmets during those years, it

is estimated that approximately 5,623 additional lives could have been saved.

- Numerous studies have proven that helmets do not impair the users' vision or hearing. All helmets provide a field of view greater than 210 degrees and often provide an advantage in hearing warning signals by reducing wind and engine noise.
- All motorcycle helmets sold in the U.S. are required to meet Federal Motor Vehicle Safety Standard 218, the performance standard which establishes the minimum level of protection helmets must afford each user.
- Helmet use laws governing all motorcycle occupants significantly increase helmet use and are easily enforced because of the occupant's high visibility. In NHTSA's latest survey (November 1991), helmet use was reported to be essentially 100 percent at sites with helmet use laws governing all motorcycle riders as compared to 34 to 54 percent at sites with no helmet use laws or laws limited to minors.
- Data on crashes in States where only minors are required to wear helmets show that fewer than 40 percent of the fatally injured minors are wearing helmets even though the law requires them to do so. Helmet laws that govern only minors are extremely difficult to enforce.
- When helmet laws were repealed and helmet use dropped, fatalities increased an estimated 20 percent.

Legislative Status

- Currently 25 States, the District of Columbia, and Puerto Rico require helmet usage by all motorcycle operators and passengers. In another 22 States, only a specific segment of motorcyclists, usually persons under a specific age, are required to wear helmets. Three States have no law requiring helmet use.
- Data from Louisiana, the first State to repeal and then readopt a full helmet law, show that a 30 percent reduction in fatalities (40 fewer deaths) during 1982, the first year after helmet law reenactment. This reduction occurred even though motorcycle registrations increased 6 percent during the year. The helmet use rate increased from roughly 50 percent to 96 percent.
- In the past three years, six States (Oregon, Nebraska, Texas, Washington, California and Maryland) have enacted helmet use laws that govern all motorcycle occupants. In Oregon, there was a 33 percent reduction in motorcycle fatalities the year after its helmet law was reenacted; Nebraska experienced a 32 percent reduction in the first year of its law; Texas experienced a 23 percent reduction; and Washington experienced a 15 percent reduction. It is too early to determine the life saving benefits resulting from California's law which became effective January 1, 1992 and Maryland's law which becomes effective October 1, 1992.

Cost Savings

- Failure to use motorcycle helmets places a large financial burden on society and individual States. A number of studies have been conducted that compare hospital costs for helmeted and non-helmeted motorcyclists involved in traffic crashes. They have found unhelmeted riders involved in crashes are less likely to have insurance and more likely to have higher hospital costs than helmeted riders involved in similar crashes.
- In Louisiana, the average cost per motorcycle crash decreased by 48 percent from 1981 to 1982, the first year of its helmet use law. Dramatic differences were found in hospital stay lengths between helmeted and non-helmeted riders.
- Studies show that the cost of helmeted vs. non-helmeted motorcyclists who were treated at various hospitals across the country range from \$2,438 to \$13,368 for helmeted motorcyclists and \$3,368 to \$30,365 for unhelmeted riders.
- NHTSA estimates that \$2.3 billion was saved between 1984 through 1990 because of the use of helmets. An additional \$2.54 billion would have been saved if all motorcyclists had worn helmets.

Who Supports Motorcycle Helmet Use Laws?

The following organizations have publicly supported motorcycle helmet use laws:

- Advocates for Highway and Auto Safety
- American Academy of Family Physicians
- American Academy of Orthopedic Surgeons

- American Academy of Pediatrics
- American Association of Critical-Care Nurses
- American Associations of Neurological Surgeons
- American Association of Occupational Health Nurses
- American Coalition for Traffic Safety, Inc.
- American College of Emergency Physicians
- American College of Preventive Medicine
- American College of Surgeons
- American Hospital Association
- American Insurance Association
- American Medical Association
- American Nurses Association
- American Public Health Association
- American Trauma Society
- Association for the Advancement of Automotive Medicine
- Child Welfare League
- Congress of Neurological Surgeons
- Consumer Federation of America
- Emergency Nurses Association
- Epilepsy Foundation of America
- GEICO
- General Federation of Women's Clubs
- Motorcycle Industry Council
- Motor Vehicle Manufacturers Association
- National Association of Public Hospitals
- National Association of Emergency Medical Technicians
- National Association of State EMS Directors
- National Council on the Handicapped
- National Head Injury Foundation
- National Safety Council
- National Safe Kids Campaign, Inc.
- Snell Memorial Foundation
- Students Against Driving Drunk
- Traffic Safety Now, Inc.

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991

ISTEA provides incentive grants in Fiscal Years 1992-94 for those States that have in effect a motorcycle helmet law applicable to all riders and a safety belt use law applicable to front-seat occupants in passenger vehicles. In the first year a State must have both laws to qualify. In the two subsequent years, it must also achieve certain compliance levels.

If a State does not have both laws by October 1, 1993, 1.5 percent of its principal Federal-aid highway funds for Fiscal year 1995 will be transferred to its Section 402 highway safety program. If a State does not have both laws in effect at any time in Fiscal Year 1995 or thereafter, 3 percent of these funds will be transferred to the Section 402 highway safety program.

Additional Sources of Information

The Effect of Helmet Law Repeal on Motorcycle Fatalities. A Four Year Update. NHTSA Research Notes, Sept. 1989. This report estimates fatalities increased about 20 percent in States that repealed helmet use laws.

The Effectiveness of Motorcycle Helmets in Preventing Fatalities. U.S. Dept. of Transportation, Report No. DOT HS 807 416, March 1989. This publication presents the data and analysis used to estimate that motorcycle helmets are 29 percent effective in preventing fatalities.

Impact of Re-Enactment of the Motorcycle Helmet Law in Louisiana. U.S. Dept. of Transportation, Report No. DOT HS 806 760, December 1984. This report presents the study and comparison of injury severity, fatalities, and financial impact of helmeted versus non-helmeted motorcycle operators and passengers in Louisiana. The repeal and subsequent re-enactment of

Louisiana's helmet use law offers unique and valuable data to conduct this systematic study.

Motorcycle Accident Cause Factors and Identification of Countermeasures. Volume 1: Technical Report. University of Southern California, Los Angeles, U.S. Dept. of Transportation, Report No. DOT HS 805 862, January 1981. This report presents the data and findings from the on-scene, in-depth investigations of 900 motorcycle crashes and the analysis of 3600 traffic accident reports of motorcycle crashes in the same study area.

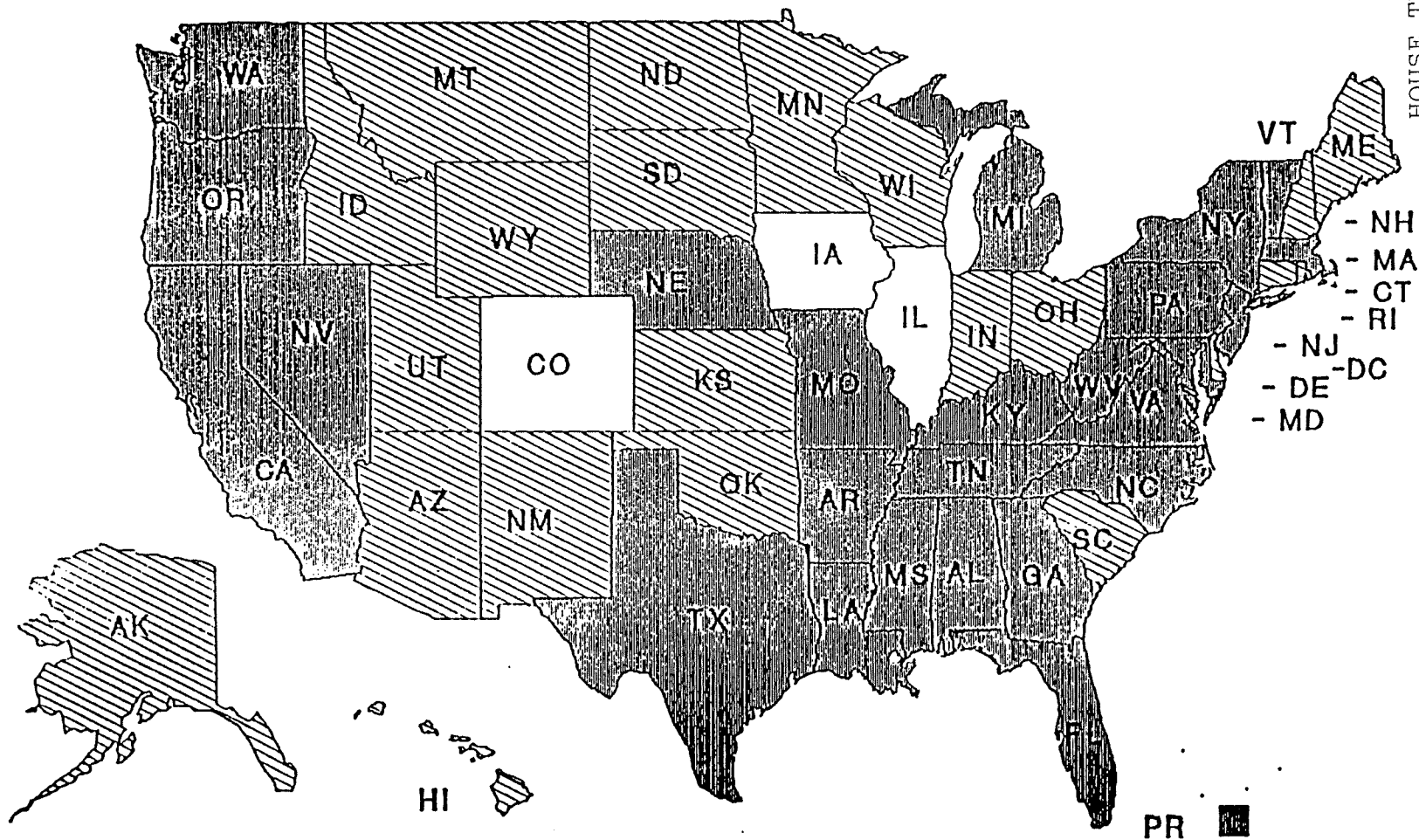
Highway Safety: Motorcycle Helmet Laws Save Lives and Reduce Costs to Society. U.S. General Accounting Office, Report to Congress, July 1991. This report evaluates studies on motorcycle helmet laws. The report summarizes each study's findings on (1) the effectiveness of helmets in preventing deaths and serious injuries, (2) the effect of helmet laws on helmet use and fatality rates, and (3) the cost that society incurs when motorcyclists who do not wear helmets are involved in crashes. All studies comparing helmeted riders to non-helmeted riders found that all helmeted riders had a lower fatality rate.

These reports and additional information are available through your State Office of Highway Safety, the NHTSA Regional Office serving your state, or from NHTSA Headquarters, Traffic Safety Programs, NTS-23, 400 7th Street., S.W., Washington, D.C. 20590, (202) 366-1739.

MOTORCYCLE HELMET USE LAWS

As of October 1992

HOUSE TRANSPORTATION
Attachment 1-10
2/10/93



Helmets Required By:



All Riders (PR + DC)



Specific Ages



No Law

KANSAS
MOTORCYCLE FACT SHEET
FOR THE YEAR 1991

There were 1,195 motorcycle crashes

- * 3.7% were fatal crashes
 - forty-nine motorcyclists died
- * 83% were injury crashes
 - 1,132 cyclists were injured
 - * 29% of the injury crashes resulted in serious or incapacitating injuries to 322 cyclists
- * 13.3% were Property Damage Only (PDO) crashes
 - 276 cyclists were involved

These crashes amount to 3.3 crashes per day -
resulting in -
3.1 injuries per day,
and
one fatality every 7.5 days

The cost of all crashes, including wages lost, medical expenses, insurance administration costs and property damage is \$30.7 million

Eight (16%) of the 49 fatalities were wearing helmets

237 (21%) of the 1,132 injured motorcyclists were wearing helmets

Motorcycle registration is approximately 2.2% of all registered motor vehicles in Kansas, but -

Motorcycle fatalities represent twelve percent (a disproportionate amount) of the 409 motor vehicle fatalities in Kansas 1991

The fatality rate of drivers killed wearing helmets is 2.84 per 100, non-helmeted fatality rate is 3.47 per 100

** Based on incomplete preliminary 1992 data, it appears **
** a lesser number of motorcyclists died, however as of **
** February 8th, we cannot provide any firm statistics. **
** **
** **
** **
** **



Department of Health and Environment

Robert C. Harder, Secretary

Reply to:

Testimony presented to
House Transportation Committee

by

The Kansas Department of Health and Environment

House Bill 2175

HB 2175 proposes to expand KSA 8-1598, to require that people of all ages must wear a helmet when operating or riding upon a motorcycle or a motorized bicycle. Kansas law currently requires only motorcyclists under the age of 18 to wear helmets.

Extent of the Problem

The overall number of motorcycle accidents is low, but almost all of these collisions result in injury. Motorcycle crashes accounted for 2% of statewide vehicle crashes in Kansas, but those crashes accounted for more than 12% of the statewide fatalities, a disproportionate amount. The majority of injured bikers and motorcycle crashes have occurred to riders over the age of 19 years. According to data from the Kansas Department of Transportation, of the 409 reported motor vehicle fatalities in Kansas in 1991, there were 49 rider fatalities. Forty-five fatalities (92%) occurred in the over age 19 age group. Of those killed in 1991, 14.2% were known to be wearing helmets; 65% were not.

Head injury is the leading cause of death in motorcycle crashes. An unhelmeted motorcyclist is 40% more likely to incur a fatal head injury than a helmeted motorcyclist.

Kansas History

In 1966, the Highway Safety Act was passed requiring all states to pass a helmet use law in order to qualify for safety and highway funds. By 1975, the District of Columbia and 47 states required all motorcyclists to use helmets and there was evidence that there was compliance. In 1976, Congressional financial pressure was lifted and within 2 years, 26 states had rescinded or weakened their laws. Kansas was among those states who repealed their helmet use law. The result was predictable and overwhelming. The repeal or weakening of motorcyclist helmet laws was followed by an almost 40% increase nationally in the numbers of fatally injured motorcyclists. In Kansas, the fatality rate increased with repeal from 15 deaths per 1,000 motorcycle crashes to 25 deaths per 1,000 motorcycle crashes. A study conducted at the University of Southern California concluded that helmet use was the single most important factor governing survival in motorcycle crashes.

HOUSE TRANSPORTATION
Attachment 2-1
2/10/93

Effect of Helmet Laws

Helmet use laws governing all motorcycle occupants significantly increase helmet use and are easily enforced because of the occupant's high visibility. The National Highway Traffic Safety Administration (NHTSA) conducted a helmet survey in 1986 that compared helmet usage in seven cities with mandatory helmet laws to helmet usage in 12 cities with no or limited helmet use laws. Surveyors observed a helmet usage rate of essentially 100% in cities with helmet use laws governing all motorcycle occupants as compared to the range of 34 to 54% at cities with no helmet use laws or laws governing only minors. Data on crashes in states where only minors are required to wear helmets show that fewer than 40% of the fatally injured minors are wearing helmets even though the law requires them to do so. This is attributed to the fact that helmet laws governing only minors are extremely difficult to enforce.

Motorcycle helmet laws are an intervention that have been proven effective in preventing unnecessary injuries and fatalities. In Oregon, there was a 33% reduction in motorcycle fatalities the year after its helmet law was reenacted; Nebraska experienced a 32% reduction in the first year of its law; and Texas experienced a 23% reduction. In Louisiana, the collision rate for motorcycles significantly decreased by 48% from 1981 when no mandatory helmet law was required until 1987 when mandatory helmet legislation was enacted.

Cost to Kansans

If motorcyclists who choose not to wear helmets were only hurting themselves, the question of mandatory helmet laws might not be such an issue for public concern. However, helmet use is an economic issue as well as a personal safety issue. The experience of the State of Louisiana is an example of the benefits to be gained by enacting a universal helmet law. This state enacted a mandatory helmet use law in 1981. An analysis revealed that following enactment, fatalities fell from 3.63 per 100 collisions to 1.07 per 100 collisions. Crashes resulting in reportable serious injuries fell from 84% to 74%. They also benefited by a substantial reduction in the average medical cost per injury: \$2,071 before enactment, \$835.00 after enactment.

A study reported in the October 1990 issue of The Journal of Trauma reported that the repeal in Kansas cost almost \$600,000 per year. Kansas is still losing \$744,000 per year in hospital costs (1989 dollars) without a motorcycle helmet law or a total of \$9.7 million since 1976. An increase in medical costs was noted in a recent study as a result of the greater number of head injuries that increased hospital days, Intensive Care Unit (ICU) days and days of disability. In Kansas, the medical cost for non-helmeted riders was 189.3% higher than for helmeted riders. More recently, two hospitals in Wichita compiled data from their trauma registry that indicated that 112 motorcycle crash injury victims were treated for major trauma in 1991. The cost for acute care hospital care for these victims was over \$1.2 million; 78% of them were not wearing a helmet. Clearly, the public has an interest in minimizing the resources directly involved in motorcycle crashes.

Ineffectiveness of Rider Education

Despite the strong advocacy by the various motorcycle organizations for educational efforts and against legislation, this approach has proved to be a dismal failure. A course developed in cooperation with the American Motorcyclists' Association, called the Motorcycle Operator Skill Test II was used in California. This program was designed to increase the awareness of helmet use and improve the individual's ability to ride the motorcycle beyond any standard

education a rider might have. In other words, it was developed as the ultimate education course. The participants in this course had 18% more crashes in the first year than did the non-participants. This group also received 9% more traffic convictions according to a 1988 status report. A similar training program developed in New York had a similar outcome.

Rider Impairment

Helmets do not cause collisions. According to the October 1990 Journal of Trauma, even full facial helmet coverage allows almost complete peripheral vision of 180 degrees. This is slightly reduced from the normal 200 degrees, but is not a functionally significant impairment. The question about hearing is a bit different. The sound of an automobile approaching from the side or rear must compete with the sound of the motorcycle engine. Both the wind and motorcycle engine, however are louder than that of the approaching car. The sound of the approaching car is obscured by this additional sound. Helmet use reduces all sound levels equally. It does not differentially reduce the sound of approaching cars. Therefore, the ability to detect approaching vehicles is not impaired by helmet use.

The question of injuries induced by the extra weight of the helmet on the head to the cervical spine is answered by four studies that demonstrate decreased cervical spine injury when helmets are worn.

Summary

Effective comprehensive programs encompassing motorcycle helmet usage, rider education, motorcycle operator licensing, and the responsible use of alcohol will have the greatest positive effect on motorcycle safety. Motorcycle helmets offer motorcyclists involved in traffic crashes the best protection from head injury. The passage of helmet use laws governing all motorcycle occupants is the most effective method of ensuring that all motorcyclists wear helmets.

Testimony presented by:

Jan Stegelman
Injury Prevention Coordinator
Office of Chronic Disease
and Health Promotion
February 10, 1993

STATEMENT SUPPORTING HOUSE BILL NO. 2175
by Paul W. Matthews, Senior Regional Director
Highway Users Federation, on behalf of the
Kansas Highway Users Conference

Mr. Chairman and Members of the Committee on Transportation:

The members of the Kansas Highway Users Conference, a coalition of organizations dedicated to the sound advancement of highway transportation and traffic safety, support H. B. 2175, which only changes six words in Kansas statutes, eliminating the words "under the age of 18 years."

Section 1031 of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) requires States to have motorcycle helmet laws for all operators and riders in effect by the end of fiscal year 1993, meaning September 30, 1993. If a State fails to enact such a provision, the ISTEA requires the U. S. Secretary of Transportation to transfer 1.5 percent of certain highway construction funds in fiscal year 1995 and 3 percent in years thereafter to safety-related programs.

The Kansas Department of Transportation estimates that failure to pass H. B. 2175 in this legislative session will result in \$2 million being transferred from badly-needed highway construction funds to highway safety in FY '95 and \$4 million from highway construction funds in FY '96 and each year thereafter that a helmet law for all operators and riders is not in effect.

Members of the Kansas Highway Users Conference support the orderly completion of the Comprehensive Highway Construction Law adopted in 1989 and feel such sanctions on funding would not be in the best interest of Kansas highway users. Kansas would also secure a traffic safety benefit by having all motorcycle operators and riders wearing a helmet which complies with minimum performance requirements.

We urge you to vote favorably on H. B. 2175.

HOUSE TRANSPORTATION
Attachment 3
2/10/93

**TESTIMONY PRESENTED TO
KANSAS
SENATE TRANSPORTATION AND
UTILITIES COMMITTEE
SB 1**



**TESTIMONY PRESENTED BY
DAVID MANN
PRESIDENT
ABATE OF KANSAS INC.**

HOUSE TRANSPORTATION
Attachment 4-1
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ABATE OF KANSAS

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Mr. Chairman, Ladies & Gentlemen of the Committee. Thank you for the opportunity to testify in opposition to S. B. 1.

This is the twenty-seventh year since discussion and debate started on this issue. Kansas passed its original mandatory helmet law effective 7-1-67 under the threat of federal blackmail. The law was repealed effective 7-1-70 for age 21 and over, it was reinstated for all ages effective 7-1-72, repealed for age 16 and over 7-1-76, then amended for those under 18 years of age effective 7-1-79. In 1983, 1985, 1991 and again in 1992 bills were introduced to revise the existing law to include Mandatory Helmet Use for all motorcyclists and here we are again in 1993.

ABATE of Kansas strongly supports comprehensive motorcycle safety programs and encourages all motorcyclists to wear appropriate protective gear and ride responsibly. However, we do feel adults should be able to evaluate personal safety issues for themselves free from governmental interferences; just as states should determine what is best for themselves without being coerced by the Federal Government.

Lawmakers in six states now agree: The Federal Government has no business trying to blackmail them into passing mandatory helmet laws.

Over the past several months legislators in Illinois, Rhode Island, Tennessee, Indiana, North Dakota and Colorado have decided to oppose the federal government's attempts to coerce them into passing helmet laws. Wyoming has tabled any action on a helmet bill until 1994 and Minnesota's Governor has spoken out against any mandated helmet legislation.

Since 1991 when the measure was passed, only one state - Maryland - has complied by passing a law requiring helmet use by all street motorcyclists however there is soon to be a bill introduced to repeal their law. However, a number of other states are considering such laws, thus our reason for being here to offer testimony on this issue.

Representatives in Illinois, Rhode Island and Tennessee have approved resolutions calling the United States Congress to abandon its federal helmet blackmail plan indicating their resentment of the federal intrusion into their state affairs. Lawmakers in South Carolina and Wisconsin are considering similar resolutions.

Last year there were bills in both the Federal Senate and House to repeal the penalty provision of Section 153 of Title 23 United States Code. On February 3, 1993, Congresswoman Olympia Snowe (Maine) and 44 co-sponsors introduced HR799. Senator Durenberger (Minnesota) and 18 co-sponsors introduced S295 calling for the repeal of the penalty provisions of Section 153 of Title 23 United States Code. It appears at least one Kansas Representative is going to join as a Co-Sponsor on HR799 and one Kansas Senator who will vote for repeal if it comes to a floor vote.

Is legislation by mandate a giant step backwards? When the colonies sent their Declaration of Independence to the King of England the following two lines were included: "He has erected a multitude of new offices, and sent hither swarms of officers to harass our people and eat out their substance." "For suspending our own legislature, and declaring themselves invested with power to legislate for us in all cases whatsoever."

Where does the Federal Government get its money to dole out to the states with their mandates and strings attached? They come from us, the citizens of this state in the form of things like 11.5 cents a gallon gas tax, excise taxes, etc., **WE ARE BEING BLACKMAILED WITH OUR OWN MONEY. FEDERAL FUNDS ARE OUR DOLLARS!!!**

The Second International Congress on Automobile Safety stated, the automobile driver is at fault in more than 70% of all car/motorcycle conflicts; perhaps it's time to spend some money in public awareness, drivers education and safety issues.

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Let's look at the Kansas Motorcycle Fact Sheet for the Year 1991 from the Kansas DOT. The first thing we would like to request you do is compare the Report from 1976 to that of 1991. (TABLES 1 AND 2) It certainly appears to us that the method of reporting used 27 years ago was much more clear and concise in giving factual information. If you will check the attached reports and graphs you will find that the numbers change from year to year and 1991 was not a good year for motorcyclists in Kansas; however there is no indication that full mandatory helmet use would have had any bearing on these figures. Using 1989 as an example, there were 1272 accidents with 1128 injuries of which 377 were incapacitating (requiring admission to a hospital), of those 84 were helmeted and 71 were not wearing a helmet. There were 27 fatalities of which 6 were wearing a helmet and 4 were not wearing a helmet, the others were shown as helmet use unknown. From the facts given in the 1991 Report, we don't have that type of information. If the fatality rates are correct 3.47 minus 2.84 per 100 is a difference of .63 per 100 fatalities.

According to 1991 figures as compiled by the Motorcycle Safety Foundation in the 1992 MIC Motorcycle Statistical Annual the national average of accidents per 10,000 registrations in states requiring full helmet use there were 308.25; in states requiring partial helmet use there were 235.81; in states with no helmet requirement there were 206.88. Fatalities per 10,000 registrations in states requiring full helmet use were 8.51; in states requiring partial helmet use there were 8.0 and in states with no helmet requirement there were 5.36. If a helmet's function is to reduce injuries and fatalities then logic would dictate that states with helmet use would have dramatically different numbers. **THE FACT THAT HELMET LAW STATES HAVE SLIGHTLY HIGHER RATES IS NOT THE ISSUE — IT'S THAT THEY DON'T HAVE LOWER RATES!!!**

Nebraska revised their helmet law to include all riders effective January 1, 1989 and from their report comparing 1988-1989 some interesting facts come to light regarding the Louisiana study. The following is from the above noted Nebraska study. "The average length of hospital stay for injured and transported cyclists was similar each year. An evaluation of Louisiana's helmet use law showed a decrease in length of stay, but that study included patients discharged from the emergency department. When hospital stays were analyzed only for admitted patients in the Louisiana study, as in the present study, the length of stay was no different." It appears repeal didn't hardly cost Kansas the purported \$9.7 million in the past 16 years as stated in this Louisiana study.

"There is no statistically significant difference in average hospital charges to the admitted patients. Although this also appears to contradict the Louisiana study, which showed a decrease in medical care costs, that study included long-term medical costs in the analysis. When only emergency department and acute hospital costs were analyzed, as in our study, the average costs were similar. Again, this might indicate that the costs of acute care for severely injured motorcyclists were similar whether a severe head injury is present or not." (Please also note 6 state comparison Motorcycle Crashers per registered motorcycles showing Nebraska has higher rates than the other five states without full helmet laws, Attachment 1.)

In 1989, the first year of the mandatory helmet law in Nebraska, there were 13 fatalities. In 1991 they had 15 fatalities this is with Nebraska's registrations being less than 50% of Kansas registrations.

A study conducted by Dr. Jane Stutts of the University of North Carolina's Highway Safety Research Center, was presented at the Association for the Advancement of Automotive Medicine's annual conference in Toronto. And it clearly shows that motorcyclists are just like everyone else in society - no more responsible and no more irresponsible.

Stutts researched the medical costs for accident victims taken to eight trauma centers in North Carolina between 1987 and 1990. During that period, she noted there were 708 motorcyclists requiring treatment at those facilities, and 8,961 victims of other types of motor-vehicle accidents.

The average cost for treatment of a motorcyclist was \$15,801.00. Interestingly, though, the average treatment cost for victims of other types of motor-vehicle accidents was \$17,892.00, or 2,000.00 more! Various reports have noted that a large percentage of Americans don't have, and can't afford, medical insurance. The North Carolina study confirms that. Dr. Stutts found that of all the motorcyclists taken to the eight trauma

centers, 49.4% had their medical costs covered by insurance. However, the insured percentage 50.4% was no higher for other motor-vehicle accidents.

Almost 34 million people, or close to 14% of Americans, go without health care protection at any given time. When looked at over time, many more people are vulnerable. For example, during a recent 28 month period, 63 million people lacked any health insurance all or part of that time.

The 1990 International Motorcycle Safety Conference at Disney World in Orlando, Florida, which was organized by the Motorcycle Safety Foundation, a division of Motorcycle Industry Council brought some interesting facts to the forefront. For example: A study of motorcycle accident victims and survivors by the heads of the Australian Adelaide's Craniofacial Unit, showed that riders sustaining a facial impact while wearing a full-face helmet were more likely to be killed than riders wearing not helmet at all.

According to a study by Doctors Rodney D. Cooter and David J. David, "the hospitalized group of riders had high scores of facial fracturing. It surprised us that when motorcyclists suffered a lot of facial fracturing, they often had little or no brain damage. It seemed their faces had absorbed most of the impact."

Careful medical examination of the deceased riders, Cooter and David said, indicated that the impact to the helmet's face bar transmitted such force to the helmet's chin strap that the victim's jawbones were forced into the base of the skull hard enough to cause a fracture.

Dr. Harry Hurt, author of the University of Southern California accident study lent support to Cooter and David's study. In a report given at the conference, Hurt noted impact to the chin bar of some full-faced helmets "produces an action similar to a cookie-cutter, with injury rather than protection." Furthermore, Hurt concluded that severe injury and death caused by accidents in which the head is subject to extreme rotational force "can not be excluded by any helmet in many accident conditions." Hurt also noted that many head injuries resulting in deaths among motorcycle riders were caused by the force of severe chest impacts on the spine and cranium and would not be reduced by wearing a helmet.

Motorcycle Dealers News and R. L. Polk 1990: Reflecting the economic impact of helmet laws, new motorcycles sales dropped 40% in Nebraska and 35% in Oregon in 1989 the year following their helmet law.

The 1991 estimated annual economic value of the motorcycle retail marketplace in Kansas was \$566,900,000.00, this includes retail sales of motorcycles, scooters and ATV's (new and used) and parts and accessories, dealers servicing, product advertising, vehicle financing charges, insurance premiums, dealer personnel salaries, states sales and dealer personal income taxes and vehicle registration fees. Revenues from industry publications, corporate income taxes, personal income tax from non-dealer salaries, motorcycle and after-market manufacture and distributor personnel salaries and advertising and special events attendance are not included.

There is no logical reason to not expect similar decreases to take place in Kansas as did in Nebraska and Oregon. Using the lesser figure or 35% this equals \$23,455,000.00 lost in Kansas revenue and the taxes the first year alone; plus the revenue lost from the additional services listed above. It could bring about the loss of 226 jobs at an additional cost to the State of \$53,110.00 in Unemployment Compensation paid out per week.

Kansas has a total estimated motorcycle population of 64,700. If we were to assume that 50% of those already owned helmets that would mean 32,350 Kansans would be required to purchase a helmet from an imported manufacturer (since only custom and racing helmets are currently manufactured in the United States). Kansans would be required to spend approximately \$4,852,500.00 of their hard earned American dollars on imported products. This is using an average cost of \$150.00 since motorcycle helmets range in price from approximately \$79.00 to \$350.00. Of course, most motorcyclists would purchase two helmets in the event they had a passenger which would double this figure.

This proposed legislation could create a nightmare for law enforcement trying to ascertain what is a DOT approved helmet and what is not. If you must mandate something make it Rider Education for the novice rider to receive their motorcycle endorsement. This will require some major overhauling of the Kansas approved Rider Education that has been self funded by Kansas motorcyclists since 1982.

Motorcyclists have a vested interest in their own safety. Ultimately, the issue is not the efficacy of helmet use but a question of whether adults should be free to make personal decisions regarding their own safety. A recent Motorcycle Industry Council survey identified the average motorcyclist as being 32 1/2 years of age, married, college educated, with an income slightly in excess of \$33,000.00 per year. These demographics define the type of individual who is capable of evaluating personal safety issues for themselves.

We urge you not to support SB 1 and would request you to introduce a Resolution letting the Federal Government know that the State of Kansas doesn't need them inflicting themselves on our state sovereignty. Thank the chance to make my views know today and I will stand questions.

Respectfully

David Mann

TABLE 1

MOTORCYCLE FATALITIES 1976

	JAN.1-JUN 30			JULY 1-DEC. 30			
	HELMET WORN	NO HELMET	UNKNOWN	HELMET WORN	NO HELMET	UNKNOWN	TOTAL
Head Injury % of Total	4 28.57%	1 7.14%	1 7.14%	5 16.67%	6 20%	4 13.33%	21 47.73%
Neck Injury % of Total	5 35.72%	0	1 7.14%	1 3.33%	0	0	7 15.91%
Total Head & Neck Injuries % of Total	9 64.29%	1 7.14%	2 14.28%	6 20%	6 20%	4 13.33%	28 63.64%
Other Injuries % of total	2 14.28%	0	0	1 3.33%	3 10%	2 6.67%	8 18.18%
Both Head & Other Injury	0	0	0	1 3.33%	3 10%	0	4 9.09%
Cause of Death Unknown	0	0	0	3 10%	1 3.33%	0	4 9.09%
Total % of Total Fatalities	11 78.57%	1 7.14%	2 14.29%	11 36.76%	13 43.33%	6 20%	44

Of the 21 head injury fatalities 9 or 40.86% were with a helmet, 7 or 33.3% were without a helmet and 5 or 23.81% it was not known if a helmet was worn.

There were no neck injury fatalities without a helmet, only 1 where it was not known if a helmet was worn, and 6 or 85.71% of the neck injuries were with a helmet.

There was 28 head/neck injury fatalities combined, which is 6.64% of the total fatalities. 53.57% of these were with a helmet on—25% of these were with no helmet and in 21.43% of them it was not know if a helmet was worn.

34.09% of all fatalities were head/neck injury fatalities with a helmet—15.9% were with no helmet—13.64% it was not known if a helmet was worn, and 36.36% were caused by multiple injuries or other than head/neck injuries.

TABLE 2

REPORT DA 2

DATA ARRAY OF SELECTED DATA ELEMENTS FOR SELECTED ACCIDENTS

DATE RUN: 10-23-92

TIME- 1-1-91 THRU 12-31-91
 LOCN- MC DR.-HELMET USAGE
 CHR3-

COLS- DMCHLM
 ROWS- DINJSEV

REQD REQ. NO. 0001
 BY: VIALLE
 PLANNING 1023

* HELMET, M/C DRIVER/PSGR																		*TOTAL	* PC
INJURY SEVERITY	*NAVAL	NWORN	WNSTR	WNDAM	WDAM	UNK	INVAL												
NONE	0	33	0	30	0	98	0										161	15	
FATAL	0	18	0	8	0	14	0										40	4	
INCAP	0	87	0	53	0	111	0										251	23	
N-INC	0	133	0	107	0	237	0										477	44	
POSS	0	40	0	32	0	71	0										143	13	
INVAL	0	0	0	0	0	0	1										1	0	
TOTAL	0	311	0	230	0	531	1										1073	100	
PERCENT	0	29	0	21	0	49	0										100		

		NO. OF ACCIDENTS		
		1053		
	VEHICLES	1618		
	DRIVERS	1618		
	PASSENGERS	502		
	PEDESTRIANS	8		
	PEDALCYCLISTS	3		
	COUNT-PED-PED	11		

HOUSE TRANSPORTATION
 Attachment 4-7
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REPORT DA 2

DATA ARRAY OF SELECTED DATA ELEMENTS FOR SELECTED ACCIDENTS

DATE RUN: 10-23-92

TIME- 1-1-91 THRU 12-31-91
 LOCN- MC PASS.-HELMET USAGE
 CHR3-

COLS- PAMCHLM
 ROWS- PAINJSEV

REQD REQ. NO. 0001
 BY: VIALLE
 PLANNING 1023

* HELMET, M/C DRIVER/PSGR																		*TOTAL	* PC
INJURY SEVERITY	*NAVAL	NWORN	WNSTR	WNDAM	WDAM	UNK	INVAL												
NONE	0	13	0	4	0	11	4										32	16	
FATAL	0	6	0	0	0	3	0										9	5	
INCAP	0	24	0	7	0	17	2										50	25	
N-INC	0	44	0	16	0	29	2										91	46	
POSS	0	6	0	5	0	5	2										18	9	
TOTAL	0	93	0	32	0	65	10										200	100	
PERCENT	0	47	0	16	0	33	5										100		

		NO. OF ACCIDENTS		
		195		
	VEHICLES	281		
	DRIVERS	281		
	PASSENGERS	256		
	PEDESTRIANS	0		
	PEDALCYCLISTS	0		
	COUNT-PED-PED	0		

ATTACHMENT 1
Motocycle Crashes Per Registered Motorcycle
In Nebraska and Comparison States

STATE	HELMET LAW	STATISTIC	1984	1985	1986	1987	1988	1989	
NEBRASKA	NONE 1984-88 ALL RL, 1989	CRASHES	1,274	1,239	970	979	857	539	
		REGISTRATIONS	46,532	42,548	33,077	31,770	29,088	23,560	
		C/R*	274	291	293	308	295	229	
IOWA	NONE	CRASHES	2,589	2,040	1,905	1,905	1,800	1,500	
		REGISTRATIONS	183,687	188,277	172,444	163,521	145,967	139,038	
		C/R*	141	108	110	116	123	108	
KANSAS	UNDER 18	CRASHES	1,835	1,681	1,644	1,534	1,274	1,189	
		REGISTRATIONS	83,744	78,739	73,890	69,532	64,724	61,674	
		C/R*	219	213	222	221	197	194	
NORTH DAKOTA	UNDER 18	CRASHES	386	380	286	285	234	186	
		REGISTRATIONS	31,480	30,596	28,152	32,152	23,978	21,674	
		C/R*	123	124	102	89	98	86	
OKLAHOMA	UNDER 18	CRASHES	2,350	2,279	1,917	1,626	1,493	1,315	
		REGISTRATIONS	150,963	104,457	68,093	67,802	64,056	60,863	
		C/R*	222	218	282	240	233	216	
SOUTH DAKOTA	UNDER 18	CRASHES	559	551	475	399	424	377	
		REGISTRATIONS	38,956	37,905	36,036	33,800	31,421	29,942	
		C/R*	143	145	132	118	135	126	

*C=CRASHES/R=REGISTRATIONS PER 10,000

Testimony for
The Kansas House Transportation and Utilities Committee
concerning

HB 2175, motorcycle helmet law

on February 10, 1993

from

Mr. Kelly Wendeln
919 S. Highland
Chanute, KS 66720

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Pro-helmet law exaggerated claims

Here is a good example of the kind of false information motorcyclists have to confront. This editorial claims, "...motorcyclist deaths in Kansas have tripled." The Kansas D.O.T. statistics on the following page clearly refute this. There is no way motorcyclist deaths in Kansas have tripled.

Editorials/Comments

2C

The Wichita Eagle and The Beacon Saturday, January 13, 1979

Helmet Law and Cycle Deaths

→ The latest report from the National Highway Traffic Safety Administration, showing that motorcyclist deaths in Kansas have tripled since the mandatory helmet law was gutted, should spur our state legislators to fix Kansas' "halfway" helmet law. Right now, only riders under 16 need wear the helmets.

Volumes of statistics on cycle injury and death rates can be compiled and offered as evidence by both those in favor of helmet laws and those who vehemently oppose them. But there are a few things that stand out, plain and simple.

One is that, no matter whose fault it is, the motorcycle rider who has an accident in almost any traffic situation is the best candidate for being hurt or killed. He or she has almost no protection from other vehicles or fixed objects. It is the human body versus whatever it collides with, and usually it is the human body that sustains the damage.

A lot of people have talked around it for a long time, but it should be clear: Motorcycles are inherently more dangerous to their operators in a crash than almost any vehicle imaginable. Even with helmets, heavy gloves and boots, and other protective clothing, cyclists are more likely to be injured or killed in accidents. But that is no reason to discard the few safety items that improve their chances of surviving or escaping serious harm.

The fact is, helmets are the best way to protect heads that may be thrown against cars, curbs, pavement or whatever, in a cycle

accident. And it doesn't matter what the age of the head is: A 42-year-old head will suffer just as badly as a 15-year-old head. That's why the under-16 helmet law doesn't make much sense — it offers only protection to the young riders.

As for the argument that each rider has the right to expose himself to harm at his own discretion, his accident isn't his alone. We all pay for higher hospitalization costs and for the community ambulances and emergency personnel who must rush to the scene of the mishap.

And the die-hard cyclists who fight helmets on the principle of individual freedoms should consider for a moment the kind of psychological suffering and guilt another motorist might have to carry around for years after being involved in a collision where a helmet could have spelled the difference between life and death.

Generally, we don't like to see the federal government using threats of cutting off money to the states to see that its wishes are carried out. But a renewed effort in Congress to allow rules that would curtail up to 10 percent of federal highway monies to states without effective cycle helmet laws may be the only way to persuade states to do the right thing.

With or without that threat, the Kansas Legislature needs to get busy and do away with the "halfway helmet" law that protects only people under 16. In its place there must be a helmet law that promotes safety for all motorcyclists.

HOUSE TRANSPORTATION
Attachment 5-2
2/10/93

Kansas Motorcycle Fatalities

Information on the following page from the Kansas Department of Transportation exposes the blatant lie ... "motorcycle helmet deaths in Kansas have tripled since the mandatory helmet law was gutted..." in 1976. Hitler once said if you tell a lie often enough, people will believe it.

In 1976 there were 47 Kansas motorcycle deaths. In 1977, there were 55 deaths, an increase of eight. And they call this tripled?

Kansas has passed a helmet law three times, 67, 72 and 79 and repealed it twice, 70 and 76. The following page will show that all five times the Kansas legislature has changed the helmet law, motorcycle deaths have gone up the following year, especially when Kansas has passed a helmet law. Helmet laws don't work and that is a fact.

I have found information from the Kansas DOT to be truthful. I cannot say the same for the federal DOT.

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Kansas Motorcycle Registration Percentages Change and Fatal
From

Safety Department, Accident Research Section
Kansas Department of Transportation
Topeka, Kansas

Page 3

	<u>Year</u>	<u>Registrations</u>		<u>Registration Percentage Change</u>	<u>Fatalities</u>
	1965	21,881	-	+35.8%	20
	1966	28,015	-	+28.0%	19
Helmet law passed effective July 1, 1967 for all ages.	- 1967	31,538	-	+12.6%	14
	1968	34,336	-	+8.9%	30
	1969	39,835	-	+16.0%	19
Helmet law repealed effective July 1, 1970 for over 21 yrs. of age.	- 1970	53,847	-	+35.2%	24
	1971	74,525	-	+38.4%	30
Helmet law passed effective July 1, 1972 for all ages.	- 1972	88,894	-	+19.3%	22
	1973	99,499	-	+11.9%	42
	1974	92,354	-	-7.2%	46
	1975	90,329	-	-2.2%	38
Helmet law repealed effective July 1, 1976 for over 16 yrs. of age.	- 1976	86,789	-	-3.9%	47
	1977	84,502	-	-2.6%	55
	1978	81,944	-	-3.0%	53
Helmet law age raised effective July 1, 1979 for under 18 yrs. old.	- 1979	87,511	-	+6.8%	50
	1980	92,218	-	+5.4%	57
	1981	110,677	-	+52.5%	69
	1982	106,566	-	-24.2%	52
	1983	83,587	-	-21.6%	39
	1984	83,744	-	+.1%	48
	1985	78,739	-	-6.0%	37
	1986	73,890	-	-6.2%	35
	1987	69,532	-	-5.9%	41
	1988	64,724	-	-6.9%	32
	1989	61,419	-	-5.1%	32

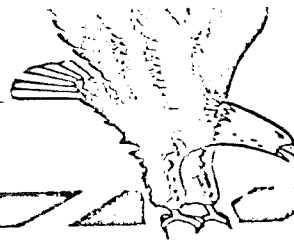
An insight into why the federal
DOT is pushing helmet laws

Twenty six years ago, high federal DOT official William Haddon told a California motorcycle magazine publisher a very revealing and stunning statement. He said that motorcyclists were selected as the precedent setters to drive the thin end of the wedge into a person's right to be free from forced self-protection. (See the following page)

Motorcyclists organized, fought the helmet law and got it repealed in 1976. Then the federal DOT went after a precedent setting forced self-protection law by pressuring American auto makers to lobby state legislatures to pass seatbelt laws.

The foot is now in the door. The main question is - where would you propose to draw the line on laws based on forced self-protection?

NEWS



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Long Beach, Cal. 90806 (213) 427-7433 (213) 427-7433
Telex Number 67-2474 Telex Number 24-3449

Aug. 11, 1972

Charles V. Simon

Dear Charles--

We are, of course, the DOT's chosen people. As I reported before, back in 1967, the DOT honcho told me that motorcyclists were selected as the precedent setters to drive the thin end of the wedge into a person's right to be free from forced self-protection. Now they seem to have backed off on that stance a little, but the idea of forcing us to wear helmets has become a fixation lasting through three presidents and two Secretaries of Transport.

I'll do what we can to help your fund raising. We are sending another \$100 which is small, I admit, but so would a thousand be, compared with what a supreme court case costs. I'll see what our readers will send.

Frankly, your Committee's appeals have not been strong enough or properly presented to get the space in the cycle publications that it deserves. The effort seems amateurish and so it doesn't incline people to think that you can win. I'm impressed with your legal talent, but how many people ~~xxx~~ know Oteri and how many would be turned off if they knew of his success at beating pot raps?

Enough for the negative side. In your favor, there is a trickle of new evidence to indicate that forced helmet wearing actually increases the risk of death. Have your lawyers surveyed the hospitals to find out how many neck and back injuries have been caused by helmet wearing? Here in Los Angeles, motorcycle injuries have climbed from 2nd to 6th to 3rd place as the cause of paralysis and most of these injured were wearing helmets. It seems to shoot down the major argument for forced helmet wearing.

In short, the tack we have found successful in beating helmet legislation here in Calif. has been that 1) Motorcycle riders are unanimously opposed to mandatory helmets, while only non-riders favor it. 2) Helmet safety is a tradeoff. It is just as dangerous as it is safe, maybe more so.

You probably won't get very far arguing for your personal liberty. But if you prove that you are being forced to take an added risk by the law, you might have a chance of overturning it. I hope that your lawyers realize that there is more to this than the principle of forced self-protection at stake. The impracticality of it is just as important and should not be overlooked.

Good luck,

Chuck Clayton, Publisher

HOUSE TRANSPORTATION

Attachment 5-6

2/10/93

An Ominous warning from
the U.S. Supreme Court

U.S. Supreme Court Chief Justice William Rehnquist recently said, "The United States could find itself in the midst of another civil war if government regulation of private lives isn't slowed."

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TESTIMONY BEFORE THE HOUSE AND SENATE
COMMITTEES ON TRANSPORTATION

My name is Donald Hoffman. I reside in Topeka, Kansas. I am a life-long resident of Kansas. I am a recreational operator of a motorcycle.

During the past 3 years I have operated a motorcycle over 30,000 miles. During 3/4 of those miles I have worn a DOT and SNELL approved helmet.

I am opposed to mandatory helmet wear requirements for adult operators and passengers.

I have never taken a formal motorcycle training course but I favor them for all riders as well as safety inspections for all vehicles operated on the states' highways including motorcycles.

The vast majority of riders that I know share my belief that government mandated helmet wear is improper. Like so many activities that Americans engage in, there are inherent risks in the operation of motorcycles; skiing, bicycling, scuba diving, rodeo, boating and water skiing, to name but a few. Many, if not all, of these activities occur regularly on public or publicly funded lands, waters and facilities.

Motorcycling by nature requires close mental and physical coordination and adaptation to diverse and changing circumstances. The mandatory requirement imposed by a helmet law unreasonably invades the safe operator's discretion in adopting to his or her operating environment. In short, there are times when I wouldn't want to be without a helmet and then there are times when the motorcycle and I are better off without the helmet. This call should be left to the licensed adult operator not the state. If other conduct of the motorcyclist is unsafe, there are plenty of regulations, ordinances and statutes on the books to enforce. The last thing our enforcement agencies need is yet another unpopular law to arrest citizens for.

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The "public burden" argument holds that motorcyclists once injured are likely to become the financial responsibility of the public or its charities and thus disproportionately consume these resources. Unfortunately such cases can be documented. Motorcyclists in this category, however, must be added to lists of victims engaged in other activities such as water-skiers, snow-skiers, football, baseball, rodeo performers, motorists, industrial workers, homemakers, and a host of others who become victims of catastrophic injuries in a myriad of ways. These are risks inherent in an inherently free society. Motorcyclists do not represent a disproportionately higher number of these victims than other lawful activities which are not subjected to this form of government intrusion.

Finally, on this subject I would simply observe that if Kansas enacts this legislation on the basis of "public burden", how can we rationalize its passage with the provisions of K.S.A. 40-3107. This legislation, a part of Kansas law since the enactment of our no-fault insurance law, allows owners of motorcycles and only motorcycles to waive Personal Injury Protection benefits required to be provided by Kansas liability insurance writers. On the one hand, our stated public policy would say that even the modest financial protection provided under no fault is not necessary for motorcyclists while on the other that only a mandatory helmet law can protect the public coffers from injured motorcyclists. These are contradictory.

I propose increased

1. education for riders
2. reasonable enforcement of existing traffic regulations
3. insurance requirements including increased PIP limits for all motorists
4. an advisory panel composed of riders, public health providers and traffic regulators to advise the legislative and executive branches of state government concerning motorcycling

within this state a form approved by the commissioner declaring that its motor vehicle liability policies, wherever issued, shall be deemed to provide the insurance required by K.S.A. 40-3107, and amendments thereto, when the vehicle is operated in this state. Any nonadmitted insurer may file such a form. A qualified self-insurer, approved by an agency of the state in which the vehicles are registered, may certify its compliance with K.S.A. 40-3107, and amendments thereto, on a form prescribed by the commissioner.

History: L. 1974, ch. 193, § 6; L. 1977, ch. 164, § 2; L. 1985, ch. 165, § 2; July 1.

Source or prior law:

L. 1973, ch. 198, § 6.

Law Review and Bar Journal References:

"No-Fault Automobile Insurance," Barry W. McCormick and Lynn Franklin Taylor II, 23 K.L.R. 141, 160, 171 (1974).

CASE ANNOTATIONS

1. History and content of section noted in holding no-fault insurance act constitutional. *Manzanares v. Bell*, 214 K. 589, 594, 522 P.2d 1291.

2. Applied; nonresident owner of motor vehicle operated on Kansas highways subject to act. *Mayer v. Harris*, 224 K. 231, 232, 579 P.2d 715.

3. Applied; uninsured motorist benefits statute, 40-284, applies only to Kansas registered or garaged vehicles. *Wilds v. Mid-Century Ins. Co.*, 231 K. 124, 125, 126, 642 P.2d 567 (1982).

40-3107. Motor vehicle liability insurance policies; required contents; exclusions of coverage. Every policy of motor vehicle liability insurance issued by an insurer to an owner residing in this state shall:

(a) Designate by explicit description or by appropriate reference of all vehicles with respect to which coverage is to be granted;

(b) insure the person named and any other person, as insured, using any such vehicle with the expressed or implied consent of such named insured, against loss from the liability imposed by law for damages arising out of the ownership, maintenance or use of any such vehicle within the United States of America or the Dominion of Canada, subject to the limits stated in such policy;

(c) state the name and address of the named insured, the coverage afforded by the policy, the premium charged and the policy period;

(d) contain an agreement or be endorsed that insurance is provided in accordance with the coverage required by this act;

(e) contain stated limits of liability, exclusive of interest and costs, with respect to each vehicle for which coverage is granted, not less than \$25,000 because of bodily injury to, or death of, one person in any one accident and, subject to the limit for one person, to a limit of not less than \$50,000 because of bodily injury to, or death of, two or more persons in any one accident, and to a limit of not less than \$10,000 because of harm to or destruction of property of others in any one accident;

(f) include personal injury protection benefits to the named insured, relatives residing in the same household, persons operating the insured motor vehicle, passengers in such motor vehicle and other persons struck by such motor vehicle and suffering bodily injury while not an occupant of a motor vehicle, not exceeding the limits prescribed for each of such benefits, for loss sustained by any such person as a result of injury. The owner of a motorcycle, as defined by K.S.A. 8-1438 and amendments thereto or motor-driven cycle, defined by K.S.A. 8-1439 and amendments thereto, who is the named insured, shall have the right to reject in writing insurance coverage including such benefits for injury to a person which occurs while the named insured is operating or is a passenger on such motorcycle or motor-driven cycle; and unless the named insured requests such coverage in writing, such coverage need not be provided in or supplemental to a renewal policy when the named insured has rejected the coverage in connection with a policy previously issued by the same insurer. The fact that the insured has rejected such coverage shall not cause such motorcycle or motor-driven cycle to be an uninsured motor vehicle;

(g) notwithstanding any omitted or inconsistent language, any contract of insurance which an insurer represents as or which purports to be a motor vehicle liability insurance policy meeting the requirements of this act shall be construed to obligate the insurer to meet all the mandatory requirements and obligations of this act;

(h) notwithstanding any other provision contained in this section, any insurer may exclude coverage required by subsections (a), (b), (c) and (d) of this section while any insured vehicles are:

(1) Rented to others or used to carry

TESTIMONY BEFORE THE HOUSE AND SENATE COMMITTEES ON TRANSPORTATION

ELDON L. GAY
2450 S.E. 29TH STREET
TOPEKA, KANSAS 66605
(913) 266-4256

February 10, 1993

*RE: Testimony in Opposition to RE-enactment of a Kansas
Motorcycle Helmet Law*

I am a 44-year old attorney from Topeka, Kansas. I began riding motorscooters and motorcycles at the age of 12. I am currently riding my fourth Harley Davidson, a 1992 Fat Boy.

In all of the years that I have been riding, I have been involved in one accident and I was not wearing a helmet. I was intentionally forced off the road by an oncoming automobile but sustained no injuries in the accident, though I did hit a traffic control sign.

As a rider of motorcycles for approximately 32 years, I am opposed to helmet laws for adult riders and adult passengers.

My reasons for said opposition are as follows:

1. **AS RESPONSIBLE AND CONCERNED CITIZENS,
MOTORCYCLE RIDERS SIMPLY DO NOT SUPPORT OR
WANT MANDATORY HELMET LAWS FOR ADULTS.**

As a responsible citizen, one must make many decisions in their life concerning all aspects of their ability to function in a society. As an attorney, I have been placed in the position of helping many people make decisions concerning everything from their financial welfare to whether they choose to have their life continued by artificial means. To think that I, as a reasonable adult, lack the wisdom to make decisions about my personal safety on whether or not to wear a helmet is ludicrous. We as citizens should not be subjected to an arbitrary law making this decision for us. It is simply a personal choice which should not be infringed upon by the State.

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2. ACCIDENTS WHICH CAUSE INJURY ARE NOT PREVENTED
BY INVOKING HELMET LAWS.

Injuries from which a helmet may protect a motorcycle rider do not occur until after a rider has been involved in an accident. A mandatory helmet law does nothing to prevent an accident from occurring.

Motorcycle rider education, improved licensing and testing, and increased public awareness are all proven preventative measures that actually reduce accidents and improve safe operation. Helmets do not prevent accidents.

3. WITH THE INFLUX OF FEDERAL FUNDS, KANSAS HAS
THE OPPORTUNITY TO EXPLORE BETTER HIGHWAY
SAFETY AND DRIVER EDUCATION PROGRAMS AS MEANS
TO PREVENTING ACCIDENTS WHICH RESULT IN
INJURIES.

Kansas will receive \$100 million per year for six years pursuant to PL 102-240 for special road projects, not as part of a highway program (Congressional Quarterly, December 21, 1991; page 3739). Also, Kansas will receive up to \$275,000 per year for three years Federal Matching money for highway safety education if they pass a helmet law by October 1, 1993. However, to receive the Federal Matching money, the State is required to match a portion of the Federal allotment total in the amounts of 25% of the first year's grant, 50% of the second year's grant, and 75% of the third year's grant. These grants cannot be used to offset what the State has previously been spending on highway safety programs and grants will be issued only to states that maintain their previous levels of spending on state and community safety projects.

If Kansas fails to pass a helmet law by October 1, 1993, they will be required to spend \$1.5 million of the \$100 million the first year on highway safety and education programs. If no helmet law is passed by October 1, 1994, Kansas must spend \$3 million of the \$100 million on such programs. Also, Kansas would at that time be ineligible for the \$275,000 three-year incentive grants.

Kansas currently spends \$200,000 per year for safety belt education and \$320,000 for education relating to alcohol safety counter-measures. There are no funds identifiable as to helmet use education. This educational structure is inadequate, if preventing accidents and injury is truly important.

The cost of an adequate safety program may be \$1.5 - \$3 million per year. It would only make sense to commit that amount since the \$1.5 - \$3 million penalty does not require State Matching Funds and is a free gift from the Federal Government if we do not pass a helmet law. There is no requirement that these funds cannot be used to offset what the State has been previously spending on

highway safety programs which may in fact release the previously committed \$520,000 for other uses.

An adequate education and safety program can do nothing but save the State many times over the cost of the programs through wages and tax receipts not lost due to accident; reductions of State expenses for medical bills of all drivers and passengers including cyclists; lower spending for traffic law enforcement due to better driver awareness and compliance; and reduction of any long term cost for the disabled.

RECOMMENDATIONS:

1. Rejection of any proposed helmet law.
2. Create a highway safety program with the common goal of preventing accidents, be it motorcycle, automobile, commercial, truck, etc. Utilize all groups appearing today for input towards the common goal of accident prevention.
3. Require a motorcycle rider education course prior to the licensing for the first time of any motorcycle rider in the State.
4. Compile data to study the results of improved education and safety programs to ascertain their success.

CONCLUSION:

The goal of all parties appearing today is the prevention of accidents. This should be attained through increased education and safety programs for all individuals using the highways of the State. The "blackmail" element of the Intermodal Surface Transportation Efficiency Act of 1991 requiring the enactment of mandatory seatbelt and helmet use laws is offensive by its very nature. The Federal Government should not be dictating to the legislature or citizens of this State their personal choices. The Highway Safety Act of 1966 incorporated language that required states to pass mandatory helmet use laws or lose a portion of their highway construction money. As a result of that Act, by 1975 all but three states had passed helmet use laws. In that year, largely as a result of pressure applied by citizens who objected to such legislation, the "blackmail" power was removed from the Federal Government by the passage of the Federal Aid Highway Act of 1975. Subsequent to that, 31 states, including Kansas, moved to permit adult riders to make their own decisions on helmet use. Kansans should not be blackmailed again into giving up their personal

choice and right. The setting aside of Federal funds for safety and education programs should be looked on as a benefit to the State which will not require the State to fund said programs but will in fact allow the Federal Government to do the same.

HOUSE TRANSPORTATION
Attachment 7-4
2/10/93

**TESTIMONY PRESENTED TO
KANSAS
HOUSE TRANSPORTATION
COMMITTEE
HB 2175**



**TESTIMONY WRITTEN
BY
GREG P. HARDY**

**TESTIMONY PRESENTED BY
KENNETH R. McNEILL
ABATE OF KANSAS INC.**

**HOUSE TRANSPORTATION
Attachment 8-1
2/10/93**

ABATE OF KANSAS

Mr. Chairman, Ladies & Gentlemen of the Committee. Thank you for the opportunity to testify in opposition to S.B. 1.

Regarding the material from the Kansas Medical Society the study by Daniel M. Sosin, M.D. of the CDC, Atlanta Georgia, states 28,749 motorcycle deaths during the period 1979-86. Of that number 15,194 (53%) involved head injury. The unanswered questions from this type of report are: (1) How many were helmeted, unhelmeted or helmet use unknown? (2) Of the 53% involving head injury in how many were head injuries the cause of death? Often in studies of this type, such as the one done in California, no matter what the cause of death was if there was any head injury shown in the I or E coding on the death certificate (no matter of location on the certificate) it was shown on the study as a head injury.

During this same time period Kansas had 389 fatalities, representing slightly over 1% of the study, of those only 36% were not wearing a helmet and we don't know how many of those suffered head injuries as the cause of death. What does the death rate per million residents have to do with anything if we don't know the number of motorcycles per million population?

The information from the ENA in their report from Stormont-Vail Regional Medical Center, state 25 severely injured motorcycle riders were admitted in 2 years, of these 25 only 1 died. Unfortunately we don't know what from, in fact nothing in the report says anything about type or location of injury or cause of death.

Kansans for Highway Safety state from 1984-1989, 77% of the fatally injured motorcyclists (169 of the 217 killed) were not wearing a helmet. According to the information from Kansas DOT there were only "47 out of 208" who were known to not have been wearing a helmet which represents 22.6%. Other parts of this report will be compared elsewhere. One of their biggest arguments seems to be the "astronomical" costs of head injuries as a result of no helmets. They use the case of a 22 year old from California. First, what proof is there he wouldn't have suffered a severe head injury with a helmet? Second, it says that he is a quad, is this head injury or spinal injury? Yes, head injuries costs are astronomical but as we know the majority of head injury cases nationwide are not motorcycle injuries.

The Kansas Department of Health & Environment state Nebraska experienced a 32% reduction in fatalities the first year of reinstatement of mandated helmet use. During 1989, the first year of Nebraska's full helmet use, Kansas showed a reduction in fatalities of 38% with no change in mandated helmet use.

This same Department sent a report to NHTSA stating "We have found no evidence that the death rate for motorcycle accidents has increased in Kansas as a result of the repeal of the helmet law. We have also not found any such evidence on a national basis." (Fatal Accident Report System NHTSA)

In their testimony this year they tell us the percentage of fatalities that purportedly were and were not wearing helmets, but fail to show what the cause of death was and do not separate unknowns.

They also state "According to the October 1990 Journal of Trauma even full facial helmets allow almost complete peripheral vision of 180 degrees." In order to meet FMVSS 218 DOT Standards they are required to have 210 degrees peripheral vision.

The report from the Kansas Department of Transportation tells us what we already know about the Federal Blackmail of transferring funds from construction to safety programs if we as a State do not comply with the Federal Mandate.

In reviewing the "Legislative Fact Sheet," let's look at the key facts. According to the National Safety Council Accident Facts 1991 in 1990

(1) There were 46,300 total vehicle fatalities. Of these motorcycles represent 6% of the total, behind pedestrians 16%, trucks and buses 18% and passenger cars 56%.

(2) Your chances of having an accident in an automobile are 110 times more likely than on a motorcycle, and you are 10 times more likely to die of a head injury in an automobile.

(3) According to NHTSA "Helmet Use vs Injury Distribution By Body Area" head injury is not the leading cause of injury for either helmeted or non-helmeted riders. (See attachment 2 PG. 5)

(4) DOT says that an unhelmeted rider is 40 percent more likely to incur injury. If this were true, why is the fatality rate per 10,000 registrations highest in those states with Mandatory Helmet use for all riders.

(5) The USC study that the DOT refers to is not very useful and gives an improper result. In this study they used any head injury in the I and E coding, no matter where it was located in the coding. In other words a fatality could occur from chest wounds but if that person had a cut on the head it was included as a head injury in the study.

(6) Motorcycle accidents have declined by 43% since 1982, while motorcycle fatalities have declined by 39%. Total motorcycle registrations during the same time period showed a decline of 27%. The fatality rate of 6.87 in 1991 (fatalities per

10,000 registered motorcycles) is the lowest rate in over 10 years and represents a decline of 16% since 1982.

(7) DOT tests helmets by a 6-foot vertical drop impacting at 13.66 m.p.h.. Even at these low impacts 52% of the helmets tested by DOT since 1974 have failed..... and only ONE has passed since 1984. The only helmets on which tests are made are medium sized helmets. (DOT Helmet Test Report, 1974-1990). This equates to a 150 pound person striking his head at 4.5 m.p.h.. (See Label Warning, Attachment 3, PG. 8)

(8) The report from the Kansas Department of Health and Environment starts out stating the fatality rate went up after repeal in 1976. In Kansas, repeal was effective 7-1-76 which gives us a unique opportunity to look at six months mandatory helmet law and six months with partial helmet law. (See Attachment 1 PG 4) The facts for 1976 are as follows: Of the 21 head injury fatalities, 9 (40.86%) were wearing a helmet, 7 (33.3%) were not wearing a helmet and in 5 (23.81%) helmet use was not known. There were no neck injury fatalities for those not wearing a helmet, only 1 where helmet use was unknown, and 6 (85.71%) of the neck injury fatalities were wearing a helmet, 36.36% were caused by multiple injuries or injuries other than head/neck.

In logic, a faulty premise necessarily produces a false conclusion, and "the public burden" theory is flawed from the beginning because its advocates assume that a helmet always makes the difference between sound health and debilitating injury. In fact, the helmet rarely makes a significant difference, simply because it is not designed and built to do so. It is designed and built to satisfy FMVSS 218, (test method above) which demands only that the helmet provide protection at impact speeds below 15 m.p.h..

As its second faulty premise "the public burden" theory assumes that only injured motorcyclists, and no other people impose a burden on the public health system. True, there are motorcyclists who don't have insurance or enough of it to cover the medical expenses they incur as a result of accidents. However, about the same percentage of all other type of motorists lack insurance too. Thus, as previously stated motorcyclists impose no more "public burden" than the vastly larger number of other people who suffer head injuries.

By looking over the leading cause of death in the U.S. from the National Safety Council Accident Facts 1991 we can derive some interesting figures. (See attachment 4 PG 9 & PG 10) Please note that motorcycle accidents comprise only 0.1% of the fatalities.

How are runaway health care costs the patients fault? According to the Health Care Finance Administration Office of National Costs Estimates, health care costs rose more than twice as fast as inflation over the past ten years. At a time when it seems as though government is trying to control almost every aspect of its citizen's lives they have done nothing to control doctor's fees, hospital costs, or drug costs. The only thing government has done is cut \$40 billion from Medicare with \$10 billion coming out of the pockets of those who can least afford it.

Why has total health expenditures increased around 256% with only a 10% increase in population. (See attachment 5 PG.6 & 7)

From the period of 1980 through 1992 prescription drugs costs rose at six times the inflation rate or 128%. (1993 Council for the Aging)

On C-Span TV Network, September 11, 1992 former Vice President Quayle remarked "America was built by taking risks." He also stated the American people need to get regulatory agencies off their backs and went on to say people his generation want less government regulation involved in their private life.

To quote James J. Baxter "What has been lost among the safety zealots is the simple fact that human beings formed societies for the specific purpose of sharing the burdens of certain risks, including old age. The security of a society was not designed to limit personal freedom and individual discretion. The freedom to make decisions concerning your own welfare and for protection against the tyranny of man and nature."

We urge you not to support SB 1 and would request you to introduce a Resolution letting the Federal Government know that the State of Kansas doesn't need them inflicting themselves on our state sovereignty.

Respectfully submitted,

Greg P. Hardy

HOUSE TRANSPORTATION
Attachment 8-3
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ATTACHMENT 1

MOTORCYCLE FATALITIES 1976

HOUSE TRANSPORTATION
Attachment 8-4
2/10/93

	JAN.1-JUN 30			JULY 1-DEC. 30			
	HELMET WORN	NO HELMET	UNKNOWN	HELMET WORN	NO HELMET	UNKNOWN	TOTAL
Head Injury % of Total	4 28.57%	1 7.14%	1 7.14%	5 16.67%	6 20%	4 13.33%	21 47.73%
Neck Injury % of Total	5 35.72%	0	1 7.14%	1 3.33%	0	0	7 15.91%
Total Head & Neck Injuries % of Total	9 64.29%	1 7.14%	2 14.28%	6 20%	6 20%	4 13.33%	28 63.64%
Other Injuries % of total	2 14.28%	0	0	1 3.33%	3 10%	2 6.67%	8 18.18%
Both Head & Other Injury	0	0	0	1 3.33%	3 10%	0	4 9.09%
Cause of Death Unknown	0	0	0	3 10%	1 3.33%	0	4 9.09%
Total % of Total Fatalities	11 78.57%	1 7.14%	2 14.29%	11 36.76%	13 43.33%	6 20%	44

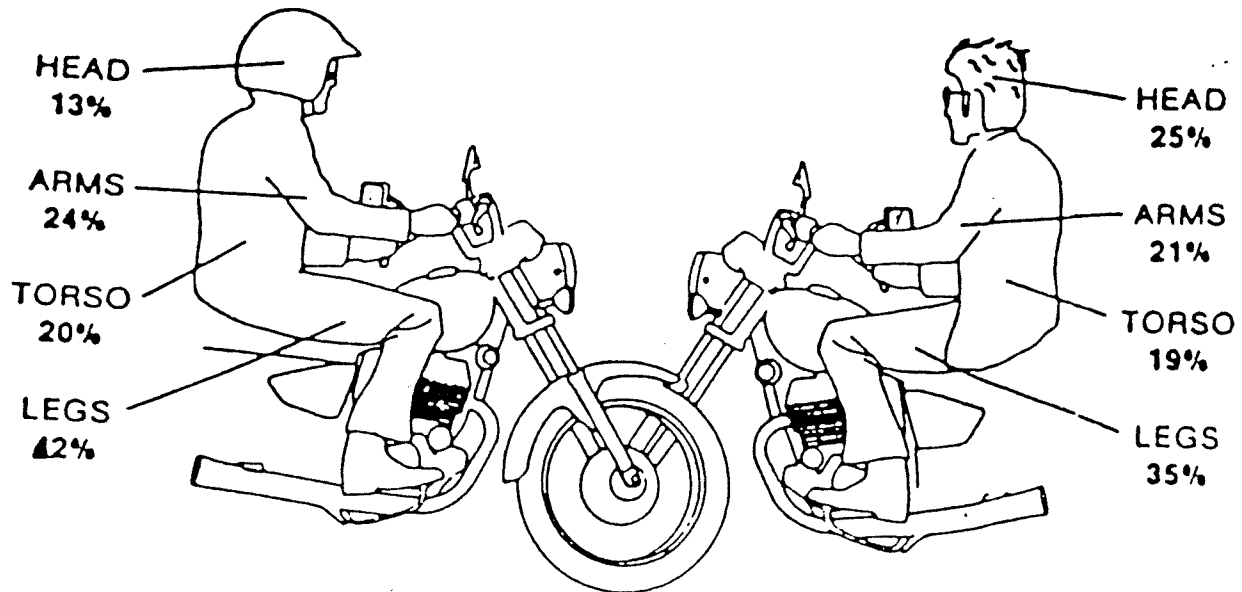
Of the 21 head injury fatalities 9 or 40.86% were with a helmet, 7 or 33.3% were without a helmet and 5 or 23.81% it was not known if a helmet was worn.

There were no neck injury fatalities without a helmet, only 1 where it was not known if a helmet was worn, and 6 or 85.71% of the neck injuries were with a helmet.

There was 28 head/neck injury fatalities combined, which is 6.64% of the total fatalities. 53.57% of these were with a helmet on—25% of these were with no helmet and in 21.43% of them it was not know if a helmet was worn.

34.09% of all falalties were head/neck injury fatalities with a helmet—15.9% were with no helmet—13.64% it was not known if a helmet was worn, and 36.36% were caused by multiple injuries or other than head/neck injuries.

Helmet Use vs. Injury Distribution By Body Area



ATTACHMENT 5

6

SELECTIONS FROM THE U.S . STATISTICAL ABSTRACT, 1991

1) U.S. Population	1979	1989
	225,055,000	247,350,000
2) Motorcycles (Source: MSF)		
Registrations	4,933,401	4,208,986
Accidents	175,280	107,264
Fatalities	4,875	3,128
3) Motor Vehicle accident fatalities	1980	1989
Passengers	36,800	34,900
Pedestrians	8,100	6,600
Motorcycles	5,100	3,100
Bicycles	1,000	800
4) Total expenditures for health	1980	1989
	\$249,100,000,000	\$604,100,000,000
Per capita health expenditures	\$930	\$2,354
5) Public expenditures, federal	1980	1989
Medicare	\$37,533,000,000	\$102,108,000,000
Medicaid	\$28,007,000,000	\$ 66,681,000,000
State/local hospitals	\$ 5,589,000,000	\$ 12,899,000,000
6) Medicare	1980	1989
Total enrollment	28,478,000	33,579,000
Benefit payments	\$35,699,000,000	\$ 98,305,000,000
7) Medicare, non-hospital	1980	1989
Enrollment, over 65	24,680,000	33,579,000
Enrollment, disabled	2,719,000	2,883,000
All payments	\$10,635,000,000	\$ 38,294,000,000
		1988
Payments, physicians	\$ 8,358,000,000	\$ 23,473,000,000
8) Medicare, hospital	1980	1989
Admissions	9,258,000	7,876,000
Hospital Charges	\$28,615,000,000	\$ 78,840,000,000
Physician's charges	\$ 9,011,000,000	\$ 26,274,000,000
9) Hospital Use	1980	1987
Days of Care, per 1000 pop.	1,217	889
Beds used per day	337	244

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<u>10) Health Professionals, number</u>	<u>1970</u>	<u>1987</u>
Doctors	348,000	612,000
Per 100,000 populaton	168	252
Registered Nurses	750,000	1,627,000
Per 100,000 popluation	368	668
<u>11) Doctors' incomes, median</u>	<u>1980</u>	<u>1988</u>
Gross	\$132,200	\$214,000
Net (taxable)	\$ 83,799	\$117,800
<u>12) Hospital Costs</u>	<u>1980</u>	<u>1988</u>
Average per day	\$ 245	\$ 586
Average per stay	\$ 1,851	\$4,207
		<u>1990</u>
Average room charges	\$ 127	\$ 315
<u>13) Hospital costs, sources of payment</u>		<u>1988</u>
Private Insurance		41.1%
Workers' compensation		1.5%
Personal funds		6.3%
Other private sources		4.7%
Medicare		34.4%
Medicaid		9.5%
No charges		7.0%

WARNING

READ BEFORE EACH USE

EXAMINE HELMET FOR DAMAGE BEFORE DONNING. NO HELMET CAN PROTECT FROM ALL FORESEEABLE IMPACTS OR INJURIES. ON IMPACT, HELMET MAY BE DAMAGED BY THE ABSORPTION OF ENERGY AND THE SHELL MAY CRACK OR BREAK. THE LINER MAY BE SEVERLY DAMAGED IN A WAY NOT VISIBLE TO THE USER. THE FUNCTION OF THIS HELMET IS TO BE DESTROYED AS IT ABSORBS ENERGY FROM THE IMPACT.

NEITHER THE MAKER NOR THE SELLER OF THIS HELMET CAN FORESEE OR PREDETERMINE THE NATURE OR SEVERITY OF ALL IMPACTS. THIS HELMET EXCEEDS FEDERAL STANDARD FMVSS218. EVEN SO, DEATH OR SEVERE INJURY MAY RESULT FROM IMPACTS AT SPEEDS AS LOW AS 15 M.P.H. WHILE WEARING A HELMET.

PERFORMANCE MAY BE ADVERSELY AFFECTED BY LOOSE FIT, FAILURE TO FASTEN STRAP SNUGLY, OR TO POSITION HELMET SQUARELY ON HEAD. APPLY NO CHEMICALS. USE CLEAR WATER AND MILD SOAP ONLY FOR CLEANING.

THIS HELMET IS NOT DESIGNED TO PROVIDE NECK OR LOWER HEAD PROTECTION.

RETURN TO THE MANUFACTURER FOR INSPECTION OR REPLACEMENT AFTER EVERY IMPACT.

MOTOR SPORTS REQUIRE GOOD TRAINING AND CAREFUL ATTENTION TO THE CARE AND USE OF SAFETY EQUIPMENT.

DUNS 07-322-0632

TYPICAL WARNING LABEL FROM INTERIOR OF DOT APPROVED HELMET. (TAKEN FROM
MAXON HELMET PURCHASED ON JUNE 3, 1989. HOUSE TRANSPORTATION
Attachment 8-8
2/10/93

WHY TARGET MOTORCYCLES?

Motorcycles Represent Just 2% Of Total U.S. Vehicles

Total Vehicle Population.....	194.5 Million
Passenger Cars 75%	144.9 Million
Trucks and Buses 23%	44.5 Million
Motorcycles 2%.....	4.3 Million

Motorcycles Represent Only 1% Of Total Vehicle Accidents

Total Accident Involvement	19.8 Million
Passengers Car 72%	14.3 Million
Trucks and Buses 22%	4.4 Million
Motorcycles .9%	180 Thousand

Motorcycles Account For Under 6% Of Total Vehicle Fatalities

Total Vehicular Fatalities	46,300
Passenger Cars 56%	25,700
Trucks and Buses 18%	8,200
Pedestrians 16%	7,400
Motorcycles 6%	2,900
Other 4.5%	2,100

Motorcycles Account For 0.1% Of Total Annual Fatalities In The U.S.

Total U.S. Fatalities	2,167,999
Heart Disease 35%.....	765,156
Cancer 22.3%	485,048
Stroke 6.9%	150,517
Motor Vehicle 2%.....	43,400
Motorcycles 0.1%	2,900

- Automobile drivers are at fault in over 2/3 of all motorcycle vs. car accidents.
- 92% of the motorcyclists involved in accidents had no formal training, and 45.5% had no motorcycle license.
- Motorcycle accidents represent only 1/10 of 1% of total U.S. health care costs.

Motorcyclists have been a political target for such discriminatory legislation as mandatory helmet laws, catastrophic health insurance and an assortment of other "safety" measures. Is the special attention aimed at motorcycles justified in view of the fact that motorcyclists represent only 2% of total vehicular traffic, less than 1% of total vehicles involved in accidents and just .01% of annual U.S. health care costs? Despite their relatively small numbers, an estimated 8% of America's 4.5 million registered motorcycle owners have joined forces in politically active organizations to protect their right to ride. These organizations advocate motorcycle awareness campaigns and rider training courses, both of which are proven to reduce accidents and resulting injuries and fatalities, as reasonable alternatives to legislation that unnecessarily targets motorcycles.

Total U.S. Fatalities:2,167,999
 Motorcycle Fatalities:2,900

Leading Causes Of Death in The United States

(Source: NSC *Accident Facts, 1991*)

Heart Disease	765,156
Cancer.....	485,048
Stroke.....	150,517
Accidents	97,100
Motor vehicle.....	46,300
Passenger cars:	25,700
Trucks:	8,200
Pedestrians:	7,400
Motorcycles:	2,900
Bicyclists:	1,000
Buses/taxis/tractors:	130
Other:	970
Falls.....	12,096
Poison.....	5,353
Drowning	4,966
Fires/burns	4,965
Surgical complications	2,858
Other	20,562
Chronic obstructive pulmonary disease	82,853
Pneumonia	77,662
Diabetes Mellitus.....	40,368
Suicide	30,407
Chronic liver disease, cirrhosis.....	26,409
Homicide	22,032
AIDS	16,602

LADIES AND GENTLEMEN...recently I've yearly made at least one pilgrimage to Topeka to speak to our Transportation Committees against mandatory helmet legislation..In years when you have felt it was a simple choice to be left up to those who ride. Many legislatively active state and national organizations have felt an awe at the cooperation motorcycle enthusiasts have received in Kansas. We always state our legislature is just better and informed and possibly more intelligent than theirs!! Now I have legislative friends say, "Jacque, we just can't lose money." I agree. But...there is no "real loss" in the federal mandate; there is a shift in where some money is to be spent. I believe in that shift—ABATE and AMA have come before you and other legislatures for years--asking for more motorcycle safety education...more highway education...saving young lives by teaching them the fundamental defensive tactics that must be used to keep out of the ways of 4 to 18-wheeled vehicles who "just don't see us."

I've never spoken to a Kansas legislator who felt good about passing laws to restrict personal freedoms—because Congress takes our money and then says we can't have our share back—unless we do what they say. ABATE and AMA calls that blackmail—so do you! How on earth can any of us handle SOMEONE who is SO FAR IN DEBT telling us how to spend our money? Do any of you remember years ago when Congress did this before—and California said "Phooey, we just won't send you our money!" No, even tho I'm from SW KS, I'm not here to push secession..just to ask you to continue looking at helmet statistics we present..and make the decision to put that money into education. Let us help; we have more Motorcycle Safety Foundation certified instructors yearly..

To do that, you must agree that education will save more lives and money than will mandatory helmets. I've challenged those who say bikers are a social burden and that our Medicaid bills will skyrocket—to have SRS pull out how much is spent in Kansas on head injured bikers—and compare it to costs of other head injuries. I don't believe that's ever been done, so I just give you my stats again. My business is home health, hospice, private duty nursing,. medical equipment and supplies. In almost 10 years in business, of over \$7 million that has flowed through my MASH agencies, only \$9,000 was received on a motorcycle rider. That \$9,000, however, was not paid by SRS; it was paid by the auto insurance company whose insured vehicle pulled out in front of two 17-year-old boys. A helmet would NOT have saved them injury; in fact, as two articles I have attached would show, they might both be either dead or totally disabled had they followed the law and had helmets on. MASH II presently cares for five quads; four were injured in auto accidents; the other dove into a haystack and broke his neck. They still wouldn't want to wear a helmet in a car!!

In 1990, the National Safety Council gave the following statistics..

- 2% of :U.S. vehicles are motorcycles.
- 1% of vehicle accidents involve motorcycles.
- .1% (not 1% or 2%) of annual fatalities are bikers.
- .1% of medical costs are attributable to motorcycle accidents.
- 92% of all motorcycle accidents involve those with no formal motorcycle training.
- 45.5% had no motorcycle license.

If we could train half of those who ride—we could probably cut our accidents in half...take that money and mandate training! Save lives—you have a great opportunity here...

Why do we have half the accidents of ordinary people in vehicles? Because we know we take our lives in our hands when we get on a motorcycle. People in cars don't even worry enough to buckle up! No, I'm not really for mandatory seat belts

either. I have a 64-year-old hospice nurse who has been in two accidents that could have been fatal--in one where she believes she would have been crushed had she been belted in--she didn't have her belt on. In the other one, she believes the seat belt saved her life...her attitude is that if she remembers it, God told her to; if she doesn't put it on--He didn't want her to. She feels the same about helmets!

As I'm in medical care, and am wondering about the ethical questions facing us all now...I watched a recent tv movie, "The Switch," because it was about a personal fight to be given the right to have the plug pulled--the switch pushed. I hadn't heard his paralysis was a helmet-related motorcycle accident! Attached is an article about Larry McAfee--who was "traveling no more than 10 mph, he hit a curve, fell, and as his head snapped back, the base of his helmet crushed his top two vertebrae."

The second article attached is written by Rodney D. Cooter, Neurosurgeon, who was involved in and studied research regarding the danger of full-faced helmets. The findings are scary.

Another aspect of injury to heads involves the theory of acceleration/deceleration injuries. Did you know that your brain's consistency is about that of pudding? The brain is surrounded by a fluid inside a tissue covering. There is very little space between the brain and the skull, but there is enough so the "pudding" can flop around a little when it gets a big jar. There are two kinds of injury that can happen to the brain--contact and acceleration/deceleration injuries. If you are hit on the head with a sledgehammer, this would cause a contact injury. When the sledgehammer or other object hits the head, use of a hard hat or helmet would dissipate the energy of impact by spreading it over a large area. This is why we wear hard hats in construction areas and helmets while "at bat" in baseball games.

BUT, seldom is a motorcyclist standing still when he receives a head whack! No help here by helmets! Acceleration/deceleration injuries occur when the head is suddenly placed in motion or stopped. IF a cyclist is involved in an accident, they usually are thrown--or leap from their bike. If their helmet impacts with an object like pavement..the helmet and then the rider's head stops in its forward motion. The brain, having its own pudding mass, continues in motion until it strikes the inside of the skull..and rebounds striking the opposite side of the skull. The helmet may have saved a cut, but it cannot save the brain from injury. 50% of those receiving such a severe brain injury die before reaching a hospital!

That involves "brain damage." Broken necks are more scary--not 50% of them kill; they just give you the life of Larry McAfee or one of my quads.

You've heard that the helmets presently suggested for motorcyclists impede hearing, peripheral vision, etc. They do. I'm sure you've heard a police officer who believes they are fine, but a fellow officer, "Skip" Messerly Jr., formerly of the Los Angeles P.D. died last fall from critical injuries to his neck and brain stem. I maintained last year that they are also hot and heavy...causing driver fatigue. Last year a Junction City editorial maintained that a Garden City woman tried to convince the Senate Committee that they were too heavy. Just carrying one isn't bad; sitting with one on your head can even be tolerated quite a while, but...they gain weight and pull on your neck when "in the wind." That's not really a big issue if you're young and strong. The real weight issue comes with the absolute proven fact that a "4 pound helmet at 50 miles per hour becomes a 200 pound weight on impact." That is a real challenge to any helmeted biker's neck! I ask that Rep. Alex Scott please pass that info on to his editor!

Money is the question now--I have chastized many of our Legislators who passed seat belt laws for almost all except children in school busses. Money had more to do with that legislation than did safety! Now you feel you face having to pass mandatory helmet legislation--because you would "lose money." I maintain passing it will cost lives and money.

Tho in previous testimony, we have pointed out the direct rise in motorcycle injuries to passage of helmet law, many of you were not here.

After 1985, New York and New Jersey Highway Departments stated that use of helmets had been accompanied by 16.6% greater incidence of accidents and 3% more fatalities in a 9 year study. Further, serious and/or fatal neck injuries increased 75% in New York State the first year of mandatory helmet regulations and fatalities increased 340% after their helmet law passed. Rhode Island had a 166.7% increase in bike-related fatalities after putting its 1971 helmet law into effect. Even improper helmet removal from injured persons can cause paralysis.

The four safest states to ride a motorcycle in remain: Iowa, Wisconsin, South Dakota and Kansas--non have mandatory helmet laws..at this time.


Years ago, when Kansas passed a helmet law, accidents tripled the first year following that legislation..

We can and should spend more money on education, both for those who wish to drive cars and those who wish to ride motorcycles. In Garden City there is a \$70 fee for driver's education. Many teenagers can't afford to take it.

Education costs soar; we're trying to control soaring medical costs. Tho a very large majority of bikers have medical insurance (I don't know any who don't), a broken neck or brain damage could eventually put them on Medicaid--after their insurance ran out.

Thusly, I would respectfully suggest to you that killing Senate Bill #1 could help Kansas in both education and medical dollars. You have also had testimony that shows huge losses for state coffers with new helmet laws. Motorcycle sales go down because people quit riding...some just move.

Think about it before you pass legislation that can kill and maim. Please.



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HOUSE TRANSPORTATION
Attachment 9-3
2/10/93

DECIDING NOT TO DIE

A TV movie celebrates quadriplegic Larry McAfee's crusade to reclaim his life



IT WAS ON A FLAWLESS SPRING MORNING, MAY 5, 1985, THAT LARRY McAfee, a 29-year-old mechanical engineer, decided, on an impulse, to take his motorcycle for a ride with friends on the mountain roads north of his suburban Atlanta home. Hours later, traveling no more than 10 m.p.h., he hit a curve, fell, and as his head snapped back, the base of his helmet crushed his top two vertebrae.

"There was not another mark on him," says Larry's mother, Amelia. Yet in that split second, the 6'6", 240-lb. McAfee, an avid outdoorsman, hunter and fledgling parachutist, had sustained what the medical profession calls a "complete injury," one that would leave him permanently paralyzed from the neck down—unable to walk, eat or even breathe again unaided.

In 1989, broken in spirit after being warehoused in a series of institutions, McAfee won the legal right to shut off his life-sustaining respirator. But today the man whose story is told in the CBS docudrama *The Switch* (airing Sunday, Jan. 17) lives with four other severely disabled people on the outskirts of Augusta, Ga., in a modest two-story house, the very first independent-care home in the state—and one that would not exist without the crusade that was championed by McAfee himself.



▲ Moving to an independent-care house in 1990 "gave me a chance at a worthwhile life," says McAfee (in the motorized wheelchair he activates by blowing into a tube).

◀ After his accident, "I used to just lie there on my back, being just so bored," says Larry (in 1983 with his nephew, Erik, 2). "People would talk about me as if I wasn't there."

As described in *The Switch* (the title refers to the mouth-controlled timer that would have allowed him to shut off his ventilator), McAfee's very existence, however arduous, seems nothing short of miraculous. Given mouth-to-mouth resuscitation at the accident scene by a nurse who happened to be picnicking nearby, he was airlifted by helicopter to Atlanta's Georgia Baptist Hospital. McAfee, played in the TV movie by Gary Cole (*Midnight Caller*), spent the next year in Atlanta's prestigious Shepherd Spinal Center before returning to his apartment and round-the-clock home-nursing care. But in the fall of 1987, his \$1 million insurance coverage ran out and he became, in the words of Dr. Russ Fine, a University of Alabama professor and talk show host who is now McAfee's close friend and advocate, "the living example of everything that's wrong about the system that serves [severely disabled] people."

Because there was no suitable place for him in Georgia, McAfee first was transferred to a nursing home in Ohio for 14 months. He was placed among elderly patients and had no television or telephone. "You are just a sack of potatoes,"



▲ McAfee (at his voice-operated home computer) is still pushing for added state aid. "If we didn't have to put energy into [finding funding]," he says, "we could focus more on vocational training."

► Not long after his accident, Larry "wanted me to turn his respirator off so he could just go to sleep," says his father, James McAfee (with Larry's mother, Amelia). "I couldn't do it."



he says of his time there. After complaining loudly, McAfee was moved to the intensive care unit of Atlanta's public Grady Memorial Hospital, the only facility in Georgia then equipped to care for respirator-dependent patients. It was there, surrounded by dying patients and an overworked medical staff, that he began his battle for the legal right to die.

In September 1989, a superior court judge ruled that McAfee had the right to turn off his ventilator, a decision upheld by the Georgia Supreme Court and reluctantly supported by McAfee's agonized parents. Fine installed the switch that McAfee himself designed. "But," says Fine, "I had this intuitive sense that he didn't want to die."

That intuition proved correct. The device gave McAfee something that had been denied him for four years: control. "I'd forgotten what it was like," he told Fine. In winning the right to die, McAfee instead found renewed determination to live—and began his battle to establish an independent-care center for the severely disabled. In a moving appearance before the Georgia legislature in February 1990, he told lawmakers: "Remember that in an instant, this can happen to you or, worse, to someone you love."

Today, as a result of his efforts, McAfee lives with two men and two women in a modest brick-and-clapboard house partly subsidized by a \$33,000 annual appropriation from the state. A rotating staff of a dozen nursing assistants and a 24-hour on-call nurse provide care. His lungs must be suctioned 10 times a day and his bowels manually emptied. Yet on Larry McAfee's good days, he goes for a ride outdoors in his wheelchair or spends hours at his computer preparing for a job he hopes to land at an engineering company. The fateful switch still exists but somehow no longer seems crucial. "If I ever have to return to an institution, then I prefer death," says McAfee, his voice punctuated by the rhythmic whoosh of his ventilator. "But never as long as we have it as good as this. My life is good now. I have hope."

■ SUSAN SCHINDEHETTE

■ GAIL WESCOTT in Atlanta

FATAL FACTS ABOUT HELMETS

A Neurosurgeon Speaks The Truth

Editor's Note: The following article demonstrates one of several deadly side effects of helmet use. Although Dr. Cooter recommends limited helmet use, his arguments directly relate to our Freedom F.I.G.H.T. program attack. If you need more information on how we plan to use this report to eliminate mandatory helmet laws and save lives, see pages 28 and 29.

During World War II, an English neurosurgeon named Cairns compared the head injuries of crashed motorcyclists wearing helmets with those not wearing helmets. Cairns, a Professor of Neurosurgery at Oxford University, noted that helmeted motorcyclists who had broken their facial bones had less serious brain injuries. Clearly, some impact energy had been absorbed by the face or the helmet. From those early studies, the suggestion came that all motorcyclists should wear a helmet.

The only types available then were "inverted pudding bowl" styles that barely covered the short hair style of the day. These had an inner lining of cork or pulp that was used to absorb energy. During the 1960s, the fighter pilot style became popular because it covered the whole scalp, came in colorful fiberglass shells, and had better energy absorption material inside. Gradually helmet standards arose to ensure that helmets were constructed to a standard level that assured adequate impact performance in controlled helmet impact tests.

During the 1970s, full-face helmets (fighter pilot style plus facial protection) gained popularity. Manufacturers argued that if the fighter pilot style helmet had a chin bar, then the whole head and face could be protected. But this presented the helmet standards committees with a dilemma: How to test the performance of the chin bar component when no one was sure about how far it should deflect in an impact? Some said the chin bar

should be soft and pliable. Others said it should be hard and inflexible. The rigid school won, and efforts were made to stiffen the chin bar by incorporating strong materials to increase its rigidity.

Early medical reports of facial injury patterns in motorcyclists supported the use of full-face helmets because hospital accident and emergency departments were treating far fewer facial cuts and abrasions among bikers wearing full

with head injuries was computerized CT scanning (CAT scanning). CAT scans could be converted into three-dimensional images to help plan the surgery that crash victims often required. Using CAT scanning techniques, we compared the patterns of injury among 50 motorcyclists admitted to hospitals with 24 motorcyclists killed from similar impacts during the same period. We retrieved the helmets worn and also studied them with

Many died in helmets that fitted well, were well adjusted, and were firmly in place at the time of the crash

facial protection. Indeed, it became rare to see an injured motorcyclist with a facial bone fracture if he wore a full-face helmet. All was well for motorcyclists who came to hospitals for treatment after a crash that involved a head impact.

But what about that ever-growing band of motorcyclists who didn't make it to the hospital? Many died in helmets that fitted well, were well adjusted, and were firmly in place at the time of the crash. Of course, some of these had fatal chest and abdominal injuries, but too many seemed to be dying from impacts they should have survived.

During the 1980s, reports from road accident research units worldwide showed an increasing incidence of a particular fatal skull injury among motorcyclists wearing full-face helmets. This common fatal injury was a skull base fracture—a severe crack across the bones on which the brain sits. To try to explain how these devastating injuries were happening, some associates and I looked in depth at a small number of motorcyclists who had been fatally injured while wearing full-face helmets. At this time, the latest X-ray equipment available for patients

the CAT scanner.

Each motorcyclist's head was considered as a four-layered unit: 1) the helmet, 2) the scalp and facial skin, 3) the skull and facial bones, and 4) the brain. Detailed scientific information was gleaned from each of these layers. That information was then fed into a computer-based coding system for analysis. In addition to the CAT scan information, a detailed autopsy was performed on the fatally injured group. An independent neuropathology review was also performed on the brain of each motorcyclist killed.

When analyzed, our results showed that motorcyclists with broken facial bones usually had been wearing helmets that gave little or no facial protection. Furthermore, they had little in the way of brain injury. In contrast, those motorcyclists killed outright often had no facial injury, even if they suffered an impact to the front of the helmet. They did, however, have skull base fractures and unsurvivable brain injuries. Apparently, the blow to the chin bar had been transmitted to the chin strap, increasing its tightness sufficiently to drive the lower jaw

upward into the base of the skull. The upward force into the skull base, then, may have caused the fracturing and subsequent brain damage.

The brain damage was concentrated at the critical brain stem region where the spinal cord effectively "plugs into" the base of the brain. Damage in that region is usually instantly fatal.

Were our findings only present by chance in the sample of motorcyclists we studied? To find out, we performed a second study of 988 brains from autopsies performed on road accident victims. These 988 included 36 cases of unequivocal brain stem injury. The proportion of motorcyclists in that series was double the expected figure, and of the 15 motorcyclists, 13 were known to have been wearing helmets at impact and 11 had

been wearing full-face helmets. Furthermore, the principal impact point was the chin bar in nine of the bikers.

These findings strengthened the possibility that a blow to a rigid chin bar could be transferred via the chin strap to the lower jaw and then to the skull base, with fatal consequences to the fragile brain stem. If this were so, then how could it be prevented? In collaboration with engineering scientists and computer-aided-design (CAD) experts, we devised a series of solutions. Essentially, they involve the incorporation of an energy absorber into the chin bar of a full-face helmet. This would reduce the impact energy transmitted to the brain stem and, hopefully, transfer a potentially fatal impact victim into the survivable range. The wheels of change

in altering safety designs move excruciatingly slow, but the full-face helmet with a soft, pliable chin bar extension may be a suitable alternative.

Let's face it: A motorcyclist's helmet should be worthy of the head upon which it rests.

—Rodney D. Cooter, M.D.

Dr. Rodney Cooter is currently the Staff Grader in Plastic Surgery at St. James University Hospital, Leeds, United Kingdom. He trained for five years at the Weapon's Research Establishment in South Australia before completing a four-year training in engineering draftsmanship with Telecom Australia. He studied medicine at the University of Adelaide for six years before commencing surgical training. During his surgical training with the Australian Craniofacial Unit, he developed an interest in the engineering aspects of injury to the head and face. In his doctoral thesis—*Craniofacial Fracture Patterns*—he examined the effects of helmets on injury patterns. This article follows that intensive study.

HOW HELMETS CAN KILL

1. Impact to the lower face bar is transmitted via the jaw to the skull.
2. The chin strap forces the jawbone upward.
3. The brain stem is severed.

This pattern of death emerged after four years of research.

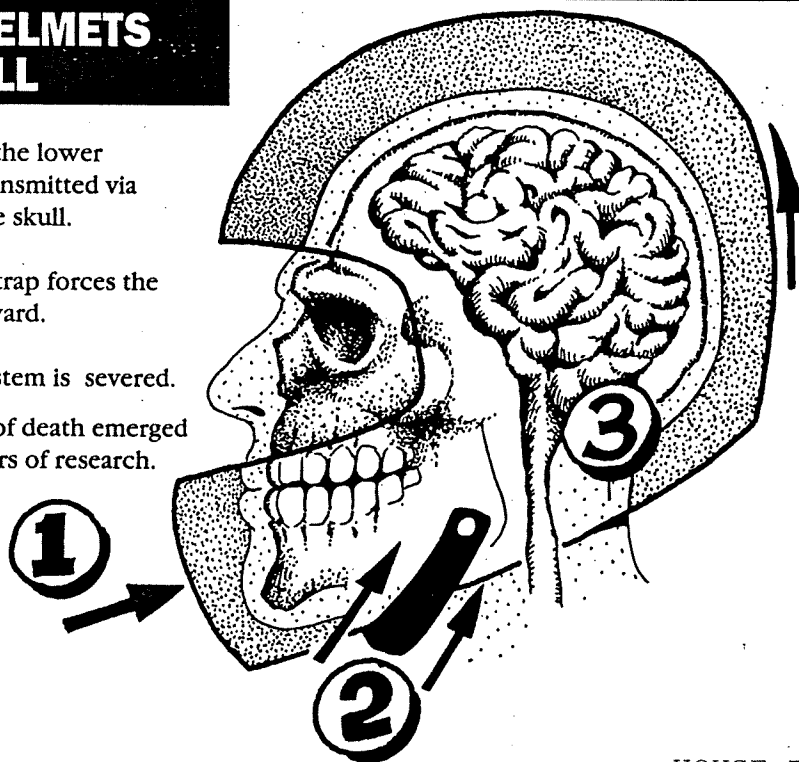


Illustration: Jon Towle

HELMET ROTATES

HOUSE TRANSPORTATION

Attachment 9-7

2/10/93

TESTIMONY BEFORE THE HOUSE AND SENATE
COMMITTEES ON TRANSPORTATION

LINDA R. MITCHELL
5231 NW LINCOLN
TOPEKA, KANSAS 66618-1224
(913) 246-0224

February 10, 1993

RE: Opposition to the re-enactment
of a Kansas motorcycle helmet law

I am a 33 year old housewife, married to District Court Judge Daniel L. Mitchell, and the mother of two small children. My husband owns and rides a 1990 Harley Davidson FLHTC (Electra Glide Classic). I own and ride a 1993 Harley Davidson FXLR (Low Rider Custom). On August 31, 1989 I completed a motorcycle rider education course associated with the Kansas State Department of Education.

I was involved in an accident approximately 15 years ago in which I was thrown forward from the motorcycle I was driving into the side of a van. I was not wearing a helmet and received head injuries. I recovered completely.

As an educated rider, I am opposed to mandatory helmet laws for adult motorcyclists for several reasons.

The first is, motorcyclists, the people who ride and enjoy motorcycles, do not support a helmet law for adults. The majority of people who seek to have the helmet law reinstated do not own or even ride a motorcycle.

Secondly, there are some instances in which the utilization of a helmet may actually detract from the safe operation of a motorcycle. The weight and heat factors may cause rider fatigue. Additionally, the rider's visual and auditory senses may be impaired.

Finally, helmet laws do not prevent accidents which cause injuries. Accidents which result in injury could be significantly reduced if both automobile and motorcycle operators were better educated.

The Head Injury Association would have you believe the issue is one of social burden. The most recent studies to date demonstrate that injured motorcyclists are no more likely to require public help with their medical bills than any other class of injured motorist. The social burden justification for adult helmet laws has no basis in reality.

HOUSE TRANSPORTATION
Attachment 10-1
2/10/93

Motorcycles comprise only 9/10 of 1 percent of all the motor vehicles involved in accidents nationwide and the costs of treating motorcycle related injuries are similar to the costs associated with other injured motorists.

Motorcycle head injuries comprise less than 5% of all head injuries. Other motor vehicles (cars and trucks) account for more than 40% of all head injuries. If helmets are the answer to preventing head injury, why then are we not requiring ALL motor vehicle operators to wear helmets? The reason is simple, the overwhelming majority of car and truck drivers would vehemently oppose such an infringement on their right to make decisions about their personal safety, which is the very same reason responsible adult motorcyclists oppose a mandatory helmet law.

The Federal Government will require that \$1.5 million of the \$100 million given to Kansas, (only 1.5%) be used for highway safety and education programs if no helmet law is in place by October 1, 1993. The amount will be \$3 million in 1994 (only 3%). The \$100 million per year for 6 years is allocated for special road projects and not part of a highway program (Congressional Quarterly, December 21, 1991; page 3739). Rather than look at this mandate as a "penalty", Kansas should accept it as an opportunity to improve safety for ALL motor vehicle operators in the state.

Preventing accidents, and thereby, injury should be the desired outcome. This can be achieved through well funded driver education and awareness programs for all.



KANSAS MEDICAL SOCIETY

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February 10, 1993

TO: House Transportation Committee

FROM: Chip Wheelen
KMS Director of Public Affairs

SUBJECT: House Bill 2175 as Introduced

Thank you for the opportunity to express support for HB 2175. Physicians are particularly aware of the severity of injuries sustained by operators and passengers of motorcycles. Oftentimes, physicians must inform family members or others that their loved one is dead or has sustained injuries that will likely result in permanent disabilities. In spite of sophisticated medical technology available to us, the human damage resulting from a motorcycle accident is frequently unrepairable.

According to a comprehensive study by Daniel M. Sosin, M.D. of the Centers of Disease Control, Atlanta, Georgia, there were 28,749 motorcyclist deaths during the period 1979-86. Of that number, 15,194 (53 percent) involved head injury. Furthermore, in states with complete helmet use laws, the death rate from motorcycle accidents averaged 11.7 deaths per million residents per year. By contrast, states with partial helmet use laws (like Kansas) experienced 19.5 motorcycle accident deaths per million population. This equates to 167% of the number of deaths in states with helmet requirements for all operators and riders regardless of age or experience.

We believe the evidence is indisputable. When Louisiana upgraded from a partial law to a complete helmet use law, the number of deaths attributable to motorcycle accidents dropped 44%.

Aside from your responsibility to establish policies which provide for public safety and reduce human suffering, there is another important consideration; cost. In addition to the substantial expense of emergency care rendered to injured motorcyclists, survivors often need extensive and prolonged medical care and other therapy, sometimes requiring nursing home or other institutional facilities. The losses to insurers and taxpayers could certainly be reduced commensurate with the reduction in severity of injuries that accrues from helmet use.

Thank you for considering our concerns. We urge you to recommend HB 2175 for passage.

HOUSE TRANSPORTATION
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2/10/93



**Kansas
Respiratory
Care
Society**

Testimony by Cheryl DeBrot, B.S.R.R.T.
Member of Board of Directors, Kansas Respiratory
Care Society - Proponent

I am a Registered Respiratory Therapist employed at Stormont-Vail Regional Medical Center here in Topeka and am more than happy to represent the KRCS in support of this legislation. Respiratory Therapists and Technicians are involved in the early care of victims of motorcycle accidents in the Emergency Room Department. If there is trauma of the head, upper airway, and/or chest, the victim's ability to breathe may be severely compromised. The placement of an artificial airway, termed intubation, and the application of mechanical ventilation is then necessary by the Respiratory Care Practitioner under the orders of a physician. Much blood can be lost as a result of the trauma as well as much external and internal swelling of body tissues, particularly of the brain.

It is the head trauma that can result from these accidents that is particularly devastating even if the victim survives the accident. The cost of the care both acute and long term, can be very great, both financially and personally. Many times the victims are young adults and teen-agers who may not have insurance and/or are receiving their medical services paid by Medicaid. Their productivity can be lost to society because their injuries can have a long range debilitating effect resulting in their inability to work and be able to contribute to the tax base.

The average cost of taking care of a head trauma victim on mechanical ventilation is \$11,000 per day at Asbury Regional Medical Center in Salina. The average length of stay in the Intensive Care Unit for that patient is 8.5 days ^{HOUSE} ^{TRANSPORTATION} at Asbury. The total average cost of care for the head trauma victim on a mechanical ventilator is 93,500 dollars in the Intensive Care Unit. That ^{Attachment 12} 2/10/93



**Kansas
Respiratory
Care
Society**

cost incurred does not include the cost of care for the remaining time in the hospital before discharge or the cost of long-term rehabilitation. If the accident victim does not have insurance, then the system being the hospital and/or the State become the secondary victims in that these costs have to be absorbed and passed onto the insured consumer.

In 1991, there were 112 motorcycle accident victims admitted into the Trauma Centers of Wesley Medical Center and St. Joseph Medical Center in Wichita in Sedgewick County. Of these 112, there were 10% fatalities, 66% with major injuries, and 24% with minor injuries which means that 11 people died, 74 people had major injuries, and 27 with minor injuries. Of the 88 people who were not wearing helmets, 11 died, 57 had major injuries, and 21 had minor injuries. Of the 24 people who were wearing helmets, 13 had major injuries, 11 had minor injuries, and there were no fatalities. The difference between these two groups in the amount of death and injury is dramatic and decisive.

The Kansas Respiratory Care Society strives to work for the best health care for all Kansans. Health Care Reform begins with the individual. The savings in both dollars and human suffering is incalculable with the successful passage of this legislation. We strongly urge you to vote favorably in support of Senate Bill 1.