Approved 3-4-85
Date

MINUTES OF THE SENATE COMMITTEE ON TRANSPORTATION AND UTILITIES.

The meeting was called to order by Sen. Bill Morris at
Chairperson

9:00 a.m./xxxx on February 27, 1985 in room 254-E of the Capitol.

All members were present xxxxx.

Committee staff present:
Fred Carman, Revisor
Hank Avila, Research Department
Louise Cunningham, Secretary

Conferees appearing before the committee:
Andrea Ramsey, Wichita
Dan Lykins, Treasurer, Kansas Head Injury Association
Sgt. Jacobs, Kansas Highway Patrol
Dr. Loren Phillips, Department of Health and Environment
Mary Pat Beals, Gardner
Mrs. Mary Lou Heckathorn, Topeka
Mike Morrison, Wichita
Virgenon Bosworth, Topeka
Jenny Baker, Topeka
Mary Hendrix, Edgerton
Linda Diepenbrock, Kansas Nursing Association
Todd Harmon, Kansas Association of Property and Casualty Insurance
Marie Housh, R.N., Stormont-Vail Medical Center
Paula Woolworth, Olathe, Bethany Rehabilitation Center
Don Karr, Topeka Rehabilitation Association
Michael Byington, Epilepsy-Kansas, Inc.

HEARING ON S.B. 156 - MANDATORY HELMET BILL

PROPONENTS:

Andrea Ramsey, Wichita, told the committee about her son, Damon, who had been injured on a motorcycle. He had not been wearing a helmet. Today 4½ years after the accident, he requires total care. He was either in a hospital or nursing home for two years and is now at home. She spoke of the money spent for his care which is almost $100,000 per year. She also told of the despair and pain his family has suffered and urged passage of S.B. 156. A copy of her statement is attached. (Attachment 1).

Dan Lykins, Treasurer, Kansas Head Injury Association, said there were people here today who had been injured or who had members of their family injured who would testify. The medical bills for this type of injury are very high. If the insurance companies do not pay these costs, the state will.

Sgt. William Jacobs, Highway Patrol, said they were in support of the bill. He said the most common cause of death or severe injury involving motorcycles involved people with no helmets. (Attachment 2).

Dr. Loren Phillips, Department of Health and Environment, said after the repeal of the mandatory helmet law in 1976, there was a 106% increase in head injuries and a 67% increase in head injury severity. A copy of his statement is attached. (Attachment 3).

Mary Pat Beals, Gardner, Kansas Head Injury Association, submitted three letters from Neurosurgeons at the Menninger Foundation signed by Dr. Craig Yorke, Dr. John B. Runnels and Dr. K. N. Arjunan. They were in support of S.B. 156. Copies of these letters are attached. (Attachments 4,5 and 6).

Unless specifically noted, the individual remarks recorded herein have not been transcribed verbatim. Individual remarks as reported herein have not been submitted to the individuals appearing before the committee for editing or corrections.

CONTINUATION SHEET

MINUTES OF THE SENATE COMMITTEE ON TRANSPORTATION AND UTILITIES,

room 254-E, Statehouse, at 9:00 a.m.~~p.m.~~ on February 27, 1985

She also submitted an article from the Indianapolis Magazine, dated April, 1984 entitled "NHIF Stresses the Need for Prevention Measures". A copy of this article is attached. (Attachment 7).

Mrs. Beals said helmets do not impair vision or hearing in any way. She said as she travels throughout the statepeople are constantly asking why a helmet law isn't mandatory. She said when people are injured in Kansas with head injuries they get good care but when you receive a head injury you are injured for life and there is no cure. She had a brother who was killed in a motorcycle accident in 1979 and a sister who received a head injury in an automobile accident in 1980. This is when she got involved with the Kansas Head Injury Association. She urged passage of S.B. 156.

Mary Lou Heckathorn, Topeka, told the committee of her 31-year old son who was injured in 1980 and is now handicapped. He was not wearing a helmet and she made no excuses for him. He made the choice to not wear the helmet but she feels it should be mandatory.

Mike Morrison, Wichita, has been a police officer in Wichita for 7 years. In 1984 he was involved in an accident. He was simply going down the street when a car made a left-hand turn into his motorcycle. Fortunately, he was wearing a helmet. He would have been killed without it. He said Police Chief LaMunyon supports this bill. There are speed limits, traffic lights, and licensing requirements for safety. This would be another safety measure.

Virgenon Bosworth, Topeka, said you can read statistics all day long but she was personally involved. She always wore a helmet while riding a motorcycle but one day in 1972 she did not wear one and it was a terrible choice for her. She was injured and lay in the hespital for three months with head injuries. She had planned to be a professional dancer and actress but that one choice changed her entire life. She urged support for S.B. 156.

Jenny Baker, Topeka, said her son was injured severely and received a large settlement, but the money couldn't help him. He survived for 7 years and then passed away.

Mary Hendrix, Edgerton, said she is the mother of Mary Pat Beals. One of her daughters had severe head injuries caused in an automobile accide- but her son was killed on a motorcycle. One of her sons is still riding a motorcycle and does not wear a helmet. Two of her other sons immediately got rid of their motorcycles. She said she has been through the pain of having a member of her family with head injuries and urged support for S.B. 156

Linda Diepenbrock, Topeka, Kansas State Nurses Association, said she is a staff nurse in the Neurosurgical Intensive Care Unit at KU Medical Center. She sees the terrible injuriesand the emotional strain and anguish on the families. Lives are disrupted and it is heartbreaking. A copy of her statement is attached. (Attachment 8).

Todd Harman, Kansas Association of Property and Casualty Companies said they were in support of this bill.

Marie Housh is a nurse at Stormont-Vail and she sees many injuries from motorcycle accidents. She seldom sees a severe head injury where the rider was wearing a helmet. She has never taken care of one where the rider was wearing a helmet. She sees the family suffer. Some patients come over from intensive care and are in limbo. They do not know when they will wake up. If they do wake up, they will be changed. The staff tries to prepare the families and when they are discharged it is very difficult for the families. It takes a lot of care and money. Some need 24 hours of supervision. Some are still coping a year or two later and may make very small improvements in their capacities. She said she has seen so much suffering and supports S.B. 156.

Paula Woolworth, Bethany Rehabilitation Center, said they are constantly trying to control medical costs and have done studies to determine the average cost of head injuries. After a year of study they determined the cost was $120,000 to $150,000 per injury.

Don Karr, Kansas Rehabilitation Center, spoke of the costs involved for the young, severely injured person which would include vocational rehabilitation, unemployment benefits and perhaps homemaker and personal care attendant services. A copy of his statement is attached. (Attachment 9)

Michael J. Byington, Topeka, representing Epilepsy, Kansas, Inc., said he works with the Topeka Resource Center for the Handicapped and sees a great number of head-injured patients. They do not want to have more clients. He said people who have never sustained a head injury may be against helmets but anyone who has had a head injury and was not wearing a helmet in retrospective, wish they had been. A copy of his statement is attached. (Attachment 10).

The committee received copies of a letter from Rosemary O'Neil who told of her experience. One son had been killed on a motorcycle and was not wearing a helmet. Another son, in a separate accident, was injured but he was wearing a helmet. A copy of her statement is attached. (Attachment 11).

A memorandum dated February 22, 1985 from Tom Bell, Kansas Hospital Association was distributed to members of the committee. It was in support of S.B. 156. A copy of this memorandum is attached. (Attachment 12).

Meeting was adjourned at 10:00 a.m.

SENATE TRANSPORTATION & UTILITIES COMMITTEE

Date 2-27-85 Place 254-E Time 9:00

GUEST LIST

PLEASE PRINT

NAME	ADDRESS (City)	ORGANIZATION
[illegible]	1314 W 6TH	RETREADS
George Blevins	507 Mechanic, Lawrence	ABATE of Kansas
Richard Schlegel	Manhattan	ABATE
C.W. Heckathorn	Topeka	Ks Head Injury Assn.
Mary Lou Heckathorn	Topeka	Ks. Head Injury Assn.
SGT. BILL JACOBS	TOPEKA	KANSAS HIGHWAY PATROL
Roger L. McCollister	Topeka	
Tom Whitaker	Topeka	Ks Motor Carriers Assn
BOB BLACK	PITTSBURG	FREEDOM OF ROAD RIDERS, INC.
MaryAnn Bumgarner		Sen. Burke-intern
LORNA A. PHILLIPS	TOPEKA	KDHE
KEVIN ROBERTSON	TOPEKA	INTERN
Mary Lisco	Shawnee	Ks Head Injury assoc
Linda Diepenbrock	Overland Park	KS Head Injury Assn / KS State Nurses Assn
Virginia L. Friedrichs	Topeka, KS	KS Head Injury Assn.
PAULA WOOLWORTH	OLATHE, KS	Bethany Rehab Center
Michael F. Byington	Topeka, Ks	Epilepsy - Kansas
Ray Petty	Topeka	KACEH
TERRY BRUCE	K.C. K	K.H.A.
Lynnelle King	Topeka	Ks State Nurses Assn

SENATE TRANSPORTATION & UTILITIES COMMITTEE

Date 2-27 Place 254-E Time 9:00

GUEST LIST

PLEASE PRINT

NAME	ADDRESS (City)	ORGANIZATION
MARY E. HENDRIX	EDGERTON, KS	KANS. HEAD INJURY ASSOC.
Elisa Harshberger	K.C., KS	KHIA
DAN LYKINS	Topeka	KHIA
Ann Rempel	Wichita	none -
Stephanie Rempel	Wichita	none
Jennie L Baker	Topeka	KHIA
Dorothy [illegible]	Wichita	—
Richard Harmon	Topeka	KS Prop. Casualty
MIKE MORRISON	WICHITA	W.P.D.
Marie Housh RN	Silver Lake Ks	Nurse \ KHIA
ROSEMARY O'NEIL	TOPEKA	—
Ken Zarda	K.C.	KHIA

ADDRESS TO SENATE TRANSPORTATION COMMITTEE

February 27, 1985

Gentlemen, thank you for giving me this opportunity to speak to you this morning. I have come to ask you to pass Senate Bill 156 and to help Kansas once again have a mandatory motorcycle helmet law for all motorcycle riders and passengers.

The Hurt Study

In a study performed for the U. S. Department of Transportation, in the region of Southern California, from July 1975 to September, 1980, Dr. H. H. Hurt of the University of Southern California did a study of motorcycle accidents. The study was performed by a very specialized research team of engineers, psychologists, doctors and data processing specialists--all with motorcycle riding experience and special training in the safe operation of motorcycles and the techniques of researching accidents. They performed on-the-scene, in-depth studies of 900 motorcycle accidents in Southern California, as well as studying the routine accident reports filed on 3600 other motorcycle accidents in that region.

They studied every aspect of motorcycles, accident locations, riders, passengers, equipment, riding techniques and other safety factors involved in the accidents. Their ultimate conclusion was that the motorcycle rider's lack of head protection accounts for the most severe but preventable injuries, and that the only significant protective equipment for motorcyclists is a qualified safety helmet, which can spectacularly reduce head injury frequency and severity. They found that helmets do not impair vision, hearing or contribute to any severe injuries.

ATT. 1
2/27/85

At that time, California had no mandatory helmet law and no requirement that traffic investigators report helmet usage in motorcycle accidents. That is true in Kansas today.

Among the 900 in-depth accidents studied, the Hurt study found the following:

> Of 900 accidents, there were 861 discrete injuries to the head and neck areas (256 minor, 59 moderate, 18 severe, 9 serious, 29 critical, and 6 fatal.)

To understand some of these terms, it is helpful to know that minor injuries are those in which the patient is hospitalized less than 48 hours and suffers less than two hours of unconsciousness. It also helps to know that even brief periods of unconsciousness--20 minutes or less--can cause brain damage. Of 538 patients suffering "minor" injuries in a Virginia study, after three months of care, among patients who had been previously employed, 34% were unable to go back to work. 79% suffered persistent headaches; 69% suffered continuing defects in memory, attention, concentration and judgment. Rimel, R. W., et al, "Disability caused by Minor Head Injury", Jour. Neurosurgery, 9:211, 1981.

Almost all persons suffering head injuries who are comatose for even hours suffer irreversible alteration of their social and psychological makeup. Patients who suffer moderate to severe closed head injuries experience impaired self control, regulation and capacity for adaptive behavior. Their intellect, reasoning power and emotional control are disturbed. They lack social judgment. They have difficulty coping with the everyday problems of living. They lose the ability for responsible behavior, self-direction, organization and common sense. They become intellectually, socially and emotionally dependent. Sowers & Marshall, "Severe Head Injury: Current Treatment and Research," The American Ass'n of Neurosurgical Nurses, 1982.

Among persons who suffer "moderate" head injuries, after three months, 69% are unable to return to work; 93% suffer persistent headaches; 90% suffer memory problems.

When you see figures saying people had head injuries, you can remember that according to the Virginia study by Rimel's team, 55% of all head injuries suffered will be classified as minor, 24% as moderate and 21% as severe. 77% will be suffered by young men. Rimel, R. W., et al., "Moderate Head Injury: Completing the Clinical Spectrum of Brain Trauma", Neurosurgery, Vol. II, No. 3, 1982.

The Hurt study also found:

-- In only four accidents did a helmet contribute to injuries, and then it was only "band-aid" type injuries, and in each case the helmet had prevented far more serious injuries.

-- In 11.8% of the accidents there was confirmed alcohol or drug involvement.

-- Only 40% of the riders wore helmets, although a comparison study of riders on the street who were not involved in accidents showed approximately 50% of riders wore helmets. Thus, the riders who did not wear helmets were involved in accidents with a greater frequency than those who did.

-- There were 54 fatalities; only 22.6% wore helmets.

-- Most riders who don't wear helmets say that they are not wearing them because they did not expect to have an accident. Others don't wear them because they are inconvenient.

-- Helmet use decreases after dark and in warm weather. It increases in wet weather. More motorcyclists appear to wear helmets for weather protection than wear them for head protection.

-- Most accidents involve males ages 17 to 39.

-- Fewer women are involved in accidents, and they are more likely than men to wear helmets. They are more apt to be passengers, and passengers suffer fewer injuries, largely because they are protected by the bodies of the riders.

-- Inexperienced riders (one year or less accounted for 73.4% of all the accidents. 57.5% of the accidents involved riders with six months or less experience.

-- In 287 of 900 accidents, there were injuries directly to the portion of the head which would be covered by a helmet, the cranium and the enclosed brain, causing the following injuries:

Degree of Injury*	Number	Percent of Total
Minor	158	58.5%
Moderate	56	16.0
Severe	20	7.0
Serious	9	3.1
Critical	30	10.5
Fatal	14	4.9
TOTAL	287	100.0%

*Unhelmeted riders accounted for approximately 80% of the more severe head injuries, as well as 69% of the neck injuries.

-- Few of the riders had any formal training riding motorcycles. They were mostly self-taught and had a great deal of inaccurate information about helmets, collision avoidance techniques and safe riding strategies.

Kansas

In Kansas, as in other states, accidents are the leading cause of death to persons from ages 1 to 44. There are about 1400 new head trauma victims (not all from motorcycle accidents) yearly who suffer moderate disability and another 300 who suffer severe disability. The majority of these patients require constant supervision, and the patients with severe disabilities are generally relegated

to nursing homes. 80% of those suffering head injuries are less than 30 years old, with normal life expectancies and can expect to spend 35 to 40 years in a nursing home or on total disability, according to Dr. George Varghese, Associate Professor in the Department of Rehabilitation Medicine at the University of Kansas Medical Center. There are no exact figures on what it costs families, insurance companies, and the State of Kansas to maintain these persons, although some estimates can be made.

The McSwain study - Kansas

When helmet laws began being repealed the U. S. Department of Transportation commissioned some studies to be made of the effect of such repeals. Kansas was one of the states targeted for study. In that 1975-76 study, Dr. McSwain of the University of Kansas found that fewer than 50% of all motorcycle riders wore helmets after the repeal, compared to 95% (estimate of Highway Patrol) before the repeal. The study covered 3,852 motorcycle accidents occurring in the two years after the Kansas repeal. Like the Hurt study, it was found that riders who wore helmets suffer fewer fatalities and head and neck injuries than riders without helmets. There were 17 fatalities, six with helmets and 11 without. Helmeted riders received 91 head injuries per 1,000 accidents. Nonhelmeted riders received 188 injuries per 1,000 accidents. Riders without helmets are more than twice as likely to be killed or suffer head injuries than riders without helmets. Fatalities and injuries increased 333% after repeal of the helmet law in Kansas.

Things are not getting better. In 1983, in Kansas, there were 2004 involvements in motorcycle accidents, including 42 fatalities, 6 with helmets, 14 without, and 22 whose helmet use was unknown. There were 493 incapacitating injuries, 52 with helmets, 98 without, and 291 whose helmet use was unknown. How many years are you going to allow this to continue?

Motorcycle riding is a privilege granted by the state, not a right. Complying with lawfully enacted safety regulations and laws is a condition which the State rightfully imposes upon that privilege.

Damon's Story

Why am I here telling you this? There is nothing new in the statistics which I have very briefly summarized for you. They have been around for years and have been repeated to this legislature before. I am not here because I am altruistic. I am not here because I have studied the statistics. I am here because my family is part of the statistics. I came to tell you Damon's story, to tell you what effect the repeal of the helmet law in Kansas has had on the lives of my family. I am going to tell you this in the hope that it will cause you to do everything humanly in your power to cause this bill to be passed.

Damon is my son. In 1980, Damon was 19 years old. He has brown hair, brown eyes, and is 6 foot 4 inches tall. In 1980 he weighed 190 pounds. Damon completed high school in May, 1980. He planned to enroll in Wichita State University. When he was 15, his IQ was tested at 125. All of you know what it is to be proud of a child. Senator Francisco, I understand that you have several children. Your fifth-grader is very bright, and you are looking forward to her coming to Washburn to participate in a spelling contest. Continue to take pride in her progress and to pray that she always has that intelligence and those abilities.

My son Damon was also bright. He was a passionate reader. Damon's English and Political Science teacher in high school told me he had exhausted their small library of all the books that interested him. They had to borrow from other school libraries to keep him satisfied and occupied. He read his way from Asimov to Solzhenitzen to Zelazney. (I am not even sure I can spell them right!) Damon wanted to be a writer and spent many hours filling his school notebooks

with poems and short stories. He did a poll to find out how many people really knew what was in the Bill of Rights.

He loved rock music and spent a lot of time listening to records, trading tapes with his friends and attending rock concerts when he had a chance. Like many teenagers, he and his friends thought about becoming musicians. They got together occasionally to play their guitars and drums, not particularly well, but with great enthusiasm. They played frisbee in the park. He loved to fish. He mowed lawns, delivered newspapers, washed cars, and worked in fast food places while he was in junior high and high school.

But don't get the idea from my memory of his better characteristics that he was an angel. He was not. He was an ordinary, often ornery teenager. He was always big for his age, without being emotionally ahead of his years. That made it difficult for him when people expected him to act as old as he looked, instead of as young as he felt inside. He was immature and a little scared of what the future might bring. He could not imagine ever being 30 years old. He was often rebellious. He didn't clean his room. He liked to cook, but did not clean up after himself. He liked to party with his friends. He did not like to cut his hair. He liked to stay up all night and sleep all day if he could. He fought with his sister.

Perhaps more than anything else, Damon loved to ride his motorcycle. Often, it was not until we heard his bike pull into the yard that we were able to sleep soundly at night.

In August, 1980, Damon picked up a catalog from Wichita State University and began planning his first semester. To save for the college tuition, he took a job, his first full time job.

On the evening of September 9, 1980, Damon went across Wichita to a party at a friend's house. About 11:00 p.m., he left the party, telling his friends that he had to get home because he had to get up and go to work the next day.

He climbed on his motorcycle and headed home. He was not wearing his helmet that time, but he did not worry about it. Under Kansas law, he did not have to wear a helmet. And in his experience there was no penalty for not wearing it. And, it was more fun to ride without it. As he rode south along the canal route, he began to overtake a semi truck. Everything appeared normal. He passed the trailer and began to draw abreast of the cab. Then the front wheel on his bike began to wobble, and he lost control. He was thrown forward off the bike, striking the pavement on his head and left shoulder and knee. He slid 187 feet before he came to a stop. The bike engine, behind him, was still running. It suffered almost no damage. Damon lay unconscious, bleeding onto the pavement. He was dying. He was saved only because he was about a mile from the trauma center at St. Joseph Hospital and an ambulance was able to get him there quickly.

They performed an emergency splenectomy on him and placed him in intensive care. I was in Lawrence when I got the call. In the middle of the night, I raced through the black Flint Hills, arriving at St. Joseph at 5:00 a.m., after the surgery. He was unconscious, and was hooked up to a roomfull of life support systems. He had lost skin around his left eye, which was blinded by the accident. He had also lost skin on his shoulder, hands, and knee.

When I was putting on a hospital gown before I could go into his room, one of the nurses in intensive care told me he might not live 24 hours, and it might be better if he did not, because he had suffered extensive brain stem damage. I could only hear that my only son, my oldest child, might die before the day was out. He did not. I thought that was the answer to a prayer. Maybe it was, but neither the prayer nor the answer quite addressed the reality of the problem.

I prayed, "Let my son live," and he did. He was in intensive care for a month, in a coma, unmoving, eyes closed, unresponsive. Brain scans showed extensive swelling and damage. An EEG showed that he was not brain dead, but neither were the rhythms

normal. I prayed, "Let him open his eyes." After thirty days he did. I thought that was the answer. After another month in intensive medical care, he was moved to rehabilitation. I talked to him; I read to him; I sang to him, all the time hoping that he could hear me telling him to fight for his life, not to give up.

After a month in ICU, he spent a few weeks in intensive medical care. Then he was moved to rehabilitation. I began to pray other prayers. "Let him be normal again." The doctor said, "Your son will never be normal again." I prayed, "Let him at least be able to walk and talk again." The therapists said he probably would never walk or talk again. I prayed, "Let him recognize me again." He did not. I prayed, "Let him at least be able to turn over in bed by himself." He did not. I prayed, "Let him at least be able to eat normally again." After two years, we finally taught him to eat again.

For two years after the accident, Damon was in the hospital or in a nursing home. Finally, the medical community said, we cannot do anything for him.

My expectations are lower, but I still pray. Now I pray, "Let me stay healthy so I can support him as long as he needs me. Let me stay strong, so I can turn him over in bed and get him up. Let me have enough time during the day to feed him, to hold his hand, and to sit with him awhile. Let me love him as he is, and somehow, let him know it."

Every morning someone bathes Damon, shampoos his hair, shaves him, puts on a fresh external catheter, a clean gown, and gets him ready for breakfast. Then they fix his breakfast and feed him. They get him up in a wheelchair while they change his bed. They give him his medicine. They talk to him. They exercise his arms and legs, his feet and hands, so they don't draw up in contorted positions. They give him his medicine, take his temperature and blood pressure. They keep track of his fluid intake and output and his bowel habits. They feed him his lunch and his supper. They play the television, or the radio or music tapes for him. He stares at the ceiling and grinds his teeth.

Damon's care is all-consuming and extremely expensive. He qualifies for

Medicaid and Medicare, and our insurance covers some, though not all of his needs. In the four and a half years since his accident, our insurance has paid $370,748.97 for his care. Medicare and the State of Kansas together have probably paid another $50,000 or more. That is almost $100,000 per year for one motorcycle victim. If he were in a nursing home, it would cost the State of Kansas at least $15,000 a year for his care, and with doctor and hospital bills, it would probably be twice that. He has seizures sometimes. Sometimes he has stomach seizures and begins to throw up, which is dangerous, because he could aspirate and choke. When he gets a cold, he cannot cough or clear his throat or blow his nose. When something gets out of control, he winds up back in the hospital for a few days.

There are 450 to 500 new people in the State of Kansas every year who suffer incapacitating injuries. Senators, the fiscal note on those 480 to 500 persons if picked up by the State--and the majority of it will be, in one form or another--is a minimum of $7,200,000 per year. And that is repeated year after year after year. Why aren't we doing something about it?

Senators, when this legislature repealed the helmet law in 1976 my son was 15 years old, tall, healthy and intelligent, with a future ahead of him. Today he is a 6'4" infant.

Helmets won't prevent accidents, but they will cut by two-thirds the number of fatalities and head injuries. Most people would be happy to save one person's life. You can save thousands of lives, bodies and minds.

If you could feel the pain my family and I feel, if you wished as I wish that no other son, no other daughter, no other mother or father would have to go through what my family has been through, you would rush to pass this bill.

And that is why I have told you Damon's story, in the hope that you will never experience it personally, and that you will prevent others from experiencing it.

For I can tell you, Senators, that you will have learned a great deal about despair the day you realize that your first born child will never be normal again, will never speak to you or look at you with recognition again. You will have learned a great deal about endurance when, after four and a half years, when you thought yourself beyond the pain, you find yourself unexpectedly crying as you drive to work. You will have learned a great deal about sadness the day you realize that you can barely remember how your son looked and sounded before the accident. And, Senators, you will have learned all there is to know about hopelessness the day you realize that you have just wished that your only son will die.

ANDREA M. RAMSAY

SUMMARY OF TESTIMONY

Before the Senate Committee on Transportation and Utilities

SENATE BILL 156

Presented by the Kansas Highway Patrol
(Sergeant William A. Jacobs)

February 27, 1985

APPEARED IN SUPPORT

The Patrol appears in support of Senate Bill 156 which makes it mandatory for all operators and passengers upon a motorcycle or motorized bicycle to wear an approved helmet regardless of their age. The requirement contained in this legislation would not cause undue hardship on any person and will greatly increase the chance of survival of persons involved in motorcycle or motorized bicycle accidents.

The most common cause of death or severe injury resulting from accidents involving these vehicles is head injuries. These vehicles offer no protection such as you have when in an enclosed motor vehicle, therefore it only stands to reason that a protective device such as a helmet can only be a benefit and attributes to the well-being of riders and passengers at all times.

For the sake of safety to the growing number of people who travel by these conveyances, we respectfully ask that favorable consideration be given to this bill.

2/27/85
ATT. (2)

KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT

TESTIMONY ON SENATE BILL 156

PRESENTED TO THE SENATE COMMITTEE ON TRANSPORTATION AND UTILITIES

FEBRUARY 27, 1985

Summary/Background:

This bill would amend K.S.A. 8-1598 to make it mandatory for all persons operating or riding upon a motorcycle or a motorized bicycle to wear a helmet which complies with minimum requirements of the national highway traffic safety administration. All persons operating or riding upon these vehicles would also be required to wear an eye-protective device which complies with standards of the secretary of transportation, except when the motorcycle is equipped with a windscreen. Failure to comply with these requirements would not constitute negligence.

The present law exempts operators and riders, 18 years old and older, from wearing a helmet.

Issues/Concerns:

The Kansas Head Injury Association estimates that each year approximately 270 Kansans are permanently and severally disabled from head injuries. Nearly 1400 receive minor to moderate head injuries resulting in some permanent loss of function and another 2800 receive injuries which result in little or no permanent loss of function. Approximately 570 Kansans die each year as the result of a head injury. Death occurs in 49% of the cases of severe head injury. For the 51% of the severally injured, disabilities include long-term coma, total dependency, total or partial blindness, paralysis, inability to speak and greatly diminished physical and mental abilities. The vast majority are sentenced to a lifetime of care in a nursing home. The cost to the medical care system can be tremendous, amounting to more than $1.5 million over the lifetime of the patient.

According to data from the Head Trauma Program at the Rehabilitation Institute of Chicago most deaths from motorcycle accidents are related to head injury and these rates are twice as high for motorcyclists not wearing helmets. Hospitalization is more common for motorcycle accidents victims not wearing helmets and the cost of hospitalization for non-helmeted riders can be three times that of those hospitalized after accidents in which helmets were worn.

A study by the National Highway Traffic Safety Administration in 1974 compared head injuries in motorcycle accidents in Illinois which had no helmet law with those in Michigan which has a compulsory helmet law for all ages. Fatal or serious head injuries were three times more common in Illinois. Studies in other areas of the country have documented similar results. Studies in Colorado, Kansas, Oklahoma and South Dakota have shown that helmetless riders have a higher incidence of neck injuries as well.

Motorcycles and motorized bikes are involved in about 8% of all fatal motor vehicle accidents and because they have so little protection motorcyclists have a seven times greater chance of fatal or severe injuries for each mile driven than do automobile drivers.

ATT. 3
2/27/85

A study by the Department of Emergency Medical Training, University of Kansas Medical Center, conducted in 1976, following the repeal of the mandatory helmet law for all ages, showed a 333 per cent higher fatal injury rate for individuals who were not wearing helmets at the time of their accident compared with those that were wearing helmets at the time of an accident. There was a 106 per cent increase in head injuries and a 67 per cent increase in head injury severity. The actual number of motorcycle accidents during the period when helmet use was mandatory fell by 50 per cent.

Once an individual is injured in a motorcycle accident, the victim becomes a cost factor to the family and public. Once disabled the victim frequently must be supported by public assistance and rarely has insurance to meet initial hospital costs and long-term medical costs. If the victim is supporting a family the costs to society are even greater. And perhaps the victim who can no longer walk, see or speak, or recognize loved ones, pays the greatest price of all.

The Department trusts the committee will find these data useful in making a decision on this bill.

cr/17D

THE KHIA

The Kansas Head Injury Association, is an advocacy group working to improve the quality of life for those persons confronted by "the silent epidemic."

Composed of head injured individuals, their families, interested friends, and professionals throughout the state, the KHIA has committed itself to bring the problem and needs of the head injured population to statewide attention.

Enabling the head injured individuals to reach their highest human potential possible is our goal, and the right of all head injured persons everywhere.

Affiliated with the National Head Injury Foundation as their state chapter, the Kansas Head Injury Association is trying to locate the head injured and their families in the state of Kansas in order to assist them in their emotional needs and to act together as a unified voice to obtain the vital and necessary services needed for these individuals. Their numbers exceed 5,000 victims added to the rolls each year.

The Kansas Head Injury Association is concerned with all aspects of the problem of head injury from prevention to late rehabilitation.

What Is A Head Injury?

Characteristics of Head Injury

Serious head injuries usually result in prolonged loss of consciousness or coma. While it may be brief, lasting only a few minutes, it may extend to days or weeks. As time in coma lengthens, emergence to a fully alert state can take a long time. The individual and his family face a prolonged period of rehabilitation that can extend for years.

Symptoms of Head Injury

Symptoms can vary greatly depending upon the extent and location of the brain injury. Usually some communication, judgement, and perception problems occur regardless of which side of the brain was injured. However, damage is not always confined to the point of injury. In many cases of head injury, the brain crashes violently against the skull causing diverse symptoms unrelated to the functions associated with the specific part of the brain suffering acute injury.

People working with head injured clients often report their clients suffer from varying degrees of memory loss and impaired learning ability. Personality changes, lack of emotional control and seizure disorders are also common.

KHIA - GOALS

As a chartered state chapter of the National Head Injury Foundation, the KHIA will work with the NHIF and concern itself with all aspects of the problem of head injury from prevention to late rehabilitation. Four of our major goals are:

1. STIMULATE PUBLIC AND PROFESSIONAL AWARENESS OF THE PROBLEM OF HEAD INJURY — THE SILENT EPIDEMIC

   Identify causes and means of prevention.

   Define the nature of disability after head injuries.

   Set forth special needs in head injury rehabilitation.

   Cite need for specific legislation to fund programs and services for the head injured.

2. PROVIDE A CENTRAL CLEARING HOUSE FOR INFORMATION AND RESOURCES FOR THE HEAD INJURED AND THEIR FAMILIES.

   Develop state resource directories.

   Distribute KHIA newsletters.

   Produce informational pamphlets on head injury.

   Disseminate information on the legal rights of the head injured person.

3. DEVELOP A SUPPORT GROUP NETWORK FOR THE HEAD INJURED AND THEIR FAMILIES.

   Assist families in organizing local support groups.

   Institute a "Hot line" for people in need.

   Assist head injured individuals in organizing groups for socialization and problem solving.

4. ESTABLISH SPECIALIZED HEAD INJURY REHABILITATION PROGRAMS.

   Encourage existing programs and develop new programs stressing cognitive retaining, behavior modification and vocational rehabilitation leading to independent living.

   Design living facilities either transitional or permanent in association with rehabilitation programs.

THE KHIA WILL SEEK THE NECESSARY FUNDS TO CARRY OUT THE GOALS BUT WE NEED YOUR HELP!

Our strength is our membership composed of the head injured, their families, concerned professionals and friends. Join with us in this much needed endeavor.

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"WE ARE COMMITTED TO THE GOAL OF ENABLING THE HEAD-INJURED INDIVIDUAL TO ACHIEVE THE HIGHEST HUMAN POTENTIAL POSSIBLE."

"From Coma to Community"

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No person who cannot pay will be denied sponsoring membership. All memberships include membership in the National Head Injury Foundation. All memberships and gifts are tax deductible.

Please indicate for our records if a head injured individual, family member or a professional, and if professional, what field: ______________________________

Would you be willing to help us in some capacity? Yes, especially in ______________________________

Please make checks payable to:

Kansas Head Injury Association
P. O. Box 1371
Kansas City, Kansas 66117
913-362-5472

KHIA is a non-profit organization.

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Kansas Head Injury Association

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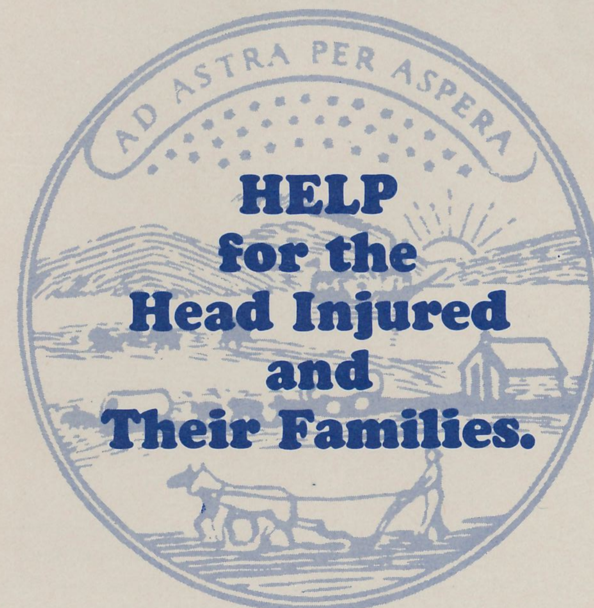
A NATIONAL HEAD INJURY FOUNDATION STATE CHAPTER



The
Menninger
Foundation

Department of Neurology,
Neurosurgery,
Internal Medicine

John B. Runnels, MD
Director

Neurology
Philip E. Mills, Jr. MD
Jonson Huang, MD
John A. Segerson, MD
Joseph M. Stein, MD

Neurosurgery
John B. Runnels, MD
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Craig H. Yorke, MD
K. N. Arjunan, MD

Internal Medicine
Paul W. Cochran, MD
Percival G. Pascua, MD
Joseph D. Sargent, MD
Nathaniel Uhr, MD

February 25, 1985

Honorable Bill Morris, Chairman
Senate Transportation Committee
Senate Chambers
State Capitol Building
Topeka, Kansas 66612

Dear Senator Morris:

I am writing in support of Senate Bill 156. I am a neurosurgeon in Topeka who deals daily with head injuries and their aftermath. I recognize that some such injuries are unavoidable, but feel that helmets for motorcyclists represent a demonstrated means to reduce the incidence significantly of needless major head injury. The problem of major head injury is a very painful one, principally for the families of those who are injured; we physicians often are impotent to deal with the aftermath of such a catastrophe.

I recognize that there are powerful "individual freedom" arguments against a mandatory helmet law. Those of you on the Committee will need to weigh those arguments against the public health considerations on the other side. I do feel that if mandatory helmet legislation is not felt to be appropriate, it would be worthwhile to require motorcyclists to insure their bodies and their health commensurate with the demonstrated risk that motorcycle riding represents. Such an approach would speak to the concerns of individual freedom while at the same time protecting the general public from the onerous expense of caring for those chronically vegetative individuals who have suffered major head injury in an unhelmeted motorcycle accident.

Thank you for your attention.

Sincerely,

Craig Yorke, M.D.

CY/jt

901 Garfield Street
Box 829
Topeka, Kansas 66601
913 357 6171

2/27/85
ATT. 9

The Menninger Foundation

Department of Neurology,
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Nathaniel Uhr, MD

February 25, 1985

Honorable Bill Morris, Chairman
Senate Transportation Committee
Senate Chambers
State Capitol Building
Topeka, Kansas 66612

Dear Senator Morris:

There is incontrovertible statistical evidence that helmet protection of the human head for riders of unprotected vehicles significantly reduces the frequency and severity of head injury, both by collision with other vehicles and impact with the unmoving environment.

As a neurosurgeon I am all too frequently involved in the tragic results of cranial injury, rarely of the protected head, in my experience. It is probably true, on the other hand, that at high speeds the force of impaction is often severe whether the head is protected or not. There are studies which delineate clearly the results of the various impact vectors and forces.

I regret that I cannot be present to testify in front of the Senate Transportation Committee in person, but I can say, unequivocally, that I express the unanimous opinions of the neurosurgeons of Topeka, Kansas: Dr. Craig Yorke, Dr. K. N. Arjunan, Dr. Robert Woods, Dr. Richard Tozer, and myself. We firmly support the reinstitution of a helmet law for the State of Kansas.

Respectfully,

JB Runnels

John B. Runnels, M.D.
Director
Department of Neurology, Neurosurgery,
Internal Medicine

JBR/jt

901 Garfield Street
Box 829
Topeka, Kansas 66601
913 357 6171

2/27/85
ATT. 5

The Menninger Foundation

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Internal Medicine
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Percival G. Pascua, MD
Joseph D. Sargent, MD
Nathaniel Uhr, MD

February 26, 1985

Honorable Bill Morris, Chairman
Senate Transportation Committee
Senate Chambers
State Capitol Building
Topeka, Kansas 66612

Dear Senator Morris:

As a practicing neurosurgeon in Topeka, Kansas, I fully support reinstitution of mandatory helmet legislation for motorcycle riders. I believe that the use of helmets can prevent, to a significant extent, serious head injuries that occur as a result of motorcycle accidents.

Sincerely,

K. N. Arjunan, M.D.

KNA/jt

901 Garfield Street
Box 829
Topeka, Kansas 66601
913 357 6171

2/27/85
ATT. 6

NHIF stresses the need for Prevention Measures

Safe or Sorry

Headlong Into Tragedy

By Patrick J. McKeand

An Indianapolis professional man who works daily with victims of head injuries during their recovery is unyielding in his attitude about wearing protective gear when traveling:

"I don't even drive to the grocery without putting my seat belt on. I'm tempted to wear a helmet in my car. When you live with this and see it, you understand what can happen."

Does he wear a helmet when he takes his bike for a spin?

"Are you kidding? I wouldn't even get on a motorcycle. Motorcycle crash victims are so screwed up physically that most are not even candidates for rehabilitation."

One hundred cyclists will die in mishaps on Indiana highways this year alone. Another 5,000 will be injured — many of them handicapped for the rest of their lives.

Effective the first of this year, 16- and 17-year-olds riding motorcycles in Indiana are required by law to wear helmets and protective eye goggles. Their passengers face the same requirements.

All other bikers have the right to choose whether or not to protect themselves.

What about head injuries from motorcycle accidents in the Indianapolis area? Is it a problem — a "silent epidemic" affecting large numbers of people?

"We see so many of them, tragically they have become routine," says Dr. David J. Powner, director of critical care units at Methodist Hospital.

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"In talking to families of victims involved in this kind of injury, we have discovered they are totally uninformed about the consequences — immediate and long-range," Powner notes.

He sketches this scenario:

"Characteristically, what we see are young, healthy teen-agers or men in their early 20s. The victim may be a college freshman on his way home for summer break. Here motorcycle accidents are more seasonal — unlike Phoenix or Los Angeles.

"A car pulls out in front of the cyclist. The accident is not the fault of the cyclist. The rider and cycle become separated. The rider becomes a human projectile. His head becomes the frontal point."

The most tragic episode of his young life then begins to unfold. His body soars through the air. his head ramming some stationary object. Inside the skull, the brain dislodges from its comfort zone and slams brutally against the head's hard shell.

Paramedics stabilize the victim's neck at the scene of the crash. At the same time they inject fluids intravenously to prevent further complications. A Lifeline helicopter picks up the victim and rushes him to Methodist Hospital for the next round of lifesaving procedures aimed at sizing up the problems and putting priorities on his most critical medical needs.

Health care experts jot down the phrase "deceleration injury" in the patient's medical records. It is no longer a question of brain damage, but rather how much brain damage.

The biker, if he survives, may have one of three categories of head injuries, Powner explains. The victim is lucky if he suffers only a *concussion.* His future state of mind and physical well being look a bit shakier if he sustains some sort of *contusion* where small blood vessels are damaged or broken. The most serious head injury — *bleeding* — usually leads to a coma.

"Get the patient on a CAT scanner quickly," the doctor orders in an effort to determine the victim's surgical needs so that preparations can begin as soon as possible to relieve any pressure on the brain.

As Powner sadly notes, some cyclists' injuries are so major that the medical staff cannot even evacuate blood from the brain to provide surgical care.

The critical care unit spends the next three to four days looking at the evolution of the swelling in the brain. "The problem with the brain," Powner says, "is that it has no place to swell because of the rigid skull. During the first week in critical care, the staff monitors the patient and focuses its efforts on procedures to alleviate the pressure around the brain.

"If you kill a brain cell, you cannot replace it," Powner points out.

Powner cites one important unknown factor involving head injuries from motorcycle crashes: "You don't know how long the brain has been damaged. It could have been two hours or 12 hours. Most of the time we have information regarding the events at the scene of the accident. But when we don't, our job is more difficult.

"The survivors usually spend about five days in the intensive care unit before they are transferred to a regular patient room for recovery and rehabilitation.

"The tragedy with this kind of head injury is that the patient's body ultimately may be okay, but the brain is damaged. The victim could become a vegetable for the remainder of his life."

All shades of permanent neurological damages are possible. As Powner recalls from his experiences handling such critical care patients, some may have partially or completely lost certain functions, such as speech, memory, the ability to recognize objects or their sense of concentration.

Acute care now completed, the next step in the recovery and rehabilitation process is to decide where patients go after leaving the hospital.

Some will go home. Some with major brain damage will go to a nursing home — temporarily or permanently. Others will be transferred to a rehabilitation center specializing in head injuries. Only a few such centers are now in operation around the nation.

The August F. Hook Physical Rehabilitation Center at Community Hospital is a pioneer in this field. Dr. Charles F. White, the center's medical director, and his associate, Dr. Donald A. Dreyer, head a team of specialists trained to improve the quality of life for head injury victims who might otherwise be totally dependent on others for the rest of their lives.

White lists these criteria for admission to the east side rehabilitation facility:

- The patient needs to be off life-support systems.
- He should be able to tolerate three hours of physical therapy a day.
- He should be functioning well enough mentally to follow simple instructions.
- He should, if possible, be mentally capable of some carryover — building blocks for progress.

In addition to White and Dreyer, the rehabilitation team includes nurses adept at teaching rather than just caring for patients. Their skills require a high level of medical and surgical acumen. And there are physical therapists, occupational therapists, speech therapists, a clinical psychologist, a social worker and a recreation therapist.

The team meets with the patient and his family, then compiles a report to determine whether or not it is appropriate for him to stay. Family involvement, White notes, is critical in rehabilitation. If a pa-

The Tragic Blow

Statistics on rehabilitation for head injury victims are not realistic, according to Dr. Charles F. White, medical director at the Hook Physical Rehabilitation Center at Community Hospital, and his associate Dr. Donald A. Dreyer.

Both claim the figures don't really tell the story. Each case is unique.

Although a composite sketch they offer may have its limitations, it does offer some clues:

The head injury victim is probably a male 17 to 22 years old. He is unemployed or working in a factory in a semiskilled or skilled labor job.

The victim arrives at the hospital unconscious with a broken arm or leg and some facial fractures. His condition is complicated by a collapsed lung or ruptured internal organ.

In a coma, he requires intensive care. He usually wakes up in three to four weeks, then suffers from spastic paralysis at least on one side.

He has some cognitive deficit, and his speech is altered. He may even discover a different tone or accent in his voice.

He probably has some kind of visual problem. He may see double or lack peripheral vision.

He becomes agitated, lethargic or both.

As he wakes up and gets to the level of recognizing his state of being — mentally and physically — he may become belligerent and violent.

Soon afterwards, he may become depressed and withdrawn.

His recovery and rehabilitation may take from two to four years.

He may never fully recover.

tient cannot benefit from the center's rehab program, he will not be admitted.

Satisfied that the patient will benefit from the center's rehab program, the team defines his discharge goals. The question is, White says, "What are the reasonable levels of functions we can expect the patient to reach?"

Goals must be functional, the medical director emphasizes, in order to prepare each person for outpatient treatment after his four- to eight-week stay at the center.

"Some patients have to backtrack on their education. They will need to learn old functions all over again," White points out. "Other patients may be physically disabled. They may have to learn job skills which will require intellectual rather than physical activity. If the patient has the capacity to learn, every day will be a new day in his life."

White and Dreyer are among just a few physiatrists practicing in Indiana. Their specialty as physicians in physical medicine and rehabilitation, is similar in many ways to sports medicine.

Both share concerns about third-party insurance restraints that prohibit more extensive rehabilitation. White cites one case of a 16-year-old head injury victim who languished in a nursing home for five years before being admitted to a rehab program. Many victims never get any help once they leave the hospital, he laments.

Why?

"Society is ready to spend hundreds of thousands of dollars on acute care but is not willing to spend any money on rehabilitation," White says. "Most doctors are concerned about acute care and getting over that hurdle."

The rehab process also is costly — around $25,000 for a 40-day stay at the east side facility. And the costs don't stop there. The victim's house has to be altered, ramps have to be installed, the bathroom and the stairs must be changed.

The victim's life style and that of his family are never the same again, White notes. "It's a whole new ballgame for everyone involved."

Many victims do recover physically but remain handicapped because of short attention spans, lack of concentration or inability to add and subtract. They may be struggling emotionally or psychologically.

Dr. Lance E. Trexler, Ph.D., one of the naion's leading authorities on neuropsychological rehabilitation for head injury victims, has taken the formal recovery process one step beyond the Hook facility at Community Hospital.

His work at the Community Hospital clinic prompted him to open his own Center for Neuropsychological Rehabilitation last December in Suite 100 at 7155 Shadeland Station. His new clinic and the Hook facility work hand in hand to provide a complete package of recovery for patients and their reintegration into their family environment.

Trexler's clinic is the only one of its kind in the world. Through the use of microcomputers. Trexler and his staff tailor individual training programs designed to restore the patient's math, memory, speech and concentration skills to their former levels of functioning.

Some patients at the Hook clinic spend from 9 AM to 4 PM weekdays at Trexler's center working in group sessions and with the microcomputers geared for their personal rehabilitation. The center also has outpatients who do not require partial hospitalization but still have significant cognitive defects which prevent them from successfully adjusting to a new life style or returning to their old life style.

Trexler refers to many of his patients as "the walking injured" because they look okay but they don't act okay. "Many are amnesic. They don't remember what they were like. They are not like children, but they do have to reformulate everything."

He says the most devastating impairments from head injuries are to the emotions, memory, perception and judgment. "The victims are simply not the same persons anymore."

His clinic uses videotapes so the patients can view themselves to see how they walk, talk, respond and act. Many are unaware they are doing something wrong or out of the ordinary. The videotapes, Trexler explains, provide feedback for the patients during their recovery.

His most recent patient was injured 13 months before coming to the clinic. It could take five years, even 13 years, Trexler says. "The norm is 12 to 16 months. A patient may spend three to four months at Methodist Hospital, three to four months at Hook and four to six months at home before coming here."

Trexler shares the concerns of White and Dreyer about the rehabilitation process. "Insurance companies spend $120,000 getting the patient to breathe again, but that's it. The cost for treating a head injury patient could go over the $1 million mark if the victim is moved from the hospital to a nursing home and stays there for 40 years. And that does happen.

"Insurance companies are inclined to warehouse these people in nursing homes rather than spend money to rehabilitate them. They would save money in the long run if they were willing to spend it up front to get these people functioning independently again."

Trexler classifies head injury patients in two simple categories:

Those who can be helped.

Those who can't be helped.

Because of limited facilities and staff, his clinic cannot even handle all the patients in the Indianapolis area who need help.

In light of the time and money required to recover at least partially from a motorcycle accident, it is ironic that a helmet costs about $100 and takes only a few seconds to put on. □

$100 May Save a Life

Helmeted riders account for roughly half of the motorcycling population, yet they suffer only 20 percent of the sport's fatalities, according to research conducted by Dr. Harry Hurt and his colleagues at the University of Southern California's Traffic Safety Center.

Hurt's findings make it clear that helmets, even poor quality helmets, offer their wearers an advantage in avoiding serious injury that is truly astounding. Helmeted riders are less likely to be involved in accidents or included in injury statistics.

The helmeted rider who succumbs to a head injury usually has suffered at least two other potentially fatal injuries in the same crash, according to Hurt's data. No amount of head protection would have saved such a rider under these circumstances.

So why even debate the need for mandatory helmet laws?

Motorcyclist magazine printed its position, one shared by a majority of bike enthusiasts, in its November 1983 issue:

"To set the record straight, let us make it clear that our objection to mandatory helmet laws is a philosophical, not a practical one. We firmly believe a helmet to be the single most important piece of safety equipment a rider can buy. We wear helmets whenever and wherever we ride, and we urge others to do the same.

"Helmets are crucial to rider safety, and research has shown there is *no* negative side to their use. We oppose mandatory helmet laws simply because we believe in the individual's right to choose how safely or unsafely he wishes to live his life."

Kansas State Nurses' Association

Good Morning. My name is Linda Diepenbrock. I am a registered nurse and a certified critical care nurse. For the past four years I have worked as a staff nurse in the Neurosurgical Intensive Care Unit at the University of Kansas Medical Center. I am also a member of the legislative committee of the Kansas State Nurse's Association and am representing them with this testimony. In working at a major referral center, particularly for trauma, for eastern Kansas, I have cared for a large number of people with head and multi-system trauma. I would like to share with you my perception of what these patients and their families experience.

Almost regardless of the apparent severity of the injury, people admitted with head injury often undergo a full battery of expensive x-ray and laboratory tests to determine the extent of their injuries and to explore for any hidden injuries. This initial testing, which is often repeated frequently, requires a considerable investment of time and energy and carries apotential risk to the patient. The injured require close monitoring of their vital signs and neurological status by specially trained nurses and the physician to avert or minimize potential crises--particularly that of brain swelling and increased intracranial pressure--which may be a fatal complication. This close monitoring translates into stays in an intensive care unit from one day to several weeks.

Head injury in itself can be devastating. Those with severe injuries may be unconscious for prolonged periods of time and may require respiratory support from a ventilator for days to weeks.

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Severe head injury is also associated with acute bleeding disorders in the initial state, and patients may require several units of blood and blood products in the first few days in order to survive. Wound infection is a possible occurence as head, facial, and extremity wounds are frequently embedded with gravel, sand, and dirt. These patients may have a paralyzed or weak side of the body also. If these patients survive, they need a lengthy and expensive course of physical and cognitive rehabilitation in a special center. If they lack the potential for active rehabilitation, they may be cared for in a skilled or intermediate care facility.

Even minor to moderate head injury carries very adverse consequences. While they may initially be more stable physically, they face problems of severe, persistent headaches, arm or leg weakness or paralysis, memory impairment, communication difficulties, visual disturbances, personality changes, decreased intellectual functioning, and emotional lability. Of course, any associated injuries, of which facial fractures are very common, may require surgical intervention, increase morbidity, and lengthen hospital stays.

While I see more acute effects, a 1981 study by Rimel _et al_. at the University of Virginia found long-term effects of minor head injury.[1] They found that of patients who had been gainfully employed before the accident, 34% were unemployed 3 months later. This study population had problems with attention, concentration, memory, and judgment as found on neuropsychological testing even though their neurological examinations were normal. They concluded that many of the patients, even after a seemingly minor concussion, incurred organic brain damage. A similiar study on disability of moderate brain injury found that only 38% had made a so-called good recovery at

3 months. This is "so-called" because 90% still had difficulties with the activities of daily living.[2]

Thus far, I have only briefly discussed the implications of the injury for the victim. Those close to the patient also undergo considerable mental and emotional anguish. They maintain vigils in hospital waiting rooms, wondering if their loved one will live or ever be the same again. Family lives are disrupted and some may quit their jobs to be with or near the patient. A mother of a 16 year old boy recently wrote: "My son suffered a head injury 2 years ago and is still trying to recover. Besides the broken bones, there is brain damage. He is tormented by memory loss, lack of coordination, change in his personality, frustration levels that lead to behavioral problems, and an extremely short attention span. It is heartbreaking to watch someone you love struggle to remember the simplest things. The shame and anger when he fails are unbearable."[3]

Although I have only addressed head injury because it is the most serious consequence of accidents, fractures, chest, and abdominal injuries may also occur, often concurrently, causing serious morbidity and possible mortality.

We must remind ourselves that young people, primarily men, are the victims of head injury. Many of them are just beginning careers and families when they suffer this life-changing condition. Head injuries in nonhelmeted motorcycle riders are potentially preventable injuries. I have observed the differences in severity of injury between helmeted and nonhelmeted riders, and I know that helmets can make a difference.

Testimony in Support of Senate Bill 156
Submitted by Don Karr, President, Topeka Rehabilitation Association

Definition of Problem: The average annual rate in the prevalance of head injury is 5000 nes cases in the state of Kansas. The medical and economic costs have been calculated to be $2.5 million for the lifetime of a young severely injured person. In addition, unemployment directly caused by the injury has been reported by 34% of those with minor injuries and 69% of those with moderate injuries.

1.52% (2600) of all head injuries occur in motor vehicle accidents; 70% (730) of all severe head injuries occur in motor vehicle accidents; 30% (8970) of all Kansans hospitalized annually will be under 25 years of age and in a motor vehicle accident.

11.62% (3100) of those annually hospitalized will be under the age of 25; an even larger percentage of those severely disabled will be under 25 because young people are more likely to survive after severe injury; This means a long life of disability ahead.

Therefore, one might expect cash outlays commensurate with the long-term rehabilitation and need for services to include; vocational rehabilitation, unemployment benefits and, quite possibly, homemaker and personal care attendant services.

* This material was obtained from Kansas Head Injury Association

2/27/85
ATT. 9

TESTIMONY OF MICHAEL J. BYINGTON

REPRESENTING EPILEPSY - KANSAS INC.

SB 156

FEBRUARY 27, 1985

FOR MORE INFORMATION: (913)233-6323

I am Michael Byington, and Epilepsy - Kansas Inc. has asked me to represent them in presentation of this testimony. I also am employed with the Topeka Resource Center for the Handicapped where I work personally with a number of hear injured consumers.

Before writing in specific terms, I must express one generality. During the last election, I ran for a seat in the Kansas House of Representatives; obviously, I did not make it or I would be busy reading other peoples' testimony right now instead of writing my own. A number of people in my legislative district, however, spoke with me as I was knocking on doors, about the helmet law issue. Those who opposed the helmet law had me convinced that the only victim in an injury involving a non-helmet wearing motor bike rider was indeed the person who chose not to use the helmet in the first place, and that it was thus not my business as a potential legislator to tell a rider whether he/she should or should not wear a helmet. After more careful consideration over the past several months, however, I have rejected this argument because I have found it to be based on a faulty premise. There are in fact, other victims besides the motor bike rider who chose not to ware the helmet any time such a decision results in an injury. These are the tax payers.

Very few people have comprehensive insurance so good that it can cover all of the medical expenses which can result from a severe head trauma. Usually state and federal tax payers end up subsidizing medical care. Often nursing home care or home health and community based attendant care services must be provided to the head injured individual on a long term basis, and with some state and/or federal support. The individual involved often becomes eligible for and draws Social Security Disability Insurance. Medicade must often assist in paying for seizure control and other therapeutic drugs. In cases where vocational rehabilitation is a realistic goal, these expenses must also be figured in. The point is that a head injury which occurs or is made more severe due to failure to wear a helmet ends up victimizing the tax payer as the tax payer usually ends up helping pay for the results.

Now I am not a cold, unfeeling, individual who cares only for the bottom line of the ledger, but there are other people testifying who can tell you about head injuries from a personal standpoint. I have talked with a lot of persons who have never sustained a head injury who are against a helmet law, but also, everyone whom I have talked with who did receive a head injury, and who was not wearing a helmet, has told me that retrospectively, they wish they had been.

It may be true that there are a few exceptional injuries which occur

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because a helmet is used. The overwhelming majority of motor bike related injuries, however, could be lessened through the use of helmets.

In conclusion, I would point out that business is booming for those of us in the rehabilitation field. We do not need more clients. We certainly do not want to see more clients created through head injuries due to lack of helmets. Remember, prevention may be a good idea from a humanitarian standpoint, but also, it saves money.

SENATE TRANSPORTATION COMMITTEE:

Mr. Chairman and members of the committee;

I am Rosemary O'Neil, formerly with the Kansas Association of Counties, now I am trying to be a good wife and mother. Unfortunately, I was unaware of the hearing you held on the bill that will require seat belt use. Had I known about that hearing, I would have been here, as it is, I represent why we need that law.

However, I am here today to talk to you about SB 156, the bill concerning motor cycle helmets. I am the mother of 4 boys. The oldest one is 30 years old. He and his wife were riding a motor cycle when he lost control. From the looks of his helmet, he would be dead now if he hadn't had it on. My third son would be 24 years old this year if he had been wearing a helmet. He was with his girl friend during the accident he had. She was wearing a helmet, she spent a lot of time in a hospital but she is better now and I've been told that she is living in Chicago.

Please make it a law! It is time that mothers shouldn't have to suffer what I have gone through.

Thank You!!

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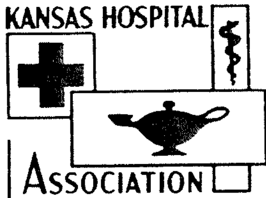

Memorandum

Donald A. Wilson
President

February 22, 1985

TO: Senate Committee on Transportation and Utilities
The Honorable Bill Morris, Chairman

FROM: Tom Bell, Legislative Liaison

SUBJECT: SENATE BILL 156

The Kansas Hospital Association wishes to express its support for Senate Bill 156, which requires all motorcycle or motorized bicycle operators, regardless of age, to wear a helmet.

In our opinion, Senate Bill 156 is legislation which is in the best interest of the general welfare of the people of Kansas. Undoubtedly, this bill would save lives and prevent injuries. Any small inconvenience it would cause to those who wish to ride without helmets is thus far outweighed.

As a matter of fairness, the Kansas Hospital Association would also support amending or striking Section 1(e) of the bill. If someone suffered a head injury while riding without a helmet and later filed suit against another party, it would seem fair to allow the defending party to introduce evidence of how a helmet might have prevented or lessened the injury. In its present form, the bill would probably not allow this.

Thank you for the opportunity to comment on this bill.

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