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KANSAS HIGHWAY AND TRAFFIC STATISTICS

1986

WITH 1985 APPENDIX

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FOREWORD

The following persons deserve special thanks for the assistance provided in the publication of this report.

Ms. Vera Pierce of the Department of Transportation, Accident Safety Section provided specific accident data and Ms. Sidney Beach, of the same department, who provided alcohol related data from the Fatal Accident Reporting System (FARS) presented in this publication. Many thanks for the assistance given.

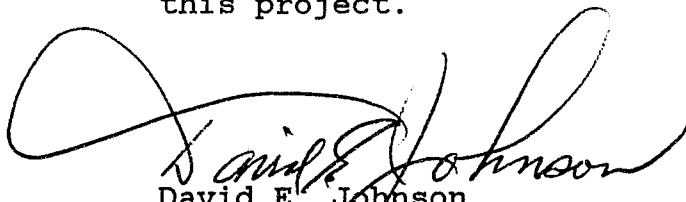
Ms. Martha R. Gonzales of the Department of Revenue, Planning and Research Services Bureau, provided data from the Division of Vehicles pertaining to drivers, licenses and vehicles and deserves a special thank you for the assistance given SAC staff.

Ms. Marilyn Brenner (now retired) of the Kansas Highway Patrol provided all data relative to patrol activities. SAC is most grateful for her contribution.

Appreciation is also extended to the Office Of Judicial Administration for providing court related data.

SAC staff involved in this project include Ms. Connie Kesinger and Ms. Barbara Berggren, who supplied the technical support necessary for a publication of this nature. Their close attention to detail and patience through numerous revisions is greatly appreciated.

This project was edited by Ms. Kathleen Perkins. To her falls the responsibility for both the quality and utility of this project.


David E. Johnson
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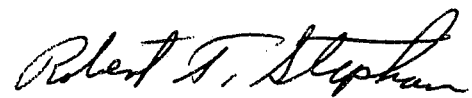

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INTRODUCTION

This report presents 1985 and 1986 highway and traffic data for the state of Kansas taken from the following sources: the Standard Summary of Motor Vehicle Traffic Accidents and the Fatal Accident Reporting System (FARS) for alcohol related accidents prepared by the Accident Safety Section of the Kansas Department of Transportation; the Highway Patrol reports provided by the Kansas Highway Patrol; licensed drivers and vehicle registrations data provided by Planning and Research Services Bureau of the Kansas Department of Revenue and alcohol conviction data prepared by the Office of Judicial Administration.

Section I presents an overview of accidents, tickets, drivers and registered vehicle information. Section II documents Department of Transportation data dealing with legally reportable accidents involving, death, bodily injury or property damage of \$500 or more. Section III presents alcohol related accidents and the resulting consequences of those accidents, and Section IV shows Highway Patrol information dealing only with Highway Patrol activities (i.e. ticketing, time allocation for the various functions of the Highway Patrol, etc.)

For those readers whose main interest is alcohol-related statistics, an appendix has been added based upon a recent Bureau of Justice Statistics special report on 'Drunk Driving.' The report in its entirety has been included in Appendix B as it contains pertinent information on a national level and therefore merits inclusion in this publication.

This publication attempts to provide the most comprehensive information available about vehicular accidents and hopefully will aid policy and decision makers in their respective tasks. Further, the Statistical Analysis Center staff will respond to all requests for additional information.

Questions, criticisms or other comments are appreciated and will help direct future publications. Please address all comments to:

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SECTION I
MULTI-YEAR COMPARATIVE ANALYSIS

SECTION I

MULTI-YEAR COMPARATIVE ANALYSIS

The multi-year analysis presented in this section aids in the identification of long and short run trends and enables decision makers and other interested persons to predict future events with more certainty. In examining these multi-year comparisons the reader should keep in mind known factors which may affect a year's total accident and death rates. Accident and death rates may be positively affected or lessened over time by the introduction of new traffic laws, better roads, safer motor vehicles and increased focus by law enforcement. They may also be negatively affected by a greater number of vehicles on the road and an increase in the number of miles traveled. The data provided on rates per 100,000,000 vehicle miles in Table 1 show a consistent increase in the number of vehicle accidents per year as the number of driven miles increase. However, while the number of vehicle accidents shows an overall increase with increased mileage the Kansas death rate continues to remain more or less the same.

Table 2 provides the number of felony and misdemeanor traffic citations issued by the Kansas Highway Patrol from 1978 - 1986. The table shows an overall decrease of 18.5% in the number of tickets issued in 1986 over the base year of 1978. However, the data further shows an increase of 8.8% in the number of tickets written in 1986 over 1985.

Figure 1 presents total motor vehicle accidents in the eleven year period from 1976 - 1986 and a projection for 1987. Figure 2 presents total persons killed in motor vehicle accidents for that period from 1976 - 1986 and a projection for 1987 as well.

Table 3 shows the number of licensed drivers in Kansas by class for the years 1979 through 1986. The data indicate a 15.5% decrease in the number of licensed drivers in Kansas in 1986 from 1980.

Table 4 presents the number of licensed drivers by class, age group and sex in 1986. The data show that of the 1,416,766 licensed Kansas drivers 55.1% are female and 44.9% are male. The data further show that 43.6% of all Kansas drivers fall into the age group between 25 and 49 years old and 93.1% of all Kansas drivers have Class C or general licenses.

Table 5 gives the number of vehicle registrations by type of vehicle registered. The data show 7.9% more vehicles were registered in 1986 than the base period of 1979. The data further show a ratio of 1.6 movable registered vehicles (2,329,146) per licensed drivers (1,416,766) in 1986.

Table 6 reflects the number of license suspensions, revocations and cancellations by reason for each from years 1979 through 1986, as reported to the Department of Revenue.

Table 7 presents a synopsis of driver activities as received by the Kansas Department of Revenue, Planning and Research Services Bureau. The data related an increase of 5.9%, in 1986, in the number of accidents reported from the base year

of 1982, while traffic citations show a decrease of 0.7% for the same time period.

Table 8 is an analysis of traffic cases filed in the state's District courts. The table displays case load activity by reason for filing and disposition of cases. The reader should keep in mind that the numbers given in this table will not coincide with numbers found in other tables throughout this publication due to the fact that district courts operate on a fiscal year calendar and the length of time that may expire between time of case filings and final disposition of cases. While the numbers are not reflective of what occurs on a year to year basis within the realm of law enforcement they do provide an overview of the consequence of breaking traffic laws and, therefore, merit the attention of this publication.

TABLE 1
COMPARISON OF MILEAGE RATES**
1976-1986

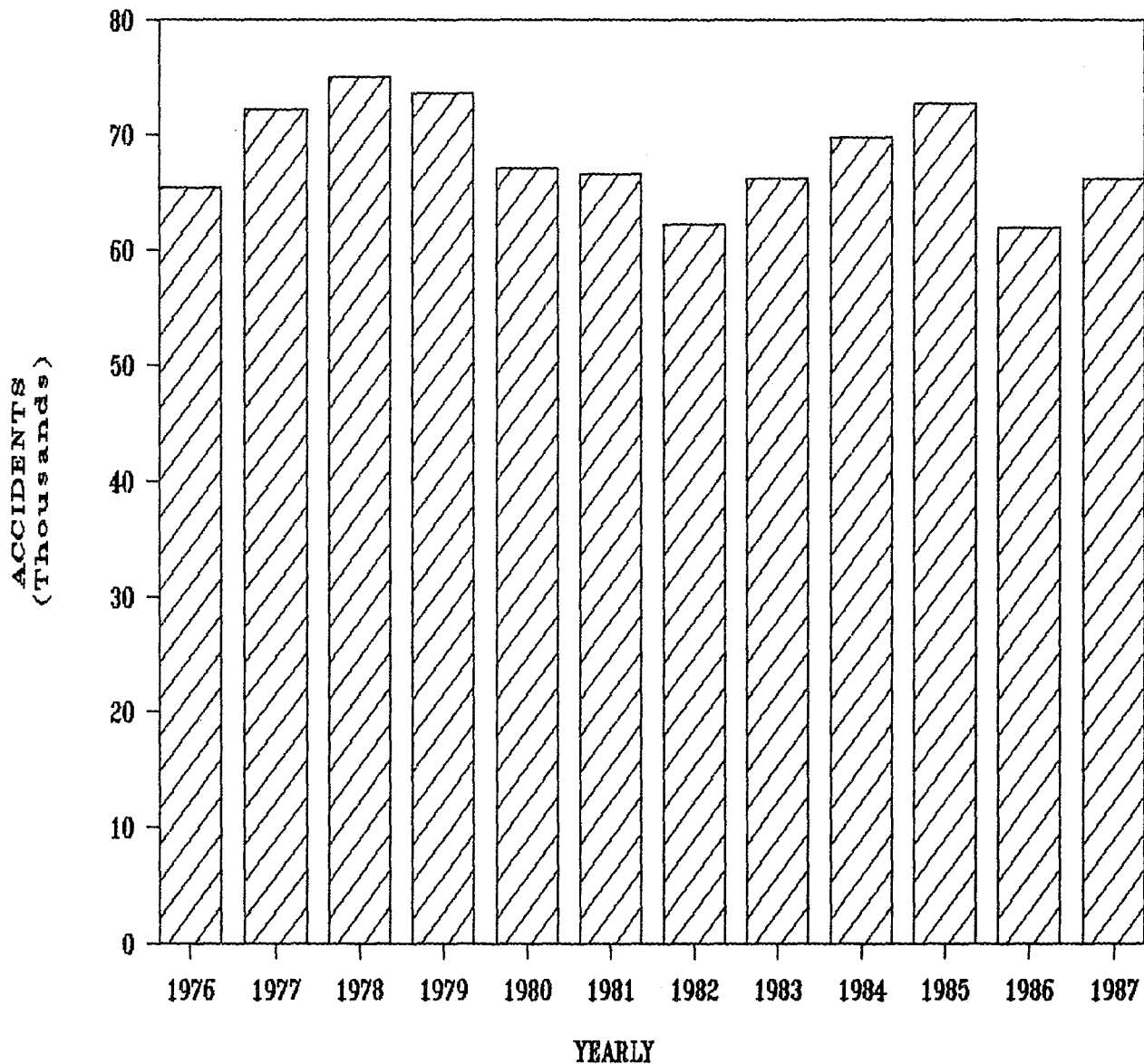
	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
Estimated Motor Vehicle Mileage Traveled (in Millions)	16,501	16,906	17,100	17,452	17,291	17,425	17,669	18,155	18,600	19,277	19,747
Motor Vehicle Deaths	563	562	572	520	595	578	498	411	510	486	500
Death Rate (per 100,000,000 Vehicle Miles)	3.4	3.3	3.3	3.0	3.4	3.3	2.8	2.3	2.7	2.5	2.5
Motor Vehicle Traffic Accidents*	65,385	72,127	74,923	73,630	67,051	66,534	62,263	66,173	69,779	72,683	61,984
Accident Rate (per 100,000,000 Vehicle Miles)	4.0	4.3	4.4	4.2	3.9	3.8	3.5	3.6	3.8	3.8	3.1

* Includes Fatal and Non-Fatal Accidents

**Information contained in this table was supplied by Kansas Department of Transportation, which keeps statistics on all legally reportable accidents. "Legally reportable accidents are those involving death, bodily injury or property damage of \$500 or more."

FIGURE 1

MOTOR VEHICLE ACCIDENTS TREND



TREND LEGEND**

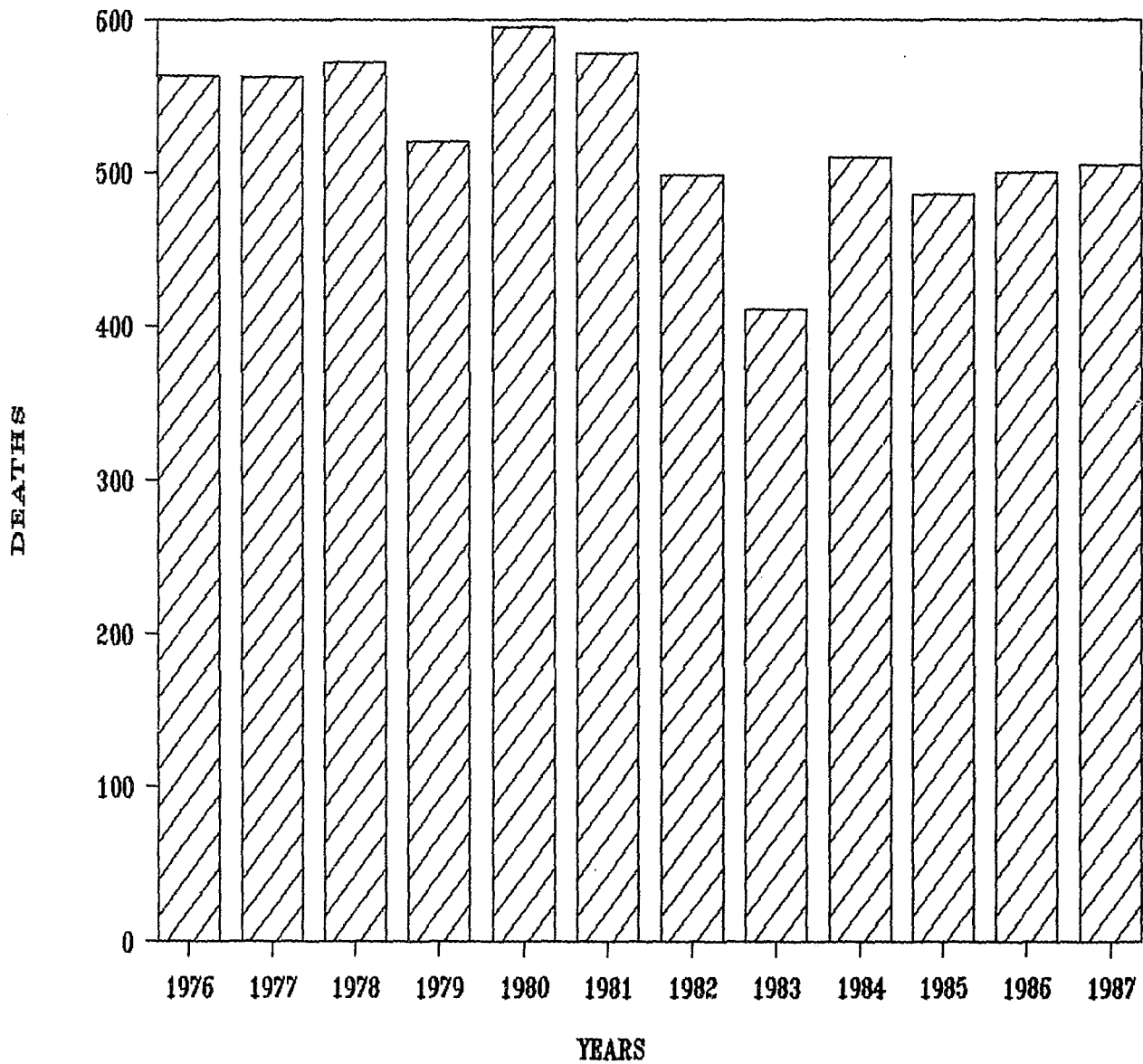
Year	Number	%Change	Rate Per 1,000
1976	65,385	+ 5.3	28.1
1977	72,127	+10.3	30.8
1978	74,923	+ 3.9	31.8
1979	73,630	- 1.7	30.9
1980	67,051	- 8.9	28.2
1981	66,534	- 0.8	28.1
1982	62,263	- 6.4	26.3
1983	66,173	+ 6.3	27.8
1984	69,779	+ 5.5	28.8
1985	72,683	+ 4.2	29.7
1986	61,984	-14.7	25.2
1987*	68,362	+10.3	27.8

* projection

**"Year" denotes year of occurrence;
 "Number" denotes number of accidents;
 "% Change" denotes percent of change
 from previous year; and "Rate per
 thousand" denotes per thousand
 population.

FIGURE 2

MOTOR VEHICLE DEATHS TREND



TREND LEGEND**

Year	Number	%Change	Rate Per 1,000
1976	563	+ 8.9	0.24
1977	562	- 0.2	0.24
1978	572	+ 1.8	0.24
1979	520	- 9.1	0.22
1980	595	+14.4	0.25
1981	578	- 2.9	0.24
1982	498	-13.8	0.21
1983	411	-17.5	0.17
1984	510	+24.1	0.21
1985	486	- 4.7	0.20
1986	500	+ 2.9	0.20
1987*	505	+ 1.0	0.20

* projection

**"Year" denotes year of occurrence;
 "Number" denotes number of deaths;
 "% Change" denotes percent of change
 from previous year; and "Rate per
 thousand" denotes per thousand
 population.

TABLE 2
TICKETS WRITTEN BY THE KANSAS HIGHWAY PATROL
1978 - 1986

	1978	1979	1980	1981	1982	1983	1984	1985	1986
Felonies	713	678	971	844	707	706	607	535	680
Misdemeanors	244,348	230,454	240,094	247,242	232,004	228,177	203,831	183,082	199,091
TOTAL	245,061	231,132	241,065	248,086	232,711	228,883	204,438	183,617	199,771

TABLE 3
NUMBER OF LICENSED DRIVERS IN KANSAS*
1979 - 1986

TYPE OF LICENSE	CALENDAR YEAR							
	1979	1980**	1981	1982	1983	1984	1985	1986***
Class A	157,292	140,587	138,832	138,815	136,347	136,271	80,809	79,988
Class B	15,237	17,167	16,811	20,428	22,029	24,130	16,507	17,609
Class C	1,679,054	1,517,684	1,522,031	1,534,539	1,552,814	1,531,137	1,316,195	1,318,848
Class D	329	400	627	542	536	446	330	321
TOTAL	1,851,912	1,675,838	1,678,301	1,694,324	1,681,726	1,691,984	1,413,841	1,416,766

* Information contained in this table was supplied by Kansas Department Revenue, Planning and Research Services Bureau.

** The total valid licenses in Kansas in 1980 reflects a decrease which is the result of a Driver's License Maintenance Program run in October 1980 for the purpose of deleting those expired unexpired licenses which had renewal dates prior to January 1, 1979.

***Figures do not include drivers over age 100, expired licenses, drivers currently suspended, or deleted records.

TABLE 4
DRIVER LICENSES BY CLASS, AGE GROUP, SEX IN KANSAS*
1986

AGE	CLASS A**			CLASS B		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
14 and 15 (restricted)	1	-	1	-	2	2
16 to 24	1,983	90	2,073	1,502	550	2,052
25 to 49	32,017	3,034	35,051	8,299	4,449	12,748
50 to 64	26,091	2,068	28,159	1,565	615	2,180
65 and Over	14,159	545	14,704	560	67	627
TOTAL	74,251	5,737	79,988	11,926	5,683	17,609

AGE	CLASS C			CLASS D		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
14 and 15 (Restricted)	10,520	8,697	19,217	8	6	14
16 to 24	125,519	138,137	263,656	152	9	161
25 to 49	222,860	346,562	569,422	118	22	140
50 to 64	90,470	142,395	232,865	4	2	6
65 and Over	99,940	133,748	233,688	-	1	1
TOTAL***	549,309	769,539	1,318,848	282	40	322

* Information contained in this table was supplied by Kansas Department of Revenue, Planning and Research Services Bureau.

** LICENSE CLASSES:

- (1) CLASS A motor vehicles shall include truck and trailer or semi-trailer combinations; truck and trailer or semi-trailer combinations having a combined gross weight of more than twenty-four thousand (24,000) pounds, except when the truck in any such combination has been registered as a farm truck; and all lawful combinations of vehicles having a combined gross weight of more than twenty-four thousand (24,000) pounds;
- (2) CLASS B motor vehicles shall include trucks of a type required to be registered in this state for a gross weight of more than twenty-four thousand (24,000) pounds, except those registered as a farm truck; and buses other than those designed for carrying fifteen (15) or fewer passengers which are owned or leased by nonprofit youth organizations and are operated by drivers who receive no compensation therefor;
- (3) CLASS C motor vehicles shall include trucks of a type required to be registered in this state for a gross weight of not more than twenty-four thousand (24,000) pounds; passenger cars; all lawful combinations of vehicles having a combined gross weight of not more than twenty-four thousand (24,000) pounds; and trucks or truck and trailer or semi-trailer combinations registered for a gross weight of more than twenty-four thousand (24,000) pounds, when such truck has been registered as a farm truck; and
- (4) CLASS D motor vehicles shall include all motorcycles. These licenses are typically combined with other classes. These combinations are added into Class A, B & C totals.

The total valid licenses in Kansas in 1980 reflects a decrease which is the result of a Driver's License Maintenance Program run in October 1980 for the purpose of deleting those expired unexpired licenses which had renewal dates prior to January 1, 1979.

***Figures do not include drivers over age 100, expired licenses, drivers currently suspended or deleted records.

TABLE 5
NUMBER OF VEHICLE REGISTRATIONS IN KANSAS*
1979 - 1986

TYPE OF REGISTRATION	1979	1980	1981	1982	1983	1984	1985	1986
Passenger Car	1,357,460	1,376,501	1,378,355	1,379,898	1,395,638	1,443,120	1,461,189	1,483,690
Truck	605,861	728,662	1,048,633	694,195	624,575	649,384	656,125	662,192
Trailer	86,917	88,996	105,773	81,112	87,907	91,342	90,091	90,389
Motorcycles	87,511	92,218	140,677	106,566	83,587	83,744	78,739	73,890
Motor Bicycles	7,594	11,208	20,307	18,128	16,761	16,876	16,747	15,986
Dealer	3,371	2,853	2,652	3,028	3,206	2,940	3,697	2,999
Non-Highway (Mobile Homes)	39,860	38,860	44,047	34,695	33,517	34,799	33,355	32,818
TOTAL	2,188,574	2,339,298	2,740,444	2,317,622	2,245,181	2,322,205	2,339,943	2,361,964

* Information contained in this table was supplied by Kansas Department of Revenue, Planning and Research Services Bureau.

TABLE 6
NUMBER OF DRIVER LICENSE SUSPENSIONS, REVOCATIONS, AND CANCELLATIONS IN KANSAS*
1979 - 1986

TYPE OF SUSPENSION, REVOCATION or CANCELLATION	CALENDAR YEAR							
	1979	1980	1981	1982	1983	1984	1985	1986
Driving Under Influence (Convicted)**	5,948	6,057	6,218	5,744	4,178	4,703	4,248	7,647
Driving Under Influence (Suspended)	1,665	1,715	1,437	1,332	1,966	2,252	3,102	5,119
Driving Under Influence (Modification)	4,283	4,342	4,781	4,412	2,212	2,451	1,146	2,528
Refusal to Take Chemical Test	1,701	1,587	2,072	2,246	2,507	2,055***	2,922	1,815
Habitual Violator (3 Moving Violations- 12 Month Period)	3,232	4,174	7,876	5,226	4,217	5,223	3,148	3,527
No Liability Insurance	5,250	5,073	5,589	6,423	14,749	24,004	22,871	24,007
Other	3,200	3,126	4,440	5,615	34,221	25,797	27,595	37,499

* Information contained in this table was supplied by Kansas Department of Revenue, Planning and Research Services Bureau.

** DUI (Suspended) and DUI (Modification) included in DUI (Convicted). Discrepancy is attributed to out-of-states on which no suspension or modification was taken on license.

***A change in law, effective January, 1984, mandates automatic suspension of persons drivers license if the person refuses to take a chemical alcohol test.

TABLE 7
SELECTED DRIVER CONTROL ACTIVITIES*
1982 - 1986

ACTIVITIES	1982	1983	1984	1985	1986
Accident Reports Received	80,286	80,631	87,229	92,462	84,980
Traffic Citations	595,881	600,630	598,331	555,602	591,963
Drivers Attending Driver Improvement Clinic	4,781	2,623	7,005	2,711	3,002
D.U.I. Diversion Agreements	692	5,116	5,631	4,747	4,256
Insurance Verification Requests	107,069	18,434	45,846	30,815	33,134
Driver License Reinstatements	20,237	37,230	42,955	38,851	38,679

* Information contained in this table was supplied by Kansas Department of Revenue, Planning and Research Services Bureau.

TABLE 8
ANALYSIS OF COURT TRAFFIC CASE LOAD ACTIVITY
BY FISCAL YEAR*
July 1, 1978 - June 30, 1986

YEARS	FILINGS					DISPOSITIONS						
	Reckless Driving	Driving Under Influence	Fleeing Police	All Other	TOTAL	Guilty Pleas	Bond For- feitures	Dis- missals	Trials To Court	Trials By Jury	Diver- sions	TOTAL
1978-1979	908	3,944	268	266,138	271,258	206,246	40,181	9,051	4,929	45	0	260,452
1979-1980	875	4,374	264	268,191	273,704	218,693	27,965	14,805	5,980	119	0	267,562
1980-1981	1,154	4,541	215	275,932	281,842	220,561	37,876	15,665	5,575	59	0	279,736
1981-1982	685	5,206	887	269,050	275,828	214,107	43,354	11,361	4,849	81	0	273,752
1982-1983	599	5,900	204	261,285	267,988	208,586	34,339	10,535	3,486	96	36	257,078
1983-1984	531	5,264	224	244,627	250,646	210,592	21,786	9,316	3,838	154	2,247	247,933
1984-1985	488	4,958	186	219,253	224,885	186,211	22,374	10,574	3,617	115	2,157	225,048
1985-1986	406	4,991	181	235,405	240,983	203,839	16,299	8,743	3,659	103	1,604	234,247

* Information contained in this table was supplied by the Kansas Office of Judicial Administration which operates on a fiscal year (July 1 to June 30) rather than a calendar year.

SECTION II
REPORTED TRAFFIC ACCIDENTS
1986

SECTION II

REPORTED TRAFFIC ACCIDENTS

The data presented in this section were taken directly from the Standard Summary of Motor Vehicle Traffic Accidents, prepared by the Traffic Safety Section, Bureau of Rural and Urban Development, Kansas Department of Transportation. This publication deals with legally reportable accidents, i.e., those traffic accidents which involved death, bodily injury or property damage of \$500.00 or more.

In 1986 there were 61,984 investigated and legally reportable accidents which involved 109,783 vehicles (Table 25), 104,040 vehicle operators and 59,677 passengers in motor vehicles. Slightly over two-thirds of all vehicle accidents occurred in an urban area on local streets (72%, Table 13) where no type of traffic control was present (40.6%, Table 15).

Of the total reported accidents 413 (0.7%) resulted in one or more fatalities; 20,975 (33.8%) were classified as non-fatal and 40,596 (65.5%) resulted only in property damage.

There were 163,717 persons in the 61,984 reported accidents in 1986 resulting in an involvement rate of 2.6 persons per accident. There were 500 fatalities (0.3%); 32,150 persons (19.6%) were injured; and the remaining 131,067 (80.1%) sustained no injuries. The injury category is subdivided into Incapacitating Injuries, 5,235 persons, and Non-Incapacitating Injuries involving 26,915 persons.

Pedestrians were involved in 668 accidents in 1984. Forty-one (6.1%) resulted in fatalities and 627 (93.9%) were classified as non-fatal accidents.

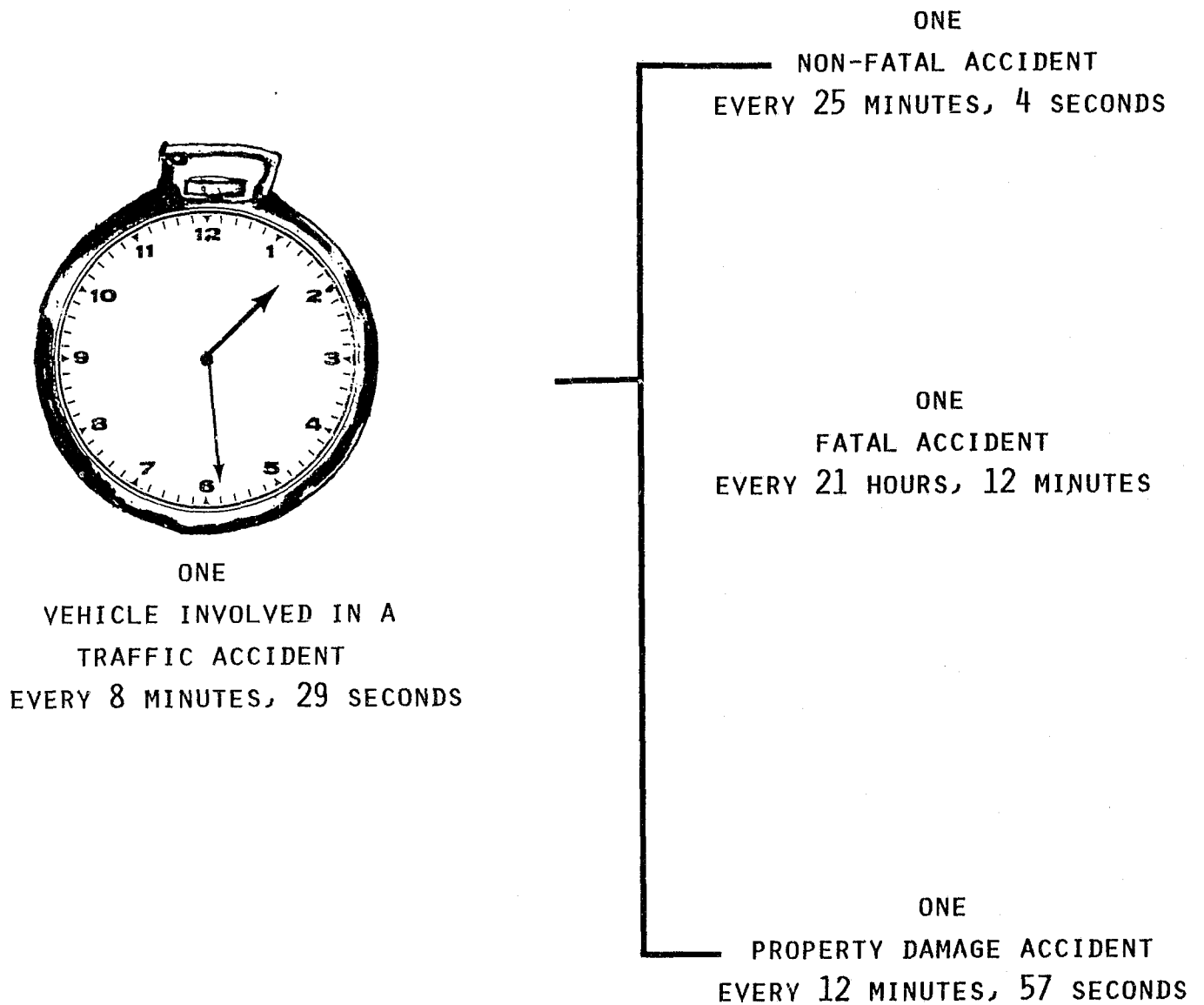
TABLE 9
TYPE OF ACCIDENT BY CLASSIFICATION OF ACCIDENT*
1986

TYPE OF ACCIDENT	FATAL ACCIDENTS	NON-FATAL ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS**
Overtured	62	1,902	1,293	3,257
Other Non- Collision	8	626	957	1,591
TOTAL NON-COLLISION	70	2,528	2,250	4,848
Motor Vehicle Same Road	173	12,502	23,978	36,653
Motor Vehicle Other Road	7	304	673	984
Motor Vehicle Parked	3	725	4,414	5,142
Railroad	18	39	52	109
Pedestrian	34	565	47	646
Pedalcycle	3	538	28	569
Animal	2	207	3,743	3,952
Fixed Object	103	3,359	4,890	8,352
Other Object	0	208	521	729
TOTAL COLLISION	343	18,447	38,346	57,136
TOTAL	413	20,975	40,596	61,984

* Kansas Standard SUMMARY OF MOTOR VEHICLE TRAFFIC ACCIDENTS, 1986; from Kansas Department of Transportation.

**Legally reportable accidents are those involving death, bodily injury or property damage of \$500 or more.

FIGURE 3
FREQUENCY OF TRAFFIC ACCIDENTS
1986



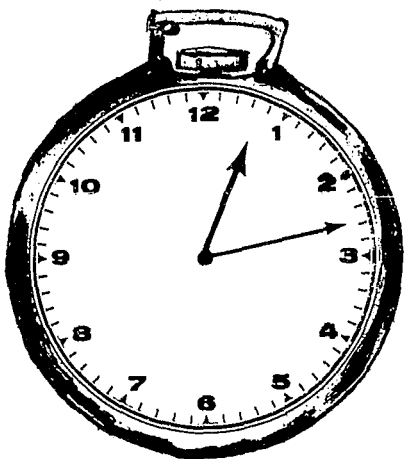
Throughout this publication the crime clock should be viewed with care. Being the most aggregate representation of crime data, it is designed to convey the annual estimated crime experience by showing the relative frequency of occurrence of the offenses. This mode of display should not be taken to imply a regularity in the commission of the offenses, rather, it represents the annual ratio of crime to fixed time intervals.

TABLE 10
PERSONS KILLED OR INJURED BY TYPE OF ACCIDENT*
1986

TYPE OF ACCIDENT	KILLED	TOTAL INJURED	INCAPACI- TATED INJURY	NONINCA- PACITATED INJURY	NOT INJURED	TOTAL PERSONS
Overturned	63	2,682	634	2,048	2,445	5,190
Other Non- Collision	8	797	178	619	2,141	2,946
TOTAL NON-COLLISION	71	3,479	812	2,667	4,586	8,136
Motor Vehicle Same Road	232	20,841	2,735	18,106	98,237	119,310
Motor Vehicle Other Road	12	535	93	442	2,604	3,151
Motor Vehicle Parked	3	989	161	828	7,023	8,015
Railroad	23	58	30	28	131	212
Pedestrian	35	631	232	399	1,016	1,682
Pedalcycle	3	578	116	462	885	1,466
Animal	2	256	23	233	6,827	7,085
Fixed Object	119	4,524	995	3,529	8,563	13,206
Other Object	0	259	38	221	1,195	1,454
TOTAL COLLISION	429	28,671	4,423	24,248	126,481	155,581
TOTAL	500	32,150	5,235	26,915	131,067	163,717

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986; from Kansas Department of Transportation.

FIGURE 4
FREQUENCY OF PERSONS KILLED OR INJURED
IN ACCIDENTS
1986



ONE
PERSON INVOLVED IN A
VEHICLE ACCIDENT
EVERY 3 MINUTES, 13 SECONDS

ONE
PERSON INJURED
EVERY 16 MINUTES, 21 SECONDS

ONE
NON-INJURED PERSON INVOLVED
IN AN ACCIDENT
EVERY 4 MINUTES, 1 SECOND

ONE
PERSON KILLED
EVERY 17 HOURS, 31 MINUTES

TABLE 11

CLASSIFICATION OF PERSONS INJURED OR KILLED BY AGE OF CASUALTY*
1986

AGE OF CASUALTY	PEDESTRIANS		BICYCLISTS		MOTORCYCLISTS		DRIVERS		PASSENGERS		TOTAL	
	KILLED	INJURED	KILLED	INJURED	KILLED	INJURED	KILLED	INJURED	KILLED	INJURED	KILLED	INJURED
0 to 4	0	46	0	13	0	3	0	3	9	801	9	866
5 to 9	3	144	0	142	0	12	0	1	11	849	14	1,148
10 to 14	3	90	2	195	2	90	3	87	6	920	16	1,382
15 to 19	3	73	0	92	12	378	35	3,613	35	2,396	85	6,552
20 to 24	7	52	0	57	6	464	43	3,448	21	1,354	77	5,375
25 to 34	5	104	0	50	14	433	71	4,857	15	1,354	105	6,798
35 to 44	6	48	0	19	0	165	38	2,712	5	694	49	3,638
45 to 54	2	32	0	8	1	54	27	1,538	9	413	39	2,045
55 to 64	3	23	1	7	2	28	25	1,223	9	437	40	1,718
65 to 74	5	14	0	4	1	11	24	851	4	365	34	1,245
75 and Older	4	28	0	1	0	3	16	560	11	305	31	897
Not Stated	0	14	0	12	0	15	1	90	0	355	1	486
TOTAL	41	668	3	600	38	1,656	283	18,983	135	10,243	500	32,150

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986; from the Department of Transportation.

TABLE 12

MANNER OF TWO MOTOR VEHICLE COLLISION BY CLASSIFICATION OF ACCIDENT*
1986

MANNER OF COLLISION	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
Head On	59	669	752	1,480
Rear End	25	5,086	7,504	12,615
Angle	91	6,725	13,333	20,149
Sideswipe- Meeting	9	409	1,557	1,975
Sideswipe- Passing	4	494	3,327	3,825
Backed Into	0	98	2,509	2,607
Not Stated	3	261	614	878
TOTAL	191	13,742	29,596	43,529

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986; from the Department of Transportation.

TABLE 13

ROUTE LOCATION BY CLASSIFICATION OF ACCIDENT*
1986

LOCATION OF ROUTE	NUMBER OF ACCIDENTS				NUMBER OF PERSONS		
	FATAL ACCIDENTS	NONFATAL ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS	KILLED	INJURED	TOTAL
URBAN							
Interstate	16	918	1,497	2,431	17	1,351	1,368
Turnpike	4	55	141	200	4	82	86
U. S. Routes	25	2,430	4,297	6,752	26	3,845	3,871
State Routes	10	860	1,598	2,468	10	1,351	1,361
Local Streets	53	10,346	19,996	30,395	58	15,450	15,508
URBAN TOTAL	108	14,609	27,529	42,246	115	22,079	22,194
RURAL							
Interstate	9	261	562	832	10	442	452
Turnpike	9	176	321	506	15	247	262
U. S. Routes	106	1,430	2,964	4,500	141	2,416	2,557
State Routes	51	963	2,122	3,136	67	1,545	1,612
Country Roads	130	3,536	7,098	10,764	152	5,421	5,573
RURAL TOTAL	305	6,366	13,067	19,738	385	10,071	10,456
STATE TOTAL	413	20,975	40,596	61,984	500	32,150	32,650

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986; from the Department of Transportation.

TABLE 14
RELATIONSHIP TO JUNCTION BY CLASSIFICATION OF ACCIDENT*
1986

RELATIONSHIP TO JUNCTION	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
URBAN				
Intersection	18	5,542	9,114	14,674
Intersection- Related	14	2,435	4,311	6,760
Driveway Access	8	1,478	3,742	5,228
Non-Junction	68	5,154	10,362	15,584
TOTAL URBAN	108	14,609	27,529	42,246
RURAL				
Intersection	48	1,048	1,664	2,760
Intersection- Related	11	611	1,037	1,659
Driveway Access	11	392	831	1,234
Non-Junction	235	4,315	9,535	14,085
TOTAL RURAL	305	6,366	13,067	19,738
TOTAL	413	20,975	40,596	61,984

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986; from the Department of Transportation.

TABLE 15
TRAFFIC CONTROL BY CLASSIFICATION OF ACCIDENT*
1986

TYPE OF TRAFFIC CONTROL	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
Stop Sign	12	1,082	2,342	3,436
Signals or Flashers	8	3,223	5,072	8,303
Railroad Gates - Signals	12	57	126	195
Warning Signs	3	89	102	194
Centerline - Edge Marks	212	8,088	14,015	22,315
No-Passing Zone	47	663	1,064	1,774
No Control Present	116	7,578	17,446	25,140
Control Not Operating	0	45	106	151
Other Control Present	2	13	33	48
Control Not Stated	1	137	290	428
TOTAL	413	20,975	40,596	61,984

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986; from the Department of Transportation.

TABLE 16

ROAD SURFACE CONDITION BY CLASSIFICATION OF ACCIDENT*
1986

ROAD SURFACE CONDITION	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
Dry	355	17,186	32,806	50,347
Wet	40	2,878	5,564	8,482
Water on Road	4	140	266	410
Snowy-Icy	9	523	1,409	1,941
Slippery-Mud, Oil	3	73	146	222
Other	2	84	162	248
Not Stated	0	91	243	334
TOTAL	413	20,975	40,596	61,984

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986;
from the Department of Transportation.

TABLE 17

ROAD CONDITION BY CLASSIFICATION OF ACCIDENT*
1986

ROAD CONDITION	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
No Defects	376	19,090	37,464	56,930
Holes, Bumps, Etc.	5	407	675	1,087
Loose Material	18	617	918	1,553
Construction- Repairs	5	499	858	1,362
Detour	2	22	24	48
Soft Shoulders	5	135	200	340
Obstruction	1	20	51	72
Other- Not Stated	1	185	406	592
TOTAL	413	20,975	40,596	61,984

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986;
from the Department of Transportation.

TABLE 18
LIGHT CONDITION BY CLASSIFICATION OF ACCIDENT*
1986

LIGHT CONDITION	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
Daylight	184	13,429	25,872	39,485
Dawn or Dusk	16	903	2,070	2,989
Dark-Lighted	54	3,859	6,767	10,680
Dark-Not Lighted	156	2,684	5,373	8,213
Not Stated	3	100	514	617
TOTAL	413	20,975	40,596	61,984

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986;
from the Department of Transportation.

TABLE 19

FATAL ACCIDENTS BY TIME OF DAY AND DAY OF WEEK*
1986

HOUR BEGINNING	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
Midnight	1	0	5	2	3	8	9	28
1:00 AM	3	2	2	5	5	9	8	34
2:00 AM	1	2	3	0	3	4	2	15
3:00 AM	0	1	4	4	2	9	6	26
4:00 AM	1	0	3	0	0	3	2	9
5:00 AM	0	0	2	0	1	1	2	6
6:00 AM	0	1	1	2	3	1	0	8
7:00 AM	1	1	2	1	2	0	1	8
8:00 AM	2	1	0	4	3	1	1	12
9:00 AM	4	2	0	1	0	1	4	12
10:00 AM	2	1	1	1	1	1	1	8
11:00 AM	2	3	2	1	2	3	1	14
Noon	3	0	1	2	2	1	1	12
1:00 PM	3	3	2	4	3	1	2	18
2:00 PM	4	1	1	2	2	4	1	15
3:00 PM	4	3	4	0	2	4	2	19
4:00 PM	4	0	0	9	9	4	1	27
5:00 PM	5	6	2	4	4	2	0	23
6:00 PM	4	1	3	2	1	6	3	20
7:00 PM	2	4	3	2	3	4	4	22
8:00 PM	3	1	4	0	4	3	4	19
9:00 PM	3	3	3	5	6	2	2	24
10:00 PM	0	0	4	2	7	0	1	14
11:00 PM	0	2	1	3	9	2	3	20
TOTAL	52	38	53	56	77	76	61	413

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986;
from the Department of Transportation.

FIGURE 5

TOTAL FATAL MOTOR VEHICLE ACCIDENTS

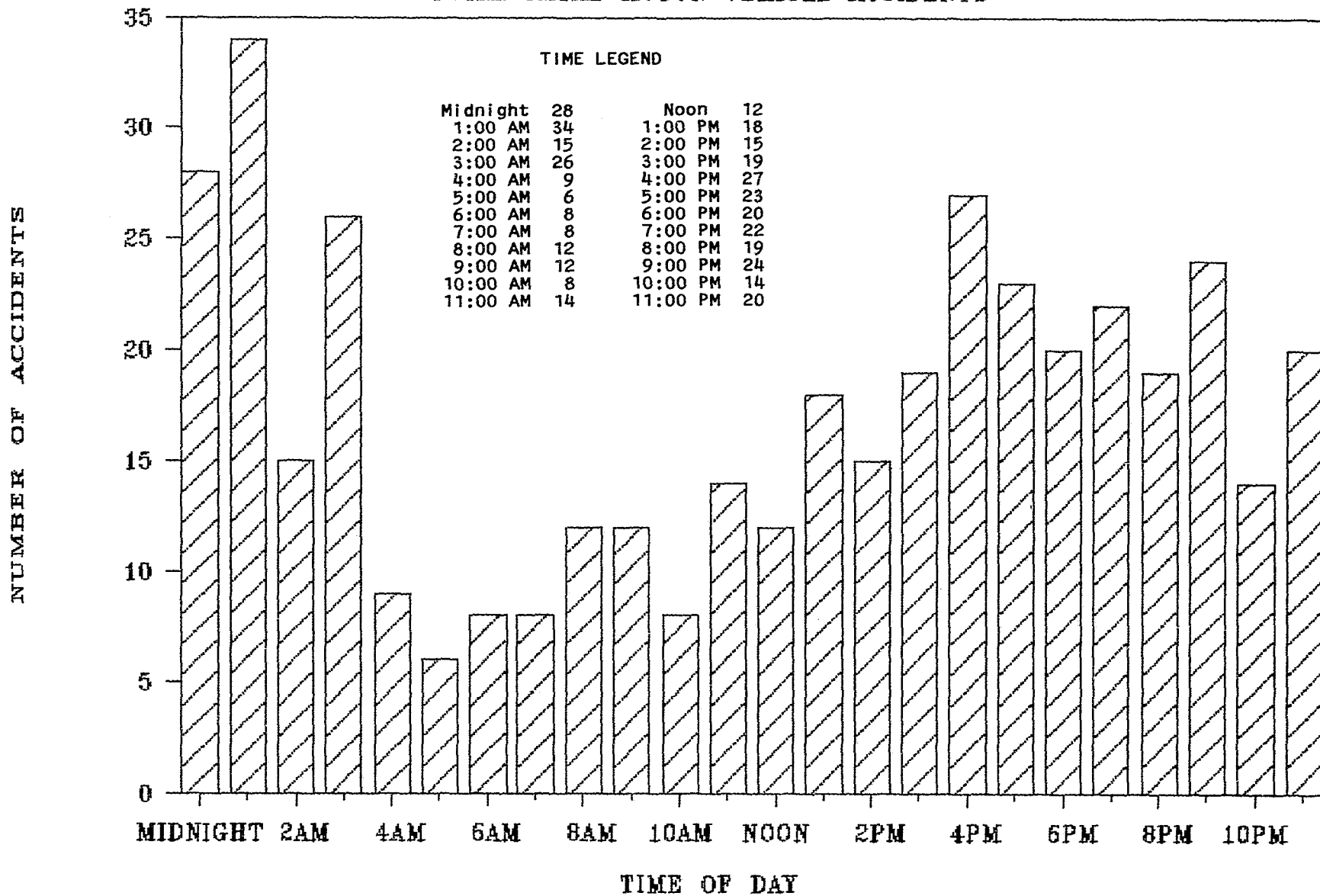


TABLE 20

MOTOR VEHICLE ACCIDENTS BY TIME OF DAY AND DAY OF WEEK*
1986

HOUR BEGINNING	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
Midnight	105	143	168	187	196	585	484	1,868
1:00 AM	70	136	136	155	164	455	455	1,571
2:00 AM	54	86	86	110	130	335	354	1,155
3:00 AM	42	64	109	97	121	339	292	1,064
4:00 AM	55	59	61	40	65	172	161	613
5:00 AM	72	89	80	59	101	121	121	643
6:00 AM	214	229	238	203	212	166	96	1,358
7:00 AM	589	542	643	529	589	219	120	3,231
8:00 AM	396	411	489	424	441	241	114	2,516
9:00 AM	334	300	295	293	344	318	176	2,060
10:00 AM	337	323	322	294	377	402	214	2,269
11:00 AM	426	427	434	371	516	514	239	2,927
Noon	547	530	501	475	618	525	365	3,561
1:00 PM	484	431	433	458	531	532	323	3,192
2:00 PM	523	443	490	478	578	512	383	3,407
3:00 PM	818	720	824	736	905	547	380	4,930
4:00 PM	750	737	809	793	971	553	432	5,045
5:00 PM	792	786	773	788	938	546	435	5,058
6:00 PM	444	510	495	506	643	514	401	3,513
7:00 PM	363	335	351	376	521	466	353	2,765
8:00 PM	300	298	317	352	461	437	245	2,410
9:00 PM	260	281	291	344	510	470	260	2,416
10:00 PM	208	249	257	266	585	501	194	2,260
11:00 PM	185	187	216	213	574	495	118	1,988
Not Stated	23	17	14	16	30	38	26	164
TOTAL	8,391	8,333	8,832	8,563	11,121	10,003	6,741	61,984

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986;
from the Department of Transportation.

FIGURE 6

TOTAL MOTOR VEHICLE ACCIDENTS

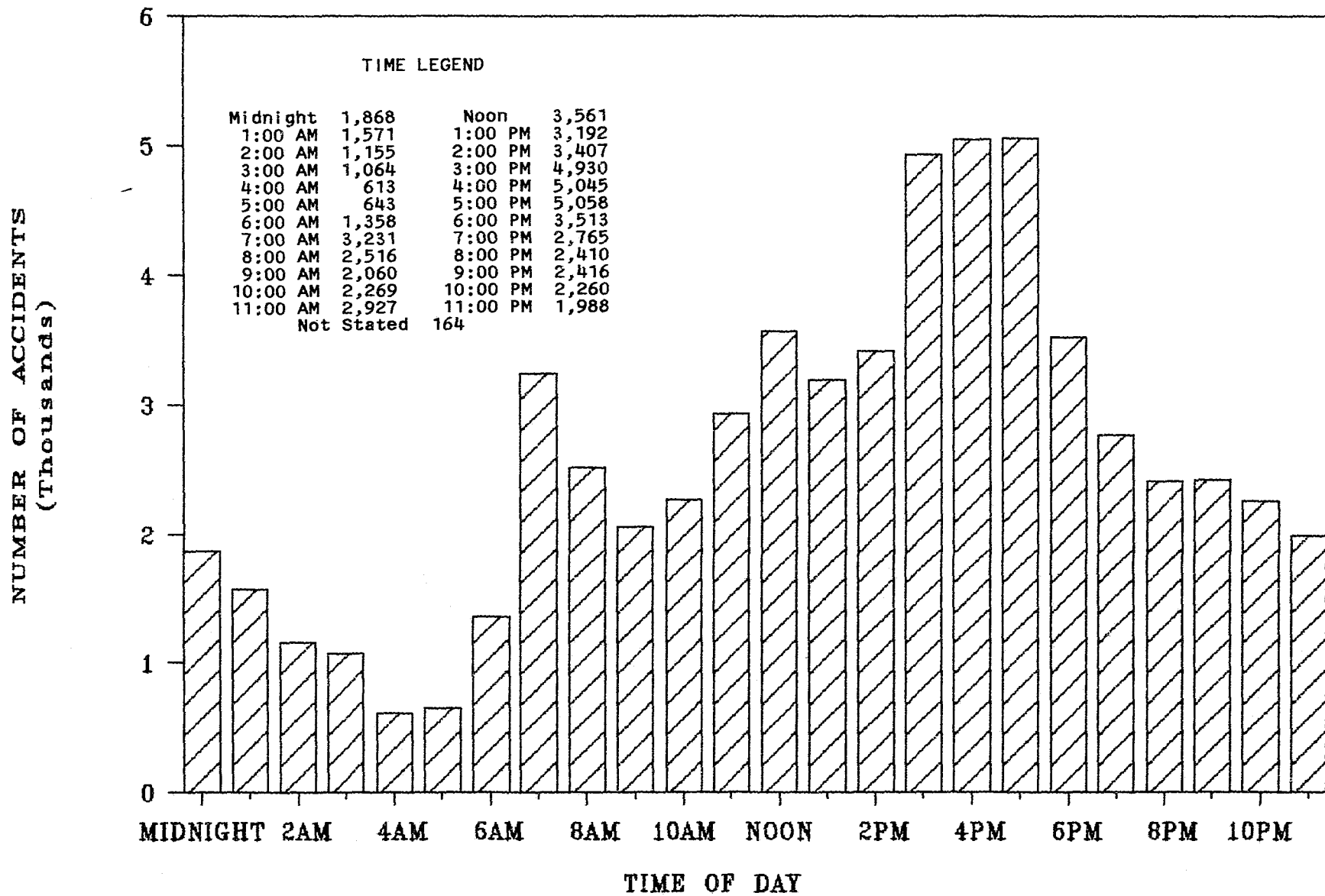


TABLE 21
DRIVER CONDITION BY CLASSIFICATION OF ACCIDENT*
1986

DRIVER CONDITION**	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
Physical Defect	2	34	53	89
Ill	6	77	50	133
Fatigued	1	163	195	359
Asleep	16	517	493	1,026
Normal	366	30,965	59,706	91,037
Had Used:				
Medication	0	43	28	71
Prescription Drugs	1	51	55	107
Illegal Drugs	5	24	20	49
Alcohol	181	2,559	2,053	4,793
Other- Not Stated	43	1,540	4,793	6,376
TOTAL**	621	35,973	67,446	104,040

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986;
from the Department of Transportation.

**Two possible per driver.

TABLE 22
CONTRIBUTING CIRCUMSTANCES BY CLASSIFICATION OF ACCIDENT*
1986

CONTRIBUTING CIRCUMSTANCES**	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
Speeding	171	4,398	5,295	9,864
Impeding Traffic	1	70	134	205
Following Too Close	1	1,361	2,077	3,439
Improper Passing	7	545	1,347	1,899
Improper Turn	9	798	2,408	3,215
Improper Stop	11	446	1,441	1,898
Passed Stop Signs	34	1,657	1,943	3,634
Failed to Yield	68	4,625	8,281	12,974
Left of Center	122	1,388	1,726	3,236
Improper Signal	0	167	437	604
Inattention	214	11,449	20,624	32,287
Avoiding Vehicle	29	1,468	2,636	4,133
None	176	14,448	28,081	42,705
Other	59	3,733	7,964	11,756
TOTAL**	902	46,553	84,394	131,849

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986;
from the Department of Transportation.

**Three possible per driver.

TABLE 23

AGE OF DRIVER BY CLASSIFICATION OF ACCIDENT*
1986

AGE OF DRIVER**	FATAL ACCIDENTS	INJURY ACCIDENTS	DAMAGE ACCIDENTS	TOTAL ACCIDENTS
15 and Younger	10	742	1,181	1,933
16	13	1,538	2,736	4,287
17	24	1,586	2,782	4,392
18 to 19	48	2,997	5,202	8,247
20 to 24	103	6,397	11,135	17,635
25 to 34	157	8,977	15,896	25,030
35 to 44	90	5,077	9,089	14,256
45 to 54	50	2,787	5,310	8,147
55 to 64	50	2,323	4,627	7,000
65 to 74	36	1,598	3,119	4,753
75 and Older	22	1,027	2,099	3,148
Not Stated	14	910	4,245	5,169
TOTAL	617	35,959	67,421	103,997

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986;
from the Department of Transportation.

**Drivers of Vehicles in Proper Parking Locations are Excluded.

TABLE 24
VEHICLE DEFECTS BY CLASSIFICATIONS OF ACCIDENT*
1986

VEHICLE DEFECTS**	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
None Apparent	590	35,582	69,332	105,504
Defective Brakes	3	435	724	1,162
Headlights	3	32	49	84
Taillights	3	41	65	109
Brake Lights	1	69	117	187
Turn Lights	0	54	124	178
Windshield Wipers	0	2	16	18
Defective Tires	7	260	323	590
Steering	2	111	163	276
Other	21	630	1,739	2,390
Not Stated	3	369	1,262	1,634
TOTAL	633	37,585	73,914	112,132

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986;
from the Department of Transportation.

**Three possible per vehicle.

TABLE 25
TYPE OF VEHICLE BY CLASSIFICATION OF ACCIDENT*
1986

TYPE OF VEHICLE**	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
Passenger Car	356	27,461	52,733	80,550
Car and Trailer	12	184	557	753
Pickup-Truck Tractor	142	6,497	14,616	21,255
Truck-Tractor- Semi	59	692	1,622	2,373
Other Truck Combinations	5	20	45	70
Truck with Camper	0	10	13	23
Farm Tractor	5	54	90	149
Taxicab	1	5	3	9
Bus	2	39	91	132
School Bus	0	31	122	153
Motorcycle	35	1,301	181	1,517
Motorscooter- Bike	4	136	16	156
Other	3	38	127	168
Not Stated	1	476	1,998	2,475
TOTAL	625	36,944	72,214	109,783

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986;
from the Department of Transportation.

**Includes vehicles in proper parking places.

TABLE 26

PEDESTRIANS KILLED OR INJURED BY PEDESTRIAN ACTIONS*
1986

PEDESTRIANS	PEDESTRIANS KILLED	PEDESTRIANS INJURED	TOTAL PEDESTRIANS
Crossing at Intersection	4	128	132
Crossing-Not at Intersection	11	266	277
Walking or Standing in Roadway	13	124	137
Playing in Roadway	0	19	19
Other-In Roadway	7	85	92
Not in Roadway	5	53	58
Not Stated	1	34	35
TOTAL	41	709	750

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986;
from the Department of Transportation.

TABLE 27

PEDESTRIANS KILLED OR INJURED BY PEDESTRIAN CONDITION*
1986

PEDESTRIAN CONDITION	PEDESTRIANS KILLED	PEDESTRIANS INJURED	TOTAL PEDESTRIANS
Physical Defect - Ill	0	4	4
Fatigued - Asleep	1	2	3
Normal	22	562	584
Had Used Drugs or Alcohol	14	77	91
Other	4	28	32
Not Stated	0	36	36
TOTAL	41	709	750

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1986;
from the Department of Transportation.

SECTION III
REPORTED ALCOHOL RELATED ACCIDENTS AND ARRESTS
1986

SECTION III

REPORTED ALCOHOL RELATED TRAFFIC ACCIDENTS AND ARRESTS

The data presented in this section are a compilation of data from every Kansas state agency that receives and maintains alcohol related accident records and drinking drivers records. These agencies are Department of Transportation (Fatal Accident Reporting System, FARS), The Department of Revenue Motor Vehicle Division, the Kansas Highway Patrol, The Kansas Bureau of Investigation editions of Crime In Kansas, years 1979 through 1986 and from the Office of Judicial Administration who supplied court related data.

In 1986 there were 4,768 alcohol related accidents, which involved 7,574 vehicles constituting a decrease of 23.3% and 25.3% respectively over the 1979 base period. Accidents in 1986 involved 6,706 vehicle operators of which 71.7% (4,809) had consumed alcohol prior to becoming involved in an accident. Of the 4,768 alcohol related accidents that occurred in 1986, 33.1% or 1,577 were caused by a vehicle coming in contact with a fixed object.

Of the total alcohol related accidents, 182 (3.8%) resulted in one or more fatalities; 2,331 (48.9%) were classified as injury or possible injury accidents and 42.6% (2,031) were classified as property damage accidents only.

A total of 10,943 persons were involved in the reported

4,768 alcohol related accidents in 1986, resulting in an involvement rate of 2.3 persons per accident. Of the total number of persons involved in alcohol related accidents 38.7% (4,239) sustained injuries.

Five hundred persons were killed in traffic accidents in 1986, of which 224 (44.8%) died from involvement in an alcohol related accident.

Drinking drivers under the age of nineteen years old constitute 14.9% of the total number of drinking drivers and account for 19.1% of all alcohol related arrests in 1986. In contrast, drinking drivers between the ages of twenty to twenty-four account for 25.7% of drinking drivers involved in accidents and 25.0% of all alcohol related arrests.

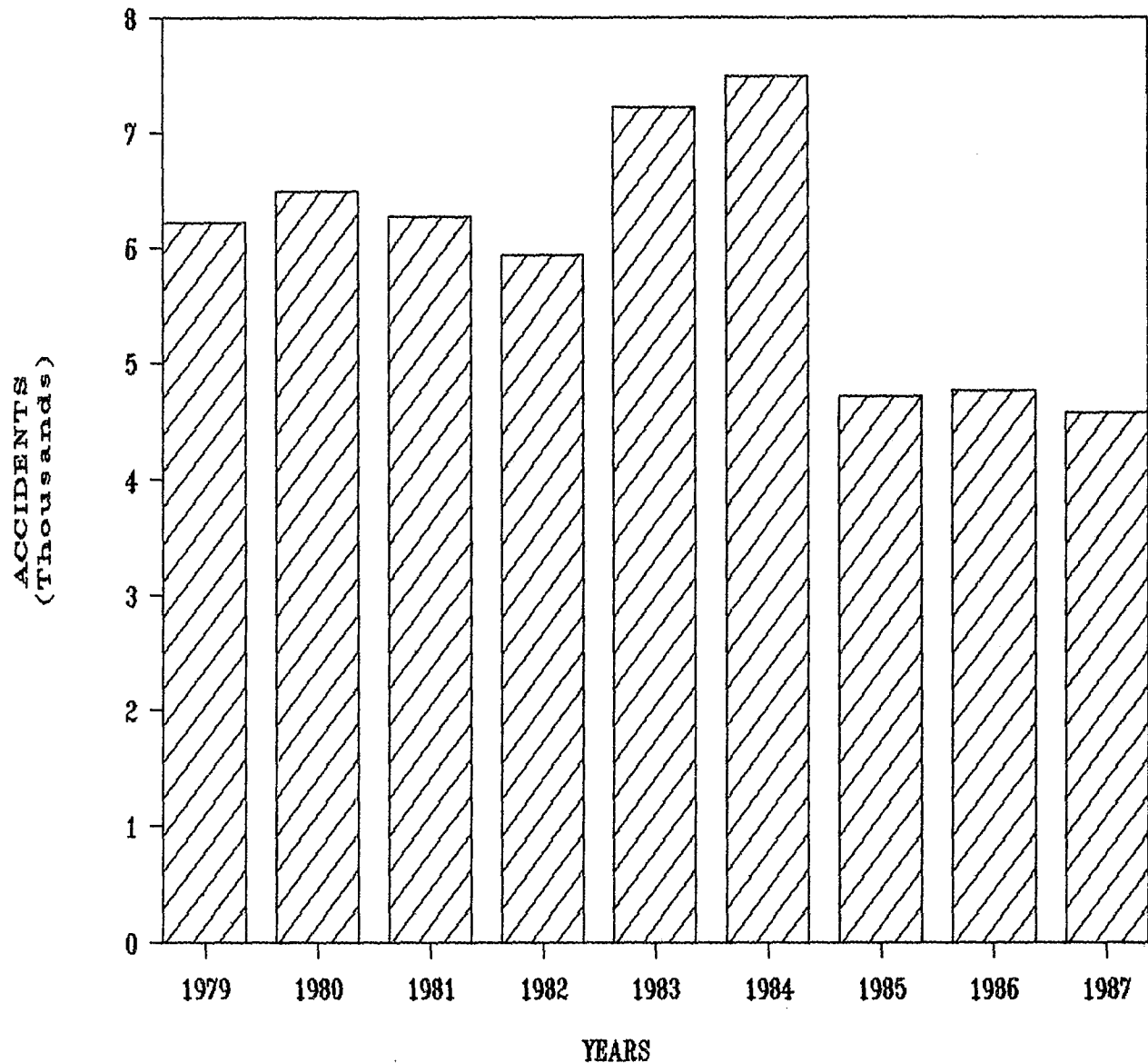
TABLE 28
ALCOHOL RELATED ACCIDENTS
BY TYPE OF ACCIDENT*
1979 - 1986

TYPE OF ACCIDENT	1979	1980	1981	1982	1983	1984	1985	1986
Overturned	562	610	602	594	581	647	402	438
Other Non-Collision	89	108	116	125	199	236	118	137
Sub-Total	651	718	718	719	780	883	520	575
Motor Vehicle Same Roadway	2,441	2,304	2,327	2,115	2,668	2,671	1,720	1,726
Motor Vehicle Other Roadway	14	5	4	71	316	305	79	49
Motor Vehicle Parked	862	971	855	832	950	893	639	632
Sub-Total	3,317	3,280	3,186	3,018	3,934	3,869	2,438	2,407
Railway Train	27	18	18	16	18	26	12	13
Pedestrian	36	75	78	36	35	49	26	85
Pedalcyclist	10	8	15	9	27	31	8	16
Animal	20	19	22	51	152	203	15	26
Fixed Object	2,118	2,333	2,208	2,034	2,160	2,304	1,608	1,577
Other Object	38	36	26	49	117	121	72	62
Sub-Total	2,249	2,489	2,367	2,195	2,509	2,734	1,741	1,779
Not Stated	0	0	0	0	0	0	14	7
TOTAL	6,217	6,487	6,271	5,932	7,223	7,486	4,713	4,768

* Information contained in this table was supplied by Kansas Department of Transportation, Fatal Accident Reporting System (FARS).

FIGURE 7

ALCOHOL RELATED ACCIDENTS TREND



TREND LEGEND**

Year	Number	%Change	Rate Per 1,000
1979	6,217		2.6
1980	6,487	+ 4.3	2.7
1981	6,271	- 3.3	2.7
1982	5,932	- 5.4	2.5
1983	7,223	+21.8	3.0
1984	7,486	+ 3.6	3.1
1985	4,713	-37.0	1.9
1986	4,768	+ 1.2	1.9
1987*	4,573	- 4.1	1.9

* projection

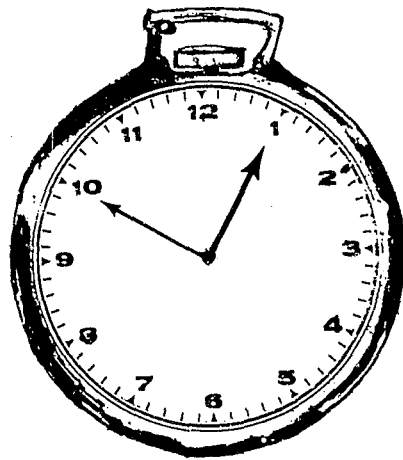
**"Year" denotes year of occurrence;
 "Number" denotes number of accidents;
 "% Change" denotes percent of change
 from previous year; and "Rate per
 thousand" denotes per thousand
 population.

TABLE 29
ALCOHOL RELATED ACCIDENTS
BY CLASSIFICATION OF ACCIDENT*
1979 - 1986

	1979	1980	1981	1982	1983	1984	1985	1986
FATAL ACCIDENTS	153	203	208	156	121	152	131	182
INJURY ACCIDENTS	865	936	928	814	797	863	686	749
NON-INJURY OR POSSIBLE INJURY	2,364	2,436	2,325	2,042	2,165	2,379	1,645	1,806
NO INJURY ACCIDENTS	2,835	2,912	2,810	2,920	4,140	4,092	2,251	2,031
TOTAL	6,217	6,487	6,271	5,932	7,223	7,486	4,713	4,768

* Information contained in this table was supplied by Kansas Department of Transportation, Fatal Accident Reporting System (FARS).

FIGURE 8
FREQUENCY OF ALCOHOL RELATED ACCIDENTS
1986



ONE
ALCOHOL RELATED ACCIDENT
EVERY 1 HOUR, 50 MINUTES

ONE
INJURY ACCIDENT
EVERY 3 HOURS, 26 MINUTES

ONE
NON-INJURY ACCIDENT
EVERY 4 HOURS, 19 MINUTES

ONE
FATAL ACCIDENT
EVERY 2 DAYS, 7 HOURS,
48 MINUTES

TABLE 30

TYPE OF ALCOHOL RELATED ACCIDENTS
BY NUMBER OF PERSONS INVOLVED*
1979 - 1986

TYPE OF ACCIDENT	1979	1980	1981	1982	1983	1984	1985	1986
Overtaken	921	1,034	1,015	997	932	1,035	658	711
Other Non-Collision	152	191	202	203	355	387	208	251
Sub-Total	1,073	1,225	1,217	1,200	1,287	1,422	866	962
Motor Vehicle Same Roadway	8,790	8,137	6,365	7,513	9,050	9,084	6,023	5,988
Motor Vehicle Other Roadway	50	13	15	230	952	968	271	163
Motor Vehicle Parked	1,388	1,548	1,262	1,421	1,710	1,533	1,078	963
Sub-Total	10,288	9,698	9,642	9,164	11,712	11,585	7,372	7,114
Railway Train	44	29	28	22	36	64	21	20
Pedestrian	118	207	214	108	89	144	82	225
Pedalcyclist	26	22	36	27	74	70	24	41
Animal	32	35	43	91	267	356	22	50
Fixed Object	3,323	3,653	3,361	3,171	3,413	3,569	2,471	2,415
Other Object	58	67	42	69	207	216	108	92
Sub-Total	3,601	4,013	3,724	3,488	4,086	4,419	2,728	2,843
Not Stated							32	24
TOTAL	14,902	14,936	14,583	13,852	17,085	17,426	10,998	10,943

* Information contained in this table was supplied by Kansas Department of Transportation, Fatal Accident Reporting System (FARS).

TABLE 31
ALCOHOL RELATED ACCIDENTS
BY NUMBER OF PERSONS INVOLVED*
1979 - 1986

	1979	1980	1981	1982	1983	1984	1985	1986
KILLED	180	232	235	183	138	172	151	224
INCAPACITATED INJURY	1,232	1,351	1,363	1,196	1,088	1,194	971	1,124
NONINCAPACITATED INJURY	4,081	4,091	3,972	3,455	3,539	3,849	2,801	3,115
NOT INJURED	9,409	9,262	9,013	9,018	12,320	12,211	7,075	6,480
TOTAL PERSONS	14,902	14,936	14,583	13,852	17,085	17,426	10,998	10,943

* Information contained in this table was supplied by Kansas Department of Transportation, Fatal Accident Reporting System (FARS).

FIGURE 9
FREQUENCY OF PERSONS KILLED OR INJURED
IN ALCOHOL RELATED ACCIDENTS
1986

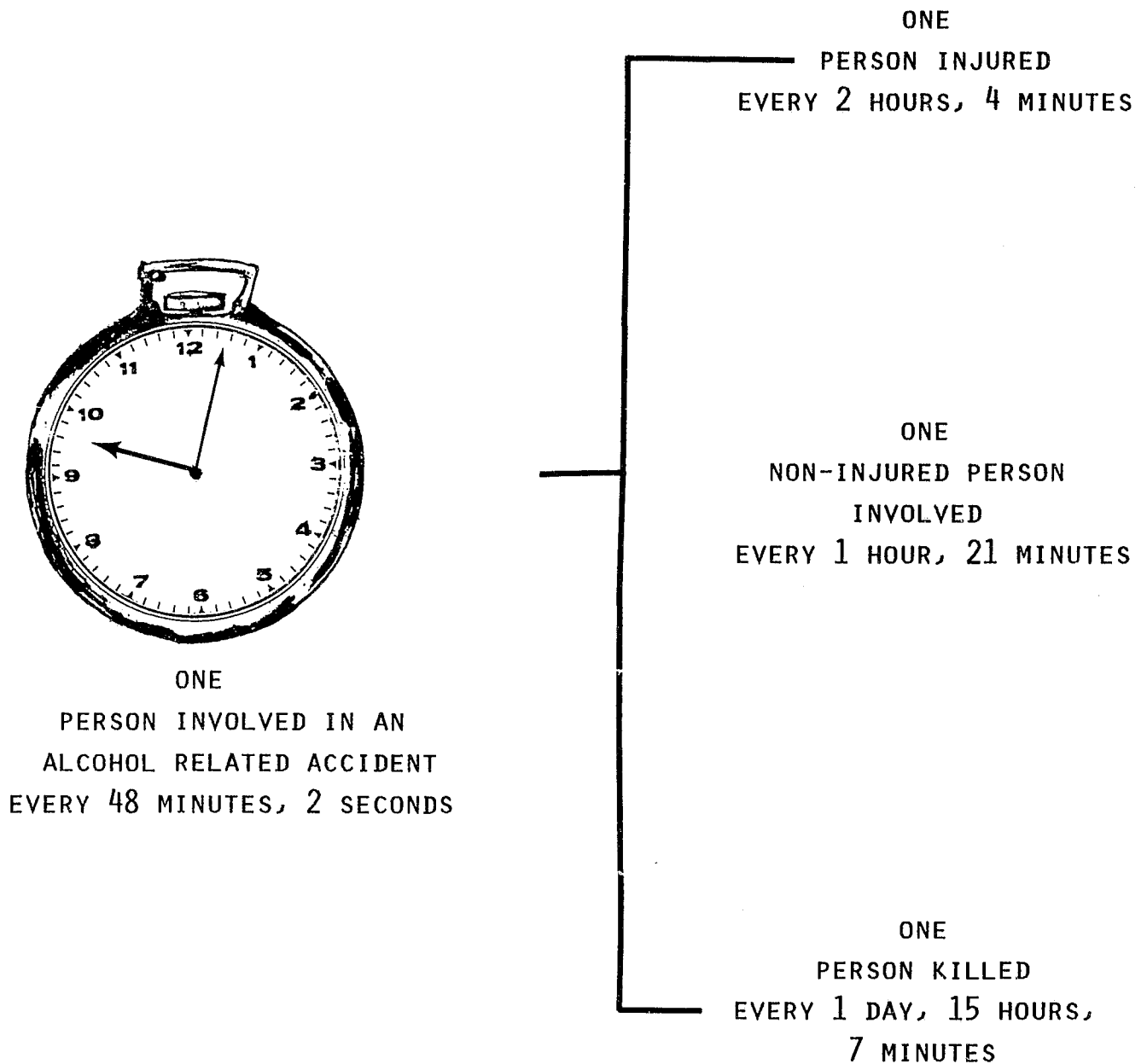


TABLE 32

TYPE OF ALCOHOL RELATED ACCIDENTS
BY NUMBER OF VEHICLES INVOLVED*
1979 - 1986

TYPE OF ACCIDENT	1979	1980	1981	1982	1983	1984	1985	1986
Overturned	571	628	620	604	596	665	415	449
Other Non-Collision	91	110	120	141	219	261	132	147
Sub-Total	662	738	740	745	815	926	547	596
Motor Vehicle Same Roadway	5,132	4,834	4,905	4,444	5,534	5,544	3,609	3,510
Motor Vehicle Other Roadway	28	10	8	142	633	619	158	102
Motor Vehicle Parked	1,954	2,245	1,948	1,874	2,106	1,942	1,422	1,410
Sub-Total	7,114	7,089	6,861	6,460	8,273	8,105	5,189	5,122
Railway Train	27	18	18	19	24	34	16	14
Pedestrian	45	81	86	39	40	51	26	87
Pedalcyclist	10	8	15	9	28	31	9	16
Animal	20	20	22	52	159	203	15	26
Fixed Object	2,224	2,420	2,302	2,130	2,274	2,438	1,704	1,634
Other Object	40	42	27	50	132	137	78	66
Sub-Total	2,366	2,589	2,470	2,299	2,657	2,894	1,848	1,843
Not Stated							25	13
TOTAL	10,142	10,416	10,071	9,504	11,745	11,925	7,609	7,574

* Information contained in this table was supplied by Kansas Department of Transportation, Fatal Accident Reporting System (FARS).

TABLE 33
ALCOHOL RELATED ACCIDENTS
BY TYPE OF VEHICLE INVOLVED*
1979 - 1986

YEAR	PASSENGER CAR	MOTORCYCLE	OTHER	TOTAL
1979	7,340	210	2,592	10,142
1980	7,471	270	2,675	10,416
1981	7,278	219	2,574	10,071
1982	6,725	194	2,585	9,504
1983	8,192	272	3,281	11,745
1984	8,279	323	3,323	11,925
1985	5,425	192	1,992	7,609
1986	5,411	198	1,965	7,574

* Information contained in this table was supplied by Kansas Department of Transportation, Fatal Accident Reporting System (FARS).

TABLE 34
ALCOHOL RELATED ACCIDENTS
BY AGE OF DRINKING DRIVER INVOLVED
1979 - 1986*

AGE	1979	1980	1981	1982	1983	1984	1985	1986
15 and Under	46	32	40	40	105	112	28	21
16	129	129	125	135	203	229	81	91
17	278	248	251	235	303	334	114	166
18 - 19	941	1,028	870	789	969	919	484	439
20 - 24	1,694	1,811	1,748	1,714	2,032	2,235	1,359	1,234
25 - 34	1,579	1,765	1,765	1,692	2,219	2,322	1,576	1,620
35 - 44	731	673	721	705	961	1,038	590	657
45 - 54	503	479	424	425	571	549	270	255
55 - 64	287	274	257	272	405	402	172	163
65 - 74	103	78	88	96	202	240	58	69
75 and Over	9	20	14	52	124	142	12	7
Unknown	119	101	106	224	458	415	88	87
TOTAL	6,419	6,638	6,409	6,379	8,602	8,937	4,832	4,809

* Information contained in this table was supplied by Kansas Department of transportation, Fatal Accident Reporting System (FARS).

TABLE 35
SUMMARY OF ALCOHOL RELATED ACCIDENTS*
1979 - 1986

	1979	1980	1981	1982	1983	1984	1985	1986
NUMBER OF ACCIDENTS	6,217	6,450	6,231	5,932	7,223	7,486	4,713	4,703
NUMBER OF VEHICLES	10,142	10,376	10,028	9,504	11,745	11,925	7,609	7,574
NUMBER OF PERSONS	14,902	14,936	14,583	13,852	17,085	17,426	10,998	10,943
TOTAL NUMBER OF DRIVERS	8,991	9,047	8,840	8,385	10,566	10,762	6,785	6,706
NUMBER OF DRINKING DRIVERS	6,419	6,638	6,409	6,379	8,602	8,937	4,832	4,809
NUMBER OF PASSENGERS RIDING WITH DRINKING DRIVERS	5,676	5,587	5,437	4,951	5,747	5,793	3,844	3,896
NUMBER OF PEDESTRIANS	118	207	214	108	89	144	39	40
NUMBER OF PEDALCYCLISTS	26	22	36	27	74	70	10	13

* Information contained in this table was supplied by Kansas Department of Transportation, Fatal Accident Reporting System (FARS).

TABLE 36
TOTAL ARRESTS FOR ALCOHOL RELATED OFFENSES*
1979 - 1986

OFFENSE	1979	1980	1981	1982	1983	1984	1985	1986
D.U.I.	9,370	9,896	10,362	11,588	13,099	13,428	12,950	14,520
LIQUOR LAWS	4,067	4,896	4,168	4,334	4,388	4,988	5,775	6,845
DRUNKENNESS	202	346	447	463	419	408	381	262
TOTAL	13,639	15,138	14,977	16,385	17,906	18,824	19,106	21,627

* As reported in 'Crime In Kansas' years 1979 through 1986.

TABLE 37
TOTAL ARRESTS FOR ALCOHOL RELATED OFFENSES BY AGE*
1979 - 1986

AGE	1979	1980	1981	1982	1983	1984	1985	1986
15 AND UNDER	254	288	186	178	166	237	303	316
16	475	416	425	313	319	381	373	572
17	749	692	572	582	480	525	506	764
18 - 19	1,834	2,271	1,957	1,977	2,028	2,018	1,843	2,471
20 - 24	3,335	4,006	4,055	4,623	5,180	5,225	4,944	5,398
25 - 34	3,016	3,583	3,712	4,269	5,034	5,620	5,959	6,654
35 - 44	1,707	1,741	1,834	2,097	2,333	2,480	2,617	2,962
45 - 54	1,330	1,219	1,301	1,318	1,312	1,326	1,400	1,430
55 - 64	713	726	713	795	793	752	860	822
65 AND OVER	225	196	222	233	261	260	301	238
TOTAL	13,638	15,138	14,977	16,385	17,906	18,824	19,106	21,627

* As reported in 'Crime In Kansas' years 1979 through 1986.

TABLE 38
DRIVING UNDER THE INFLUENCE ARRESTS BY SEX
1979 - 1986*

YEAR	JUVENILE MALE	JUVENILE FEMALE	JUVENILE TOTAL	ADULT MALE	ADULT FEMALE	ADULT TOTAL
1979	282	48	330	8,307	733	9,040
1980	240	38	278	8,791	827	9,618
1981	262	41	303	9,033	1,206	10,059
1982	212	29	241	10,190	1,157	11,347
1983	219	52	271	11,483	1,345	12,828
1984	203	37	240	11,710	1,478	13,188
1985	181	38	219	11,247	1,484	12,731
1986	244	29	290	12,538	1,692	14,230

* As reported in 'Crime In Kansas' years 1979 through 1986.

TABLE 39
DRIVING UNDER THE INFLUENCE ARRESTS BY AGE*
1979 - 1986

AGE	1979	1980	1981	1982	1983	1984	1985	1986
15 AND UNDER	18	28	18	9	20	18	17	22
16	95	73	93	58	82	84	76	89
17	217	177	192	174	169	138	126	179
18	461	508	419	463	463	450	436	437
19	518	555	580	647	650	598	567	536
20	529	578	599	693	731	662	623	622
21	489	550	577	695	794	805	723	764
22	447	495	580	615	774	721	714	821
23	421	455	471	570	727	769	646	701
24	410	451	472	506	591	701	654	690
25 - 34	2,386	2,784	2,962	3,423	4,099	4,540	4,647	5,313
35 - 44	1,420	1,454	1,542	1,769	1,987	2,018	1,985	2,447
45 - 54	1,147	1,051	1,083	1,109	1,116	1,109	954	1,084
55 - 64	625	579	594	656	673	612	600	627
65 AND OVER	187	158	180	201	223	203	182	188
TOTAL	9,370	9,896	10,362	11,588	13,099	13,428	12,950	14,520

* As reported in 'Crime In Kansas' years 1979 through 1986.

TABLE 40
KANSAS HIGHWAY PATROL
TICKETS WRITTEN FOR ALCOHOL RELATED OFFENSES
1979 - 1986

TYPE OF OFFENSE	1979	1980	1981	1982	1983	1984	1985	1986
Sell Liquor to Minor	84	57	69	47	37	37	45	47
Consume Alcohol Public Place	4	1	0	5	13	4	4	6
Transporting Liquor into State	4	1	1	1	4	2	1	1
Transporting Open Liquor Container	1,209	1,044	1,142	1,288	1,159	1,101	969	1,252
Transporting Open 3.2 Beer Container	0	0	321	822	919	844	715	925
Under Age Consumption/Poss of Alcohol	0	0	7	26	13	30	42	160
TOTAL	1,301	1,103	1,540	2,189	2,145	2,018	1,776	2,391

TICKETS FOR D.U.I.

D.U.I. Liquor Blood Test	269	365	360	347	386	364	357	407
D.U.I. Liquor Breath Test	1,775	1,721	1,621	2,149	1,757	1,611	1,403	1,848
D.U.I. Liquor No Test	28	33	29	26	13	13	13	8
D.U.I. Liquor Test Refused	663	658	690	756	570	439	323	338
D.U.I. Liquor Urine Test	0	0	0	0	0	4	5	16
D.U.I. Narcotic Drugs	1	1	1	0	0	1	3	2
Driver Drinking or D.U.I.*	25	10	11	0	0	0	0	0
D.U.I. Alc/Drug Use on Duty*	19	13	4	21	10	8	0	0
TOTAL	2,780	2,801	2,716	3,299	2,726	2,440	2,104	2,619

GRAND TOTAL	4,081	3,904	4,256	5,488	4,871	4,458	3,880	5,010
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* This category includes tickets written for violations of Kansas Administrative Regulations 81-4-7 which prohibits motor carriers from driving when under the influence of narcotics, drugs or alcoholic beverages and prohibits the use of same while on duty.

TABLE 41
KANSAS HIGHWAY PATROL
D.U.I. ARRESTS BY HOURLY RATE
1979 - 1986

HOUR RATE BEGINNING	1979	1980	1981	1982	1983	1984	1985	1986
Midnight	353	354	355	519	441	387	307	393
1:00 AM	253	252	266	321	280	237	169	294
2:00 AM	142	120	123	175	130	110	85	137
3:00 AM	62	52	58	96	70	64	39	79
4:00 AM	15	28	13	36	22	25	22	26
5:00 AM	9	8	12	14	18	12	8	13
6:00 AM	11	15	9	18	19	16	14	16
7:00 AM	18	14	20	20	15	15	15	13
8:00 AM	10	19	11	25	12	16	14	10
9:00 AM	21	16	13	10	17	10	6	18
10:00 AM	20	22	31	17	17	18	8	6
11:00 AM	33	37	31	29	26	22	24	26
Noon	33	24	31	31	18	16	23	24
1:00 PM	45	50	47	46	43	40	24	26
2:00 PM	44	61	57	63	55	40	42	41
3:00 PM	86	71	77	72	47	59	53	57
4:00 PM	113	120	95	100	81	84	59	79
5:00 PM	143	111	122	121	112	93	92	92
6:00 PM	141	139	117	131	102	96	105	110
7:00 PM	143	160	151	174	130	124	116	134
8:00 PM	226	227	209	270	198	152	184	191
9:00 PM	245	255	257	272	226	232	171	227
10:00 PM	273	290	258	303	293	254	224	262
11:00 PM	341	356	337	415	354	309	297	343
TOTAL	2,780	2,801	2,700	3,278	2,726	2,431	2,101	2,617

TABLE 42
KANSAS HIGHWAY PATROL
D.U.I. ARRESTS BY DAY OF WEEK
1979 - 1986

YEAR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	TOTAL
1979	204	213	223	247	493	842	558	2,780
1980	184	239	263	241	517	821	536	2,801
1981	190	195	238	303	449	765	560	2,700
1982	212	240	242	288	574	1,020	702	3,278
1983	174	196	236	247	425	868	580	2,726
1984	179	160	196	227	392	730	547	2,431
1985	161	172	167	214	340	628	419	2,101
1986	166	199	239	263	400	798	552	2,617

TABLE 43
D.U.I. RELATED CONVICTIONS
1979 - 1986*

	1979	1980	1981	1982	1983	1984	1985	1986
D.L. Suspensions/Revocations	1,665	1,715	1,437	1,332	1,966	2,252	3,102	5,119
D.L. Modifications	4,283	4,342	4,781	4,412	2,212	2,451	1,146	2,528
D.U.I. - No Action Taken by Court**	---	---	---	436	524	1,037	1,493	2,040
Diversion Agreements**	---	---	---	692	5,116	5,631	4,747	4,256
Total D.U.I. Convictions	5,948	6,057	6,218	6,872	9,818	11,371	10,488	13,943

* Information contained in this table was supplied by Kansas Department of Revenue, Planning and Research Services Bureau.

** Prior to 1982, a different law was in effect; therefore, no data is available for those years.

***Diversion agreements may or may not be counted as a D.U.I. conviction. Prior to 1982, the Division of Vehicles did not have to be informed when an agreement was entered into.

TABLE 44
CHEMICAL TEST REFUSALS
1979 - 1986*

	1979	1980	1981	1982	1983	1984	1985	1986
D.L. Suspensions	1,104	1,028	1,166	1,550	2,448	2,055	2,922	1,815
D.L. Modifications	597	559	906	696	59	*	*	*
Total Chemical Test Refusals**	1,701	1,587	2,072	2,246	2,507	2,055	2,922	1,815

* Information contained in this table was supplied by Kansas Department of Revenue, Planning and Research Services Bureau.

**There were no chemical test refusal restrictions in 1984 due to a law change making it a mandatory suspension.

TABLE 45

DRIVING UNDER THE INFLUENCE COURT DISPOSITIONS
BY FISCAL YEAR
July 1, 1982 - June 30, 1986*

Years	<u>FILINGS</u>		<u>DISPOSITIONS</u>					Total
	Driving Under Influence	Guilty Pleas	Bond Forfeitures	Dismissals	Trials To Court	Trials by Jury	Diversions	
1982-1983	5,900	1,809	28	436	756	116	1,371	4,516
1983-1984	5,264	1,911	37	558	489	105	2,127	5,227
1984-1985	4,958	1,633	42	470	612	79	1,992	4,828
1985-1986	4,991	1,883	69	451	597	76	1,391	4,467

* Information contained in this table was supplied by the Kansas Office of Judicial Administration which operates on a fiscal year (July 1 to June 30) rather than a calendar year.

SECTION IV
HIGHWAY PATROL ACTIVITIES
1986

SECTION IV

HIGHWAY PATROL ACTIVITIES

The following section examines Highway Patrol activities, specifically the tickets written by the Highway Patrol, hourly time distribution and a summary of total Highway Patrol activities. The data presented were taken from several reports which were supplied by the Highway Patrol.

Tables 46 and 47 present information concerning the 199,771 tickets written by the Highway Patrol in 1986, which includes 381 voided tickets. In 1986, 199,091 tickets or 99.7% of all tickets written, were written for misdemeanor traffic violations and 680 tickets, or 0.3% were written for felony traffic violations. The greatest number of tickets (76,982) were written on U.S. Highways. Speeding tickets accounted for 74.1% (148,067) of all tickets written by the Patrol. Further, 97.5% of all speeding tickets were written for exceeding the 55 mile per hour speed limit. There were a total of 2,617 tickets written for driving under the influence of either intoxicating beverages or drugs.

Table 48 presents a comparison of the number of tickets written by time of day and day of week. The data reflect an increase in ticketing activity on Friday, Saturday and Sunday, with Saturday showing the largest number of tickets written. The data further show the greatest number of tickets, 15,093, was written between the hours of 4:00 p.m. and 5:00 p.m. and the

least number of tickets written between 3:00 a.m. and 4:00 a.m. Table 48 also indicates the hour 3:00 p.m. to 4:00 p.m. on Sunday as the single time period with the greatest number of tickets written.

Table 49 displays a summary of state wide violations issued by the manner in which the violator was detected. It is evident by the displayed data that radar continues to be the most common method (41.6%) of detection used in clocking speeding violators.

Table 50 presents a comprehensive summary of the Highway Patrol's activities for years 1985 and 1986. The data show the number of hours expended and the number of miles driven by the Patrol on Kansas roadways. It further shows the total number of accidents investigated, types of motor vehicle inspections, etc. This table was included to apprise the reader of the total scope of the Highway Patrol's duties.

TABLE 46

TICKETS WRITTEN BY THE HIGHWAY PATROL
1986

TICKETS	FELONIES	MISDEMEANORS	TOTAL
55 m.p.h. Violations	0	144,287	144,287
Other Speed Violations	0	3,780	3,780
Total Speeding Violations	0	148,067	148,067
D.U.I. - Liquor Violations	0	2,617	2,617
D.U.I. - Narcotic Drug	0	2	2
D.U.I. - Other **	0	0	0
Total D.U.I. Violations	0	2,619	2,619
All Other Violations	680	48,405	49,085
TOTAL	680	199,091	199,771

* Note: Total includes 381 voided tickets.

**This category includes tickets written for violations of Kansas Administrative Regulations 82-4-7 and 82-4-14 which prohibit motor carriers from driving when under the influence of narcotics, drugs or alcoholic beverages and prohibits the use of same while on duty.

TABLE 47

KANSAS HIGHWAY PATROL
TICKETS WRITTEN BY LOCATION
1986

TOTAL TICKETS WRITTEN	TURNPIKE	INTER- STATE HIGHWAY	U.S. HIGHWAY	KANSAS HIGHWAY	OTHER HIGHWAY	OLD HIGHWAY
199,771	14,693	65,581	76,982	31,778	869	9,868

* Note: Total includes 381 voided tickets.

TABLE 48

KANSAS HIGHWAY PATROL TICKETS WRITTEN
BY DAY OF WEEK AND TIME OF DAY
1986

HOUR BEGINNING	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	TOTAL
Midnight	321	252	282	369	305	1,695	1,745	4,969
1:00 AM	109	75	168	133	130	998	1,104	2,717
2:00 AM	89	59	64	93	85	278	345	1,013
3:00 AM	52	37	77	96	47	143	145	597
4:00 AM	54	43	52	59	65	78	96	447
5:00 AM	70	69	76	84	83	68	71	521
6:00 AM	565	554	530	533	432	270	247	3,131
7:00 AM	1,760	1,737	1,802	1,685	1,263	1,024	1,007	10,278
8:00 AM	1,212	1,343	1,343	1,395	1,238	1,242	1,094	8,867
9:00 AM	1,232	1,235	1,287	1,249	1,200	1,440	1,540	9,183
10:00 AM	1,645	1,668	1,648	1,624	1,499	1,898	2,107	12,089
11:00 AM	1,601	1,570	1,529	1,640	1,514	1,914	1,967	11,735
Noon	1,184	1,121	1,137	1,140	1,038	1,278	1,569	8,467
1:00 PM	1,992	1,878	2,032	1,853	1,746	2,101	2,449	14,051
2:00 PM	2,007	1,807	1,975	1,764	1,704	1,980	2,694	13,931
3:00 PM	1,738	1,670	1,724	1,739	1,686	1,682	2,770	13,009
4:00 PM	1,772	1,699	1,828	1,784	1,836	1,789	2,883	13,591
5:00 PM	1,748	1,675	1,764	1,898	2,718	2,621	2,669	15,093
6:00 PM	1,094	1,028	1,048	1,117	2,469	2,338	1,573	10,667
7:00 PM	1,118	1,063	1,167	1,061	2,126	2,125	1,720	10,380
8:00 PM	1,226	1,175	1,375	1,341	2,353	2,263	1,765	11,498
9:00 PM	977	950	1,113	1,011	2,064	1,918	1,305	9,338
10:00 PM	743	693	823	779	1,846	1,750	972	7,606
11:00 PM	492	512	640	556	1,902	1,948	543	6,593
TOTAL	24,801	23,913	25,484	25,003	31,349	34,841	34,380	199,771

TABLE 49
SUMMARY OF STATE WIDE
KANSAS HIGHWAY PATROL VIOLATIONS ISSUED
1985 - 1986

VIOLATIONS	1985	1986	PERCENT OF CHANGE
ARRESTS			
Aircraft	11,132	10,997	- 1.2
Moving Hazardous Violations	20,541	21,710	+ 5.7
Other Felony	531	705	+ 32.8
Misdemeanor, Non-Traffic	2,355	2,267	- 3.7
Misdemeanor, Traffic	21,694	27,836	+ 28.3
Radar	117,265	124,510	+ 6.2
Stopwatch	6,990	8,694	+ 24.4
Driving Under the Influence	2,100	2,604	+ 24.0
TOTAL ARRESTS	182,608	199,323	+ 9.2
WARNINGS			
Aircraft	2,740	3,508	+ 28.0
Moving Hazardous violations	75,151	68,146	- 9.3
Other	24,567	79,028	+221.7
Radar	31,193	37,943	+ 21.6
Stopwatch	1,698	2,553	+ 50.4
TOTAL WARNINGS	135,349	191,178	+ 41.3
TOTAL	317,957	390,501	+ 22.8

TABLE 50
SUMMARY OF STATE WIDE
KANSAS HIGHWAY PATROL ACTIVITIES
1985 - 1986

ACTIVITIES	1985*	1986**	PERCENT OF CHANGE
Interstate Hours Patrolled	67,379	66,196.5	- 1.8
Interstate Miles Patrolled	2,001,328	1,949,302	- 2.6
Total Miles Patrolled	10,051,072	9,888,328	- 1.6
Total Accidents Investigated	8,514	7,227	-15.1
Alcohol Analysis Tests Given	3,246	3,523	+ 8.5
Inspection:			
Private Motor Vehicles*	2,530	3,039	+20.1
School Bus	5,187	5,309	+ 2.4
Trucks	34,903	46,741	+33.9
Vehicle	34,139	43,251	+26.7
Vehicle Inspection Numbers	33,280	13,633	-59.0
NCIC Hits	496	608	+22.6
Recovered Cars:			
Abandoned	409	400	- 2.2
Stolen	227	253	+11.5
Services Rendered	77,188	101,263	+31.2
Unattended Vehicle Checks and Tickets Issued	16,252	15,550	- 4.3
Value of Recovered Property	\$ 1,337,486	\$ 1,050,762	-21.4
Special Permits Revenue	\$ 1,631	\$ 1,368	-16.1
Safety Programs Given	2,855	2,925	+ 2.5
Safety Programs Attendance	177,877	202,772	+14.0

* Through May 31, 1985

**Beginning June 1, 1986

APPENDIX A
REPORTED TRAFFIC ACCIDENTS
AND
HIGHWAY PATROL ACTIVITIES
1985

TABLE A-1
TYPE OF ACCIDENT BY CLASSIFICATION OF ACCIDENT*
1985

TYPE OF ACCIDENT	FATAL ACCIDENTS	NON-FATAL ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS**
Overturned	64	2,039	1,669	3,772
Other Non- Collision	7	658	1,269	1,934
TOTAL NON-COLLISION	71	2,697	2,938	5,706
Motor Vehicle Same Road	194	12,727	29,053	41,974
Motor Vehicle Other Road	3	545	1,469	2,017
Motor Vehicle Parked	5	745	6,023	6,773
Railroad	15	58	80	153
Pedestrian	32	515	62	609
Pedalcycle	4	409	36	449
Animal	2	197	3,440	3,639
Fixed Object	102	3,789	6,579	10,470
Other Object	1	225	667	893
TOTAL COLLISION	358	19,210	47,409	66,977
TOTAL	429	21,907	50,347	72,683

* Kansas Standard SUMMARY OF MOTOR VEHICLE TRAFFIC ACCIDENTS, 1985; from Kansas Department of Transportation.

**Legally reportable accidents are those involving death, bodily injury or property damage of \$500 or more.

TABLE A-2
PERSONS KILLED OR INJURED BY TYPE OF ACCIDENT*
1985

TYPE OF ACCIDENT	KILLED	TOTAL INJURED	INCAPACI- TATED INJURY	NONINCA- PACITATED INJURY	NOT INJURED	TOTAL PERSONS
Overturned	70	2,872	660	2,212	3,414	6,356
Other Non- Collision	7	816	161	655	2,838	3,661
TOTAL NON-COLLISION	77	3,688	821	2,867	6,252	10,017
Motor Vehicle Same Road	234	21,069	2,853	18,216	113,849	135,152
Motor Vehicle Other Road	3	932	151	781	5,315	6,250
Motor Vehicle Parked	6	974	122	852	10,061	11,041
Railroad	16	87	35	52	275	378
Pedestrian	32	555	191	364	1,030	1,617
Pedalcycle	5	425	106	319	753	1,183
Animal	2	239	29	210	6,158	6,399
Fixed Object	110	4,961	1,119	3,842	11,586	16,657
Other Object	1	295	60	235	1,345	1,641
TOTAL COLLISION	409	29,537	4,666	24,871	150,372	180,318
TOTAL	486	33,225	5,487	27,738	156,624	190,335

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985; from Kansas Department of Transportation.

TABLE A-3

CLASSIFICATION OF PERSONS INJURED OR KILLED BY AGE OF CASUALTY*
1985

AGE OF CASUALTY	PEDESTRIANS		BICYCLISTS		MOTORCYCLISTS		DRIVERS		PASSENGERS		TOTAL	
	KILLED	INJURED	KILLED	INJURED	KILLED	INJURED	KILLED	INJURED	KILLED	INJURED	KILLED	INJURED
0 to 4	4	43	0	2	0	0	0	0	14	867	18	912
5 to 9	2	123	1	65	0	0	0	0	9	931	12	1,119
10 to 14	0	95	2	130	1	48	1	95	4	987	8	1,355
15 to 19	4	76	0	64	3	305	40	3,476	26	2,367	73	6,288
20 to 24	4	59	0	40	8	431	50	3,718	19	1,464	81	5,712
25 to 34	5	88	1	27	11	433	60	5,027	17	1,378	94	6,953
35 to 44	1	49	1	8	3	136	26	2,628	7	727	38	3,548
45 to 54	3	32	0	4	2	53	36	1,536	4	467	45	2,092
55 to 64	4	35	0	5	2	27	18	1,330	6	428	30	1,825
65 to 74	5	14	0	1	1	4	26	814	10	385	42	1,218
75 and Older	4	13	0	1	1	3	20	507	15	281	40	805
Not Stated	0	12	0	6	0	12	3	427	2	941	5	1,398
TOTAL	36	639	5	353	32	1,452	280	19,558	133	11,223	486	33,225

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985; from the Department of Transportation.

TABLE A-4

MANNER OF TWO MOTOR VEHICLE COLLISION BY CLASSIFICATION OF ACCIDENT*
1985

MANNER OF COLLISION	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
Head On	69	918	1,195	2,182
Rear End	21	5,048	9,271	14,340
Angle	98	6,962	15,959	23,019
Sideswipe- Meeting	11	453	2,212	2,676
Sideswipe- Passing	7	491	4,111	4,609
Backed Into	0	108	3,417	3,525
Not Stated	2	532	1,178	1,712
TOTAL	208	14,512	37,343	52,063

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985; from the Department of Transportation.

TABLE A-5
ROUTE LOCATION BY CLASSIFICATION OF ACCIDENT*
1985

LOCATION OF ROUTE	NUMBER OF ACCIDENTS				NUMBER OF PERSONS		
	FATAL ACCIDENTS	NONFATAL ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS	KILLED	INJURED	TOTAL
URBAN							
Interstate	16	1,031	1,910	2,957	16	1,495	1,511
Turnpike	2	65	158	225	2	97	99
U. S. Routes	28	2,524	5,208	7,760	32	3,994	4,026
State Routes	11	925	1,863	2,799	11	1,419	1,430
Local Streets	73	10,471	24,683	35,227	78	15,413	15,491
URBAN TOTAL	130	15,016	33,822	48,968	139	22,418	22,557
RURAL							
Interstate	23	321	713	1,057	24	545	569
Turnpike	5	173	433	611	5	273	278
U. S. Routes	104	1,687	3,776	5,567	122	2,728	2,850
State Routes	42	990	2,417	3,449	46	1,565	1,611
Country Roads	123	3,254	6,158	9,535	148	5,058	5,206
Local Streets	2	466	3,028	3,496	2	638	640
RURAL TOTAL	299	6,891	16,525	23,715	347	10,807	11,154
STATE TOTAL	429	21,907	50,347	72,683	486	33,225	33,711

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985; from the Department of Transportation.

TABLE A-6

RELATIONSHIP TO JUNCTION BY CLASSIFICATION OF ACCIDENT*
1985

RELATIONSHIP TO JUNCTION	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
URBAN				
Intersection	32	5,506	10,103	15,641
Intersection- Related	10	2,525	5,797	8,332
Driveway Access	5	1,506	4,372	5,883
Non-Junction	83	5,479	13,550	19,112
TOTAL URBAN	130	15,016	33,822	48,968
RURAL				
Intersection	44	1,036	2,051	3,131
Intersection- Related	18	658	1,562	2,238
Driveway Access	12	389	1,159	1,560
Non-Junction	225	4,808	11,753	16,786
TOTAL RURAL	299	6,891	16,525	23,715
TOTAL	429	27,907	50,347	72,683

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985; from the Department of Transportation.

TABLE A-7
TRAFFIC CONTROL BY CLASSIFICATION OF ACCIDENT*
1985

TYPE OF TRAFFIC CONTROL	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
Stop Sign	13	1,067	2,963	4,043
Signals or Flashers	19	3,292	6,058	9,369
Railroad Gates - Signals	8	80	188	276
Warning Signs	2	84	149	235
Centerline - Edge Marks	209	8,601	16,177	24,987
No-Passing Zone	34	789	1,202	2,025
No Control Present	144	7,659	22,645	30,448
Control Not Operating	0	52	147	199
Other Control Present	0	18	34	52
Control Not Stated	0	265	784	1,049
TOTAL	429	21,907	50,347	72,683

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985; from the Department of Transportation.

TABLE A-8

ROAD SURFACE CONDITION BY CLASSIFICATION OF ACCIDENT*
1985

ROAD SURFACE CONDITION	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
Dry	333	14,942	31,516	46,791
Wet	47	3,584	7,997	11,628
Water on Road	2	218	409	629
Snowy-Icy	41	2,787	9,300	12,128
Slippery-Mud, Oil	0	98	194	292
Other	3	101	241	345
Not Stated	3	177	690	870
TOTAL	429	21,907	50,347	72,683

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985;
from the Department of Transportation.

TABLE A-9

ROAD CONDITION BY CLASSIFICATION OF ACCIDENT*
1985

ROAD CONDITION	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
No Defects	387	19,683	45,266	65,336
Holes, Bumps, Etc.	8	469	1,067	1,544
Loose Material	14	678	1,344	2,036
Construction- Repairs	12	493	889	1,394
Detour	0	28	49	77
Soft Shoulders	4	149	279	432
Obstruction	0	21	48	69
Other- Not Stated	4	386	1,405	1,795
TOTAL	429	21,907	50,347	72,683

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985;
from the Department of Transportation.

TABLE A-10
LIGHT CONDITION BY CLASSIFICATION OF ACCIDENT*
1985

LIGHT CONDITION	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
Daylight	205	14,172	32,552	46,929
Dawn or Dusk	16	959	2,440	3,415
Dark-Lighted	68	3,867	8,241	12,176
Dark-Not Lighted	135	2,691	6,113	8,939
Not Stated	5	218	1,001	1,224
TOTAL	429	21,907	50,347	72,683

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985;
from the Department of Transportation.

TABLE A-11
FATAL ACCIDENTS BY TIME OF DAY AND DAY OF WEEK*
1985

HOUR BEGINNING	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
Midnight	1	2	2	0	3	5	5	18
1:00 AM	0	0	1	5	2	5	5	18
2:00 AM	0	1	0	4	0	7	7	19
3:00 AM	0	1	2	1	0	8	9	21
4:00 AM	2	2	0	3	4	1	3	15
5:00 AM	1	1	0	0	0	1	2	5
6:00 AM	4	1	2	1	2	0	0	10
7:00 AM	3	3	3	2	1	0	3	15
8:00 AM	2	1	3	0	5	0	3	14
9:00 AM	2	2	2	2	2	2	4	16
10:00 AM	1	0	0	2	1	4	3	11
11:00 AM	0	2	1	2	2	2	0	9
Noon	3	6	3	6	3	1	3	25
1:00 PM	5	5	3	3	3	3	3	25
2:00 PM	2	3	3	1	6	2	0	17
3:00 PM	1	3	2	2	4	3	1	16
4:00 PM	3	3	4	1	4	4	2	21
5:00 PM	2	5	7	5	3	1	5	28
6:00 PM	1	4	2	2	5	0	4	18
7:00 PM	2	3	2	3	6	2	2	20
8:00 PM	0	3	1	2	6	1	5	18
9:00 PM	3	2	5	3	5	2	1	21
10:00 PM	3	3	2	1	6	2	4	21
11:00 PM	3	3	2	2	7	10	1	28
TOTAL	44	59	52	53	80	66	75	429

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985;
from the Department of Transportation.

TABLE A-12
MOTOR VEHICLE ACCIDENTS BY TIME OF DAY AND DAY OF WEEK*
1985

HOUR BEGINNING	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
Midnight	111	153	139	217	233	617	546	2,016
1:00 AM	85	118	123	155	163	524	529	1,697
2:00 AM	81	104	96	132	140	406	399	1,358
3:00 AM	59	68	81	134	132	357	375	1,206
4:00 AM	50	52	48	56	73	188	187	654
5:00 AM	93	92	71	87	113	158	113	727
6:00 AM	257	215	259	235	235	165	131	1,497
7:00 AM	709	621	775	613	643	222	124	3,707
8:00 AM	593	489	556	503	591	336	149	3,217
9:00 AM	421	389	394	389	423	476	280	2,772
10:00 AM	427	381	492	380	457	586	308	3,031
11:00 AM	501	482	588	463	658	706	284	3,682
Noon	638	661	641	587	680	703	435	4,345
1:00 PM	561	559	578	527	617	613	441	3,896
2:00 PM	666	591	622	493	668	646	419	4,105
3:00 PM	926	887	892	889	1,079	664	452	5,789
4:00 PM	934	896	888	883	1,165	650	483	5,899
5:00 PM	971	831	886	857	1,056	648	480	5,729
6:00 PM	574	489	537	548	732	583	425	3,888
7:00 PM	400	419	405	419	575	561	374	3,153
8:00 PM	321	321	324	342	446	449	293	2,496
9:00 PM	299	352	315	333	532	505	313	2,649
10:00 PM	247	256	277	322	609	523	268	2,502
11:00 PM	192	207	237	272	597	587	202	2,294
Not Stated	38	36	63	34	71	78	54	374
TOTAL	10,154	9,669	10,287	9,870	12,688	11,951	8,064	72,683

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985;
from the Department of Transportation.

TABLE A-13

DRIVER CONDITION BY CLASSIFICATION OF ACCIDENT**
1985

DRIVER CONDITION*	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
Physical Defect	0	48	71	119
Ill	1	70	47	118
Fatigued	2	168	214	384
Asleep	23	528	560	1,111
Normal	419	31,248	70,012	101,679
Had Used:				
Medication	0	40	56	96
Prescription Drugs	2	62	63	127
Illegal Drugs	1	21	21	43
Alcohol	139	2,385	2,308	4,832
Other- Not Stated	65	3,030	9,925	13,020
TOTAL	625	37,600	83,277	121,529

* Two possible per driver.

**Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985;
from the Department of Transportation.

TABLE A-14

CONTRIBUTING CIRCUMSTANCES BY CLASSIFICATION OF ACCIDENT**
1985

CONTRIBUTING CIRCUMSTANCES*	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
Speeding	177	5,197	8,177	13,551
Impeding Traffic	1	116	226	343
Following Too Close	2	1,354	2,443	3,799
Improper Passing	21	558	1,550	2,129
Improper Turn	13	888	2,959	3,860
Improper Stop	6	425	1,902	2,333
Passed Stop Signs	22	1,628	2,111	3,761
Failed to Yield	58	4,560	9,000	13,618
Left of Center	103	1,419	2,230	3,752
Improper Signal	3	159	534	696
Inattention	204	11,161	24,452	35,817
Avoiding Vehicle	16	1,537	3,422	4,975
None	198	14,551	33,005	47,754
Other	83	3,345	8,066	11,494
TOTAL	907	46,898	100,077	147,882

* Three possible per driver.

**Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985;
from the Department of Transportation.

TABLE A-15

AGE OF DRIVER BY CLASSIFICATION OF ACCIDENT**
1985

AGE OF DRIVER*	FATAL ACCIDENTS	INJURY ACCIDENTS	DAMAGE ACCIDENTS	TOTAL ACCIDENTS
15 and Younger	12	672	1,299	1,983
16	16	1,431	3,022	4,469
17	17	1,423	3,088	4,528
18 to 19	44	3,149	6,412	9,605
20 to 24	114	6,957	14,149	21,220
25 to 34	172	9,537	19,604	29,313
35 to 44	80	5,126	10,831	16,037
45 to 54	67	2,941	6,460	9,468
55 to 64	49	2,549	5,678	8,276
65 to 74	40	1,525	3,565	5,130
75 and Older	28	963	2,442	3,433
Not Stated	13	1,327	6,727	8,067
TOTAL	652	37,600	83,277	121,529

* Drivers of vehicles in proper parking locations are excluded.

**Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985
from the Department of Transportation.

TABLE A-16
VEHICLE DEFECTS BY CLASSIFICATIONS OF ACCIDENT**
1985

VEHICLE DEFECTS*	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
None Apparent	611	36,974	86,053	123,638
Defective Brakes	4	399	748	1,151
Headlights	2	32	48	82
Taillights	2	41	75	118
Brake Lights	1	58	132	191
Turn Lights	2	49	157	208
Windshield Wipers	1	13	25	39
Defective Tires	19	271	383	673
Steering	0	115	159	274
Other	22	657	2,169	2,848
TOTAL	664	38,609	89,949	129,222

* Three possible per vehicle.

**Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985;
from the Department of Transportation.

TABLE A-17

TYPE OF VEHICLE BY CLASSIFICATION OF ACCIDENT**
1985

TYPE OF VEHICLE*	FATAL ACCIDENTS	INJURY ACCIDENTS	PROPERTY DAMAGE ACCIDENTS	TOTAL ACCIDENTS
Passenger Car	385	28,208	63,851	92,444
Car and Trailer	9	85	391	485
Pickup-Truck Tractor	148	7,137	19,480	26,765
Truck-Tractor- Semi	60	781	2,023	2,864
Other Truck Combinations	4	19	52	75
Truck with Camper	0	4	4	8
Farm Tractor	4	37	103	144
Taxicab	0	0	3	3
Bus	1	35	122	158
School Bus	2	57	192	251
Motorcycle	37	1,423	248	1,708
Motorscooter- Bike	3	91	13	107
Not Stated	7	732	3,471	4,210
TOTAL	660	38,609	89,953	129,222

* Includes vehicles in proper parking places.

**Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985;
from the Department of Transportation.

TABLE A-18

PEDESTRIANS KILLED OR INJURED BY PEDESTRIAN ACTIONS*
1985

PEDESTRIANS	PEDESTRIANS KILLED	PEDESTRIANS INJURED	TOTAL PEDESTRIANS
Crossing at Intersection	1	139	140
Crossing-Not at Intersection	13	209	222
Walking or Standing in Roadway	10	132	142
Playing in Roadway	1	11	12
Other-In Roadway	6	83	89
Not in Roadway	3	36	39
Not Stated	2	29	31
TOTAL	36	639	675

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985;
from the Department of Transportation.

TABLE A-19

PEDESTRIANS KILLED OR INJURED BY PEDESTRIAN CONDITION*
1985

PEDESTRIAN CONDITION	PEDESTRIANS KILLED	PEDESTRIANS INJURED	TOTAL PEDESTRIANS
Physical Defect - Ill	0	4	4
Fatigued - Asleep	0	1	1
Normal	22	484	506
Had Used Drugs or Alcohol	5	31	36
Other	9	15	24
Not Stated	0	104	104
TOTAL	36	639	675

* Kansas Standard Summary of Motor Vehicle Traffic Accidents, 1985;
from the Department of Transportation.

TABLE A-20

TICKETS WRITTEN BY THE HIGHWAY PATROL
1985

TICKETS	FELONIES	MISDEMEANORS	TOTAL
55 m.p.h. Violations	0	135,152	135,152
Other Speed Violations	0	3,583	3,583
Total Speeding Violations	0	138,735	138,735
D.U.I. - Liquor Violations	0	2,101	2,101
D.U.I. - Narcotic Drug	0	3	3
D.U.I. - Other **	0	0	0
Total D.U.I. Violations	0	2,104	2,104
All Other Violations	535	42,243	42,778
TOTAL	535	183,082	183,617

* Note: Total includes 802 voided tickets.

**This category includes tickets written for violations of Kansas Administrative Regulations 82-4-7 and 82-4-14 which prohibit motor carriers from driving when under the influence of narcotics, drugs or alcoholic beverages and prohibits the use of same while on duty.

TABLE A-21

KANSAS HIGHWAY PATROL
TICKETS WRITTEN BY LOCATION
1985

TOTAL TICKETS WRITTEN	TURNPIKE	INTER- STATE HIGHWAY	U.S. HIGHWAY	KANSAS HIGHWAY	OTHER HIGHWAY	OLD HIGHWAY
183,617	10,776	59,534	73,113	30,376	488	9,330

* Note: Total includes 802 voided tickets.

APPENDIX B

Bureau of Justice Statistics

Special Report

DRUNK DRIVING



Bureau of Justice Statistics Special Report

Drunk Driving

by Lawrence A. Greenfeld
BJS Statistician

February 1988

This report analyzes recent trends in arrests for driving under the influence of alcohol or other intoxicants (DUI), and it examines the characteristics of persons confined in local jails in 1983 who had been charged with driving while intoxicated by alcohol (DWI). DUI is the general term for drivers who operate a motor vehicle after having consumed an intoxicant (such as drugs or alcohol); DWI, in this study, specifically refers to inmates in local jails who were charged with driving while intoxicated by alcohol (usually defined by State law as a specific concentration of alcohol in the blood).

Data on DUI arrests were drawn from information provided to the Federal Bureau of Investigation (FBI) by State and local police agencies. Information on a nationally representative sample of jail inmates was obtained from the 1983 Survey of Inmates of Local Jails sponsored by the Bureau of Justice Statistics.

Major findings include:

- Between 1970 and 1986 arrests for DUI increased nearly 223% while the number of licensed drivers increased by 42%.
- Arrest rates for DUI were highest among 21-year-olds and reached their peak in 1983 with a rate of 1 arrest for every 39 licensed drivers of that age.
- Since 1983 most States have phased in new laws raising the minimum age for the purchase or sale of alcoholic beverages to 21. Per capita arrest rates for DUI for those age 18-20 have decreased by 14% since then--more than twice the rate of decrease for those age 21-24.

Drunk driving is a serious crime--serious in terms of its prevalence and its consequences. In 1986 there was about 1 arrest for driving under the influence of an intoxicant for every 88 licensed drivers. The National Highway Traffic Safety Administration estimates that perhaps as many as a quarter of a million persons were killed in alcohol-related motor vehicle crashes over the last 10 years. More than 650,000 persons are injured in such crashes every year. The annual cost in property damage, medical costs, and other costs of drunk driving may total more than \$24 billion.

This report examines trends in arrests for drunk driving and provides a detailed portrait of drunk drivers held in local jails in 1983. It describes how much alco-

hol these inmates consumed, the types of beverages they drank, and how long they spent drinking prior to their arrests.

In recent years a number of organizations, such as Mothers Against Drunk Driving, have helped to increase public awareness of this issue. The challenge to us is to reduce the incidence and prevalence of drunk driving and to target the chronic drunk driver, typically found in the Nation's jails, for special response. Many States have initiated efforts designed to deal with this problem: increasing the minimum age for purchasing alcoholic beverages and enacting new laws to stiffen the penalties, particularly for those who repeatedly drink and drive.

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- About 7% of all persons confined in local jails on June 30, 1983, were charged with or convicted of DWI; nearly 13% of jail inmates had a current charge or prior conviction for DWI.
- Those in jail for DWI were 95% male, had a median age of 32, and reflected a racial distribution similar to the adult general population. Nearly 80% were not living with a spouse at the time of arrest, and they were more likely to be unemployed than adults in the civilian labor force.
- Nearly half of those in jail for DWI had previously been sentenced to probation, jail, or prison for DWI, and three-quarters had a prior sentence for any crime (including DWI).
- About 7% of all persons confined in local jails on June 30, 1983, were charged with or convicted of DWI; nearly 13% of jail inmates had a current charge or prior conviction for DWI.
- Prior to their arrest for DWI, convicted offenders had consumed a median of 6 ounces of pure alcohol (about equal to the alcoholic content of 12 bottles of beer or 8 mixed drinks) in a median of 4 hours. About 26% consumed at least 10 ounces of pure alcohol (equivalent to 20 beers or 13 mixed drinks).
- About 54% reported drinking only beer, about 2% only wine, 23% liquor only, and 21% had been drinking two or more different beverages. This last group consumed the most alcohol prior to arrest, about three times more than those who drank only beer.
- For DWI offenders sentenced to jail, the median term imposed was 5 months; those with prior DWI sentences received sentences that were about twice as long as first-timers.

• Nearly half of all inmates in jail for DWI had previously been involved in an alcohol abuse treatment program--about 1 in 11 was in treatment at the time of the arrest for DWI.

DUI arrests

In 1986 more than 158 million persons held driver's licenses in the United States--nearly 86% of the population age 16 and over. During the same year the FBI estimated that nearly 1.8 million arrests were made by State and local police agencies for driving under the influence of an intoxicating substance. The same year, 46,056 motor vehicle fatalities occurred; about 40% were probably alcohol-related according to the National Highway Traffic Safety Administration.

Between 1970 and 1986 the rate of arrest for DUI rose more than 127%, from 498 arrests per 100,000 licensed drivers to 1,131 (figure 1). The peak year, 1983, reflected a record 1,921,000 arrests--about 1 arrest for every 80 licensed drivers in the Nation.

The prevalence of arrests for DUI must be viewed in the context of the levels of consumption of alcoholic beverages in the United States. In 1985 the per capita consumption of alcoholic beverages was 27.6 gallons. This was greater than the per capita consumption of coffee (25.9 gallons per U.S. resident) and milk (27.1 gallons) and was exceeded only by the consumption of soft drinks (45.6 gallons).¹

The annual consumption of alcoholic beverages based only upon the adult population age 21 and older (most States now impose this age restriction) would equal about 34.5 gallons of beer, 3.5 gallons of wine, and 2.5 gallons of liquor per person. However, individual patterns of consumption vary. It has been estimated that a third of the adult population accounts for 95% of the alcohol consumed and 5% of the adult population accounts for half of the consumption.²

DUI arrests and age

Since 1975, there has not been consistent growth in arrest rates across all age groups. In 1975 those between age 18 and 49 were over represented among arrestees compared to their share of licensed drivers (table 1). Persons age

Number of arrests for driving under the influence per 100,000 licensed drivers, 1970-1986

Number per 100,000

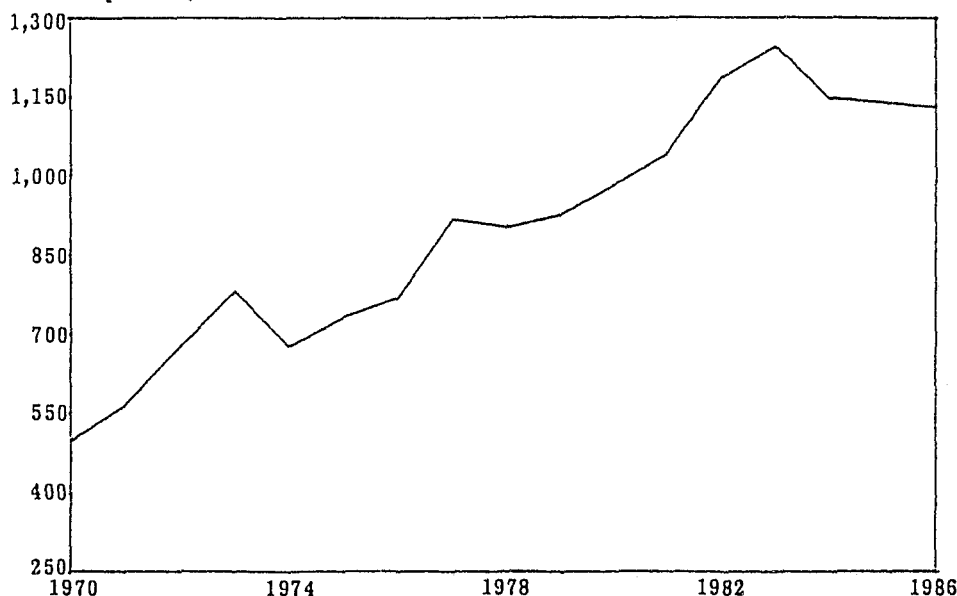


Table 1. Comparison of licensed drivers and estimated arrests for driving under the influence, by age, 1975 and 1986

Age	1975			1986			Percent change in rate 1975-86
	Percent of: Drivers	Percent of: Arrests	Arrests per 100,000 drivers	Percent of: Drivers	Percent of: Arrests	Arrests per 100,000 drivers	
Total	100%	100%	729	100%	100%	1,130	+ 55%
16-17 years old	3.7%	1.8%	352	2.6%	1.5%	647	+ 84%
18-24	18.9	25.3	979	15.7	28.8	2,075	+ 112
25-29	12.9	15.0	847	13.0	22.0	1,909	+ 125
30-34	10.3	12.2	867	12.2	15.8	1,471	+ 70
35-39	8.5	10.6	909	10.9	11.1	1,158	+ 27
40-44	7.9	9.8	904	8.5	7.2	968	+ 7
45-49	8.0	8.9	812	6.9	4.9	805	- 1
50-54	7.9	7.3	675	6.3	3.4	609	- 10
55-59	6.8	4.6	490	6.3	2.4	434	- 11
60-64	5.7	2.7	347	5.9	1.6	299	- 14
65 and older	9.5	1.8	141	11.9	1.2	118	- 16

Note: Percents may not add to 100% due to rounding. Table excludes licensed drivers and arrests for those less than 16 years old. For those 16 and older there were 129,671,000 licensed drivers in 1975 and 158,494,000 in 1986; and there were 945,757 DUI arrests in 1975 and 1,791,575

in 1986. The age distribution of known arrests for DUI was applied to the total number of estimated DUI arrests. Sources: Federal Highway Administration, Selected Highway Statistics and Charts, 1985. FBI, Crime in the United States (1975 and 1986).

18-24 accounted for 18.9% of drivers but 25.3% of those arrested, about 1 arrest for every 102 drivers. Drivers age 65 and older, by contrast, accounted for 9.5% of drivers but less than 2% of those arrested, about 1 arrest for every 709 drivers in this age group.

Compared to 1975, data for 1986 reflected declines in arrest rates for every group over the age of 45. Arrest rates for those 45-49 were down about 1%, and each succeeding age group showed a larger percentage decline. However, the younger age groups reflected substantial growth in the rate of

DUI arrests--drivers between the ages of 18 and 29 experienced rates of arrest in 1986 more than double the rates of arrest for those age 18-29 in 1975.

There are several possible reasons why arrest rates have increased among younger age groups and decreased among older age groups. Although increased enforcement of drinking and/or driving laws would be expected to affect all age groups to some degree, more stringent enforcement efforts may have been applied to younger age groups selectively. Drinking or driving behavior may also have changed over time across

¹Statistical Abstract of the U.S., 1987, Table 181, p. 111.

²Olson, Steve and Dean R. Gerstein, Alcohol in America: Taking Action to Prevent Abuse (Washington, D.C.: National Academy Press, 1985), p. 13.

Table 2. Arrest rates for DUI, 18-24 year olds, 1976-86

Age	Number of DUI arrests per 100,000 licensed drivers in:										
	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
18 years old	1,068	1,288	1,344	1,486	1,586	1,596	1,787	1,623	1,526	1,428	1,480
19	1,133	1,453	1,478	1,623	1,802	1,869	2,141	2,086	1,973	1,848	1,780
20	1,148	1,481	1,551	1,779	1,867	2,031	2,334	2,359	2,209	2,117	1,961
21	1,212	1,554	1,615	1,778	1,947	2,124	2,503	2,536	2,479	2,408	2,292
22	1,118	1,462	1,514	1,593	1,839	1,969	2,352	2,505	2,383	2,358	2,310
23	1,063	1,368	1,415	1,535	1,738	1,892	2,192	2,400	2,300	2,296	2,257
24	1,023	1,316	1,347	1,459	1,622	1,780	2,126	2,265	2,210	2,285	2,213
All drivers	768	914	901	925	982	1,041	1,184	1,244	1,145	1,140	1,131

Note: See Note, table 1.

different age groups. Legislative changes between 1971 and 1983 lowering the minimum drinking age may also have played a role by increasing the prevalence of drinking among younger age groups.

Legislative changes and DUI arrests

Throughout the 1970's and early 1980's, States lowered the minimum age for the purchase or sale of alcoholic beverages, largely in response to the ratification of the 26th Amendment (1971) which extended the right to vote to 18-year-olds. Between 1970 and 1973, 24 States reduced the minimum age;³ by 1983, 33 States permitted the purchase of alcoholic beverages by persons under the age of 21. As a result of recent changes in Federal Highway funds legislation, however, States have begun to phase in new laws raising the minimum drinking age--as of January 1, 1987, only 7 States had not raised the drinking age to 21.⁴

Drinking age	Number of States	
	1983	1987
18	13	2
19	14	5
20	6	0
21	17	43

Arrest rates for those age 18-19 peaked in 1982; for 20-year-olds they peaked a year later (table 2). Overall, the number of arrests of those age 18-20 for DUI decreased 24% between 1983 and 1986, from 216,255 to 164,011, while the number of licensed drivers of this age declined by 12% (from 10.6 million to 9.3 million). This may mean that as much as half of the decline in arrests among drivers of these ages (and as much as 20% of the decline in arrests for all ages) could be due to

³Williams, A.F., R.F. Rich, O.L. Zador, and L.J. Robertson, "The Legal Minimum Age and Fatal Motor Vehicle Crashes," *Journal of Legal Studies*, Vol. 4, no. 1 (1975), pp 219-39.

⁴See *A Digest of State Alcohol Highway Safety Related Legislation*, (1983-87) (Washington, D.C.: National Highway Traffic Safety Administration).

Table 3. Cumulative estimated DUI arrest rate for licensed drivers age 18-24

Year of birth	Total number of DUI arrests per 100,000 licensed driver who were age:						
	18	19	20	21	22	23	24
1958	1,068	2,521	4,072	5,850	7,689	9,581	11,707
1959	1,288	2,766	4,545	6,492	8,461	10,653	12,918
1960	1,344	2,967	4,834	6,958	9,310	11,710	13,920
1961	1,486	3,288	5,319	7,822	10,327	12,627	14,912
1962	1,586	3,455	5,789	8,325	10,708	13,004	15,217
1963	1,596	3,737	6,096	8,575	10,933	13,190	
1964	1,787	3,873	6,082	8,490	10,800		
1965	1,623	3,596	5,713	8,005			
1966	1,526	3,374	5,335				
1967	1,428	3,208					
1968	1,480						

Note: See Note, table 1.

changes in the drinking age laws.⁵ This may also indicate that future declines will occur as the new laws, which often are gradually phased-in, apply to larger segments of the under-21 population.

Arrest rates for age groups 21 and older have also declined since 1983, though at a slower pace than for those younger than 21. Between 1983 and 1986 the number of DUI arrests per 100,000 licensed drivers dropped 9.6% for 21-year-olds, 7.8% for 22-year-olds, 6% for 23-year-olds, and 2.3% for 24-year-olds. In the aggregate, arrest rates per 100,000 licensed drivers for those age 18-20 declined more than twice as fast as for those age 21-24 between 1983 and 1986 (14% for those under 21 vs. 6.5% for those 21-24).

⁵This estimate was calculated by applying the 1983 arrest rate for those age 18-20 (2041 per 100,000 drivers) to the number of drivers in 1986 (9,344,000) of this age, producing an estimate of 190,684 arrests in 1986. Actual arrests in 1986 were 164,011 or 26,673 fewer than expected. The overall decline in the number of arrests between the 2 years was 52,244 (216,255 - 164,011). Thus, the percentage of the decline not due to a change in the number of drivers of these ages would be about half (26,673/52,244).

The total decline in the number of arrests for persons of all ages between 1983 and 1986 was 127,800. Thus, as much as 21% of the drop (26,673/127,800) might be attributable to changes in the minimum drinking age laws.

DUI arrest rates for specific ages can also be compared across different years of birth (table 3). Persons born in 1958 who became 24 years old in 1982 would have accumulated an estimated 11,707 arrests per 100,000 licensed drivers between the ages of 18 and 24--about 1 arrest for every 8.5 drivers. By comparison, those born 4 years later who became 24 in 1986 accumulated 30% more arrests over the same ages--15,217 arrests per 100,000 licensed drivers or 1 arrest for every 6.6 drivers. Generally, persons born in 1963 and 1964 are likely to accumulate more arrests by age 24 than either their predecessors or those born in subsequent years. Those born in 1963-64 would have become 21 years old at about the same time that the States began phasing in the new, higher minimum age laws for the purchase of alcoholic beverages.

Continued monitoring of the DUI arrest experience of these age groups will be necessary to determine whether the declines observed in the most recent years for the youngest groups carry forward to age 21 and beyond. Arrest data in future years will provide additional information on whether new groups of drivers turning ages 18, 19 and 20, who will be fully covered by the new laws, also maintain lower arrest rates.

Lower arrest rates may also be a reflection of changing drinking behavior among young adults. Based on national surveys of high school seniors, seniors

in 1986 (after most States had raised their drinking ages) reported less prevalent daily drinking and drinking in the month preceding the survey than did seniors in 1980 (before drinking ages were raised). In addition, a smaller percentage of seniors in 1986 reported engaging in binge drinking (5 or more drinks in a row at least once in the 2 weeks prior to the interview) than did seniors in 1980.⁶

	Senior class of:	
	1980	1986
Percent who drank in last 30 days	72.0%	65.0%
Percent who drank daily	6.0	4.8
Percent with binge drinking	41.2	36.8

DWI offenders in jail

On June 30, 1983, there were an estimated 220,740 adults confined in the Nation's 3,338 local jails. An estimated 13,089 (6%) were serving sentences after conviction for driving while intoxicated (table 4). Less than 1% of those in jail were unconvicted inmates charged with DWI. (Persons charged with or convicted of driving while intoxicated by drugs have been excluded from this analysis.)

When prior sentences are taken into account, the estimated percent of jail inmates with a current charge or a past conviction for DWI rises to nearly 13%.

(The Survey of Local Jail Inmates is conducted every 5-7 years. Due to increased public, legislative, and law enforcement interest in the problem of drunk driving in recent years, the data for jail inmates in 1983 may not reflect the current jail population.)

⁶See "Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth," conducted by the Institute of Social Research at The University of Michigan and funded primarily by the National Institute on Drug Abuse. See also High School Senior Drug Use: 1975-1986 (Rockville, Maryland: National Institute on Drug Abuse, March 1987).

Table 4. Prevalence of DWI among jail inmates, 1983

Current or prior charge or conviction for DWI	All inmates	Percent of all inmates
Total	220,740	100%
Currently charged with DWI	1,826	.8%
Currently convicted of DWI	13,089	5.9
Prior DWI conviction only	13,413	6.1
All other inmates	192,410	87.2

Table 5. Characteristics of jail inmates charged with or convicted of DWI, 1983

Characteristic	Percent of inmates
Sex	
Male	94.7%
Female	5.3
Race	
White	85.6%
Black	9.8
Other	4.6
Ethnicity	
Hispanic	17.2
Non-Hispanic	82.8
Age	
17-19 years	2.4%
20-24	22.3
25-29	17.3
30-34	17.1
35-39	11.6
40-44	8.0
45-49	6.9
50-54	6.8
55-64	6.5
65 and older	1.0
Median age	32 years
Education	
Less than 8 years	13.1%
8-9	15.9
10-11	19.4
12	36.0
Some college	15.7
Median education	12 years
Marital status	
Married	22.2%
Widowed	2.0
Divorced/separated	39.1
Never married	36.7
Employment status at arrest	
Unemployed	32.7%
Employed	67.3
Full-time	58.2
Part-time	9.1
Median annual income*	\$8,750
Type of usual occupation	
Laborer	16.7%
Construction trade	16.2
Machine operator	11.4
Farm worker	9.7
Mechanic/craftsman	7.4
Transportation/heavy equipment	7.2
Food services	5.3
Executive/managerial	4.4
Administrative support	4.2
Sales	3.8
All other	13.7
Total number of inmates	14,915

*For those who had been free at least 1 full year prior to arrest.

Profile of DWI offenders

Among convicted and unconvicted persons in jail for DWI, males predominated, and the racial distribution was similar to the adult general population (table 5). An estimated 17% classified themselves as Hispanic, a higher proportion than in the general population (8%).

The median age of the DWI jail inmates was 32, about 5 years older than the median age of those jailed for other crimes. About 51% had completed high school, but about 13% had less than 8 years of education. Almost 80% of DWI inmates of local jails reported they were not living with a spouse at the time of their arrest: An estimated 37% had never been married, 39% were divorced or separated, and 2% were widowed.

The relatively high percentage of unemployed persons among those in jail for DWI (33%) may be a reflection of the types of occupations represented. Nearly a third reported their usual work was as laborers or in the construction trades, occupations that are often subject to temporary periods of unemployment.

Prior DWI history

About 48% of persons jailed for DWI had previous DWI convictions (table 6). In general, convicted and unconvicted DWI jail inmates were alike with respect to prior histories of DWI convictions.

Persons jailed for DWI were more likely than other jail inmates to have been previously convicted of the same crime. Among robbers in jail, 33% had a prior robbery conviction; among those jailed for assault, 37% had a previous assault conviction; and among those charged with drug trafficking, 36% had a prior conviction for this offense. Compared to those jailed for DWI, only persons jailed for larceny (52%) and burglary (51%) had higher percentages with prior convictions for the same crime.

About three-fourths of DWI offenders had previously been convicted of any crime, including DWI, and had been sentenced to probation, jail, or prison. This proportion was similar among those in jail for crimes other than DWI.

Table 6. Jail inmates charged with DWI, by number of prior DWI sentences, 1983

Number of prior DWI sentences	Percent of inmates charged with DWI		
	All	Unconvicted	Convicted
Total	100%	100%	100%
None	51.7%	54.7%	51.3%
1	30.1	30.6	30.1
2	12.6	8.6	13.2
3 or more	5.6	6.1	5.5
Number of inmates	14,915	1,826	13,089

Note: Percents may not add to 100% due to rounding.

Table 7. Alcohol consumption prior to arrest of jail inmates serving a sentence for DWI, 1983

Ounces of ethanol consumed	Percent of jail inmates convicted of DWI		
	All	Male	Female
Total	100%	100%	100%
Less than 1 ounce	1.9%	1.9%	1.0%
1-1.9	7.1	7.1	7.2
2-2.9	11.8	11.4	17.4
3-3.9	17.1	16.5	26.5
4-4.9	8.7	9.0	4.2
5-9.9	27.2	27.2	27.9
10-14.9	14.4	15.0	6.0
15 or more	11.8	11.9	10.0
Median ounces of ethanol	6 ounces	6 ounces	3.9 ounces
Number of offenders	13,089	12,369	720

Note: Percents may not add to 100% due to rounding.

Alcohol consumption

Convicted offenders were asked detailed questions about their consumption of alcoholic beverages prior to their arrest for DWI. The types of beverages consumed, the amount consumed, and the period of time spent drinking were collected from each offender who reported drinking prior to arrest. Based on these responses, it was possible to convert the amount and type of beverage consumed to a pure alcohol equivalent (ethanol) in order to estimate total intake (see Methodology for conversions).

Convicted DWI offenders were estimated to have consumed a median of

Table 8. Number of hours spent drinking and amount of ethanol consumed prior to arrest for DWI, for convicted jail inmates, 1983

Hours spent drinking	Percent of jail inmates convicted of DWI	Average ethanol consumption prior to arrest
Total	100%	7.4 oz.
1 hour or less	11.6%	3.4 oz.
2-3	17.9	6.1
4-5	22.9	6.3
6-7	15.6	8.8
8-9	10.5	9.2
10-11	14.2	11.8
12 hours or more	7.4	15.9
Median	4 hours	6 oz.

Note: Percents may not add to 100% due to rounding.

6 ounces of ethanol (equivalent to the alcohol content of 12 bottles of beer or 8 mixed drinks) prior to arrest (table 7). Male offenders had consumed about 50% more ethanol than female offenders. About 9% of the convicted offenders had consumed less than 2 ounces of ethanol; 38% consumed between 2 and 5 ounces; 27% between 5 and 10 ounces; and 26% reported consuming the equivalent of 10 or more ounces of ethanol. To consume 10 ounces of ethanol would require drinking the equivalent of 20 beers or 13 mixed drinks.

The median length of the drinking session prior to the arrest was 4 hours (table 8). Given the median consumption of 6 ounces of alcohol, this would suggest a rate of consumption equivalent to about

3 beers or 2 mixed drinks per hour. The average, or mean, ethanol consumption was 7.4 ounces, and the average amount consumed escalated with the number of hours spent drinking.

Most convicted DWI offenders reported drinking only beer prior to arrest:

Percent who drank:

Beer only	54%
Wine only	2
Liquor only	23
More than one type	21

Amounts consumed prior to arrest varied with the type of beverage. Those who drank only beer consumed the smallest median amount of pure alcohol, 3.5 ounces or the equivalent of about 7 beers (table 9). The median ethanol consumption for wine drinkers, 3.7 ounces, would approximately equal 6.5 glasses (at 4 ounces of wine per glass). Those drinking only liquor prior to arrest consumed a median quantity of ethanol more than double that of beer and wine drinkers--approximately equal to 10 to 11 drinks. Those who combined different beverages were estimated to have had an intake of ethanol more than three times that of those who drank beer only and nearly 40% greater than those who consumed liquor only.

Table 9. Type of alcoholic beverage and amount of ethanol consumed prior to arrest for DWI, convicted jail inmates, 1983

Ounces of ethanol consumed	Percent of inmates convicted of DWI who drank:			
	Beer only	Wine only	Liquor only	More than one type
Total	100%	100%	100%	100%
Less than 1 ounce	1.7%	21.7%	2.2%	0%
1-1.9	8.5	22.6	8.3	.6
2-2.9	16.4	3.0	8.6	4.3
3-3.9	25.7	46.8	2.3	7.9
4-4.9	5.8	0	14.3	11.1
5-9.9	31.5	3.0	30.2	15.4
10-14.9	6.2	0	18.2	32.8
15 or more	4.2	3.0	15.8	27.9
Median ounces of ethanol consumed	3.5 ounces	3.7 ounces	8 ounces	11 ounces

Note: Percents may not add to 100% due to rounding.

Those jail inmates convicted of DWI who consumed the most alcohol prior to their arrest were also the ones who typically drank the greatest amounts in their usual drinking sessions (table 10). Among those who consumed less than 2 ounces of ethanol prior to arrest, 87% described themselves as usually drinking daily or several times per week with a median ethanol consumption of about 4 ounces per drinking session. Those who consumed greater quantities of ethanol prior to arrest reported less frequent usual drinking sessions, though they consumed more alcohol at a typical drinking session. Nearly three-quarters of those who consumed 10 ounces or more prior to the arrest that resulted in their DWI conviction reported that they usually consumed at least this amount of ethanol when drinking, and nearly half reported that they usually drank less frequently than weekly. This type of drinking, often referred to as "binge drinking," is thought to be most prevalent among younger age groups and more common among those not living with spouses.⁷

Sentencing and DWI

Those convicted offenders sentenced to jail are not representative of all persons sentenced for DWI since many more DWI offenders are under probation supervision in the community or have received other sanctions.⁸ However, it is useful to examine the length of the sentences imposed for those who receive jail terms since they are more likely to be the chronic and serious offenders for whom the effect of a prior record can be gauged. The median jail sentence for first-time DWI offenders was 90 days compared to 180 days for recidivists (table 11). About a third of the first-timers received 30 days or less compared to about a fifth of the recidivists.

Among those with two or more prior convictions, a comparatively small percentage appear to have received sentences greater than a year. Many of the most chronic DWI offenders, however, may have been sentenced to State prisons rather than local jails. (In 1983 an estimated 1.4% of State prison admissions were for DWI.)

⁷See Collins, James J., Jr., *Drinking and Crime: Perspectives on the Relationship Between Alcohol Consumption and Criminal Behavior* (New York: Guilford Press, 1981), pp. 163-67.

⁸On December 31, 1986, 21 States reported that 21.2% of the 913,785 adult offenders on probation had been convicted of DWI. Applied to the entire probation population of the 50 States and the District of Columbia (2,035,593 probationers), the estimated number of DWI offenders on probation would be over 430,000—perhaps 30 times the number of DWI offenders in local jails in 1983.

Table 10. Usual drinking behavior of jail inmates convicted of DWI, by amount of ethanol consumed prior to arrest, 1983

Usual consumption of alcohol	All convicted inmates	Percent of convicted jail inmates by amount of ethanol consumed prior to arrest			
		Less than 2 ounces	2-4.9 ounces	5-9.9 ounces	10 or more ounces
Frequency of usual drinking	100%	100%	100%	100%	100%
Daily	17.8%	27.1%	11.4%	12.6%	29.0%
Several times per week	39.3	60.3	44.9	38.8	25.0
Several times per month	22.1	6.4	29.1	22.0	17.3
Less than once per month	20.8	6.2	14.6	26.7	28.6
Amount of ethanol usually consumed when drinking	100%	100%	100%	100%	100%
Less than 2 ounces	5.8%	21.5%	7.8%	3.5%	.2%
2-4.9 ounces	19.7	34.9	31.1	9.8	8.6
5-9.9 ounces	29.6	15.9	34.2	40.6	16.5
10 or more ounces	44.9	27.9	26.9	46.1	74.7
Median ounces usually consumed	8.1 oz.	4.3 oz.	6 oz.	9 oz.	17.7 oz.
Number of inmates	13,089	1,178	4,921	3,561	3,429

Note: Percents may not add to 100% due to rounding.

Table 11. Length of sentence imposed for convicted DWI offenders, by number of prior DWI sentences to jail or prison, 1983

Sentence length	All offenders	Percent of inmates by prior DWI sentences to jail or prison		
		None	One	Two or more
Total	100%	100%	100%	100%
30 days or less	27.3%	33.8%	20.9%	19.0%
31-60	12.5	15.7	10.9	6.3
61-90	4.2	4.9	5.2	.7
91-120	5.4	3.5	5.0	11.3
121-180	15.9	12.8	16.8	23.2
181-240	4.0	2.8	6.8	2.6
241-365	21.7	17.6	22.7	31.5
More than 1 year	9.1	8.9	11.7	5.4
Mean number of days	218	197	215	281
Median number of days	150	90	180	180

Note: Percents may not add to 100% due to rounding.

Table 12. History of participation in alcohol abuse treatment programs for jail inmates charged with DWI, 1983

Participation in alcohol abuse treatment programs	Percent of jail inmates charged with DWI		
	All	Unconvicted	Convicted
Ever in treatment	100%	100%	100%
Yes	48.4	45.8	48.7
No	51.6	54.2	51.3
Number of times enrolled in treatment programs	100%	100%	100%
None	51.6	54.2	51.3
1	35.8	37.8	35.5
2	7.6	8.0	7.6
3 or more	5.0	0	5.6
In treatment at time of arrest	100%	100%	100%
Yes	8.7	9.7	8.6
No	91.3	90.3	91.4

Alcohol treatment and DWI

Nearly half of the persons confined in local jails on a DWI charge reported having previously participated in an alcohol treatment program (table 12). In fact, nearly 9% reported that they were in such treatment at the time of their arrest. Based upon their older age, patterns of usual drinking, and prior conviction histories, many of

those in jail for DWI appear to have had chronic alcohol problems. The prevalence of past alcohol treatment further illustrates the chronic nature of their problems with alcohol. As with prior conviction histories, unconvicted jail inmates were much like convicted DWI offenders with respect to past alcohol treatment.

Those with prior records of DWI offenses were more likely than first offenders to have been in a treatment program (table 13). This may reflect the tendency of judges to impose alcohol treatment participation as a condition of a sentence for DWI. Those with the most chronic DWI histories reported the highest levels of prior alcohol treatment, probably reflecting past attempts to remedy a serious and chronic alcohol problem.

Appendix. Estimating Blood Alcohol Concentrations (BAC)

Blood alcohol concentration (BAC) refers to the number of grams of pure alcohol present in 100 milliliters of blood. The BAC of an individual may be established by a variety of testing procedures including chemical breath analysis, saliva testing, blood testing, urinalysis, or chemical analysis of tissue samples.

Calculating the BAC levels of convicted DWI offenders in jail is useful for two reasons. First, it provides a measure of intoxication that can be compared to other groups of drivers for whom BAC is known--in this case, drinking drivers involved in fatal accidents. Second, estimating blood alcohol concentration serves as a validity check on the self-reported amounts consumed prior to arrest; it can be used to evaluate whether such amounts seem reasonable and even whether they are physiologically possible.

Blood alcohol concentrations may be affected by numerous factors including physiological differences, food consumption, the amount of ethanol ingested, and the time elapsed between drinking and testing. Several assumptions underlie the estimates of blood alcohol concentration presented here:

1. Average body weights for 35-34-year-old males and females in the general population were assumed for the jail population.
2. An average rate of metabolism was assumed for the jail inmates equivalent to the general population, though such rates are known to vary because of differences in physiology and alcohol tolerance.
3. The rate of alcohol consumption was assumed to be stable over the drinking session prior to arrest. If, for example, 6 ounces of ethanol were consumed during a 4-hour drinking session, the formula assumes that 1.5 ounces of ethanol were consumed per hour.

Table 13. History of participation in alcohol abuse treatment programs, by number of prior sentences for DWI, for all jail inmates charged with DWI, 1983

	Total	Percent of jail inmates charged with DWI who:	
		Ever received treatment	Never received treatment
All inmates	100%	48.4%	51.6%
Number of prior DWI sentences			
None	100%	39.0%	61.0%
1	100	49.0	50.3
2	100	66.3	33.7
3 or more	100	78.2	21.8

State statutes often define two types of minimum blood alcohol concentrations that constitute evidence of intoxication--"illegal per se" and "presumptive" levels. Presumptive levels of intoxication are generally lower than illegal per se levels and require a different burden of proof to convict an individual of drunk driving. Across the States, illegal per se blood alcohol levels cluster around .10, but several States define it as low as .08 and others as high as .15. Presumptive levels for DWI or DUI may range from .05 and up but also cluster at the .10 level. The President's Commission on Drunk Driving has recommended that a presumptive BAC of .08 be enacted by State legislatures (November, 1983). A BAC level above .05 is described as "driving while impaired" by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) Clearinghouse on Alcohol Information.

Estimated BAC was highest among inmates age 30-39 and those age 45-49 (appendix table 1). BAC's did not vary much based on number of prior DWI convictions. As with ethanol consumption, BAC's escalated with the number of hours spent drinking and varied by type of beverage consumed. The highest BAC levels were found among those who drank combinations of beverages.

Jail inmates were estimated to have had a median BAC at the time of the DWI arrest of .15 and an average (mean) BAC of .20 (appendix table 2). The distribution of BAC levels for DWI jail inmates was similar to the BAC levels of drinking drivers involved in fatal accidents in 1983, suggesting that the average degree of intoxication of both groups was similar.⁹

⁹ While the presence of alcohol may or may not have been the proximate cause of the fatal accident, only 7.7% of drinking drivers involved in such accidents were found to have BAC levels below .05, or the impaired level as defined by the National Institute on Alcoholism and Alcohol Abuse, at the time of measurement. Assuming that a period of time may have passed between the time of the accident and testing for BAC, it is possible that actual BAC's at the time of the accident may have been higher (BAC declines by about .015 per hour).

Appendix table 1. Estimated mean blood alcohol concentration (BAC) at arrest of convicted jail inmates charged with DWI, 1983

	Blood alcohol concentration (BAC)
Age	
17-24 years	.19
25-29	.19
30-34	.24
35-39	.24
40-44	.19
45-49	.24
50 or more	.17
Number of prior DWI convictions	
None	.19
1	.22
2	.21
3 or more	.18
Number of hours spent drinking before arrest	
1 hour or less	.13
2	.18
3	.20
4	.21
5	.23
6	.26
7	.25
8	.23
Beverage consumed prior to arrest	
Beer	.16
Wine	.10
Liquor	.25
More than one type	.29

Note: Estimates are based upon an average body weight of 173 pounds for men and 142 pounds for women. (Source: Statistical Abstract of the U.S., 1987, Table 176, p. 108). BAC is estimated for those who reported drinking for up to 8 hours before their arrest; the number of unweighted cases who reported drinking for more than 8 hours may result in unreliable estimates.

Appendix table 2. Comparison of estimated blood alcohol concentration for fatal accident drivers in 1983 and convicted DWI offenders in local jails, 1983

	Estimated BAC, 1983	
	Drinking drivers involved in fatal accidents*	Jail inmates
Mean	.17	.20
75th percentile	.22	.29
50th percentile (median)	.17	.15
25th percentile	.11	.07

*Data were provided by Dr. Terry Zobeck of the Alcohol Epidemiologic Data System of the National Institute on Alcoholism and Alcohol Abuse. BAC test results were available for approximately 34% of the drivers involved in fatal accidents in 1983 (n=18,789). Testing methods included blood, breath, urine, saliva, and other types of analyses that varied from case to case. Note that these data cover drivers involved in fatal accidents with measurable amounts of alcohol in their blood, whether or not the drinking driver caused the accident and whether or not intoxication contributed to the accident.

Formula for calculating BAC after multiple hours of drinking (Widmark Formula)

The National Highway Traffic Safety Administration (NHTSA) has provided a formula for use in this study that permits an estimate of BAC to be made based upon the self-reported pre-arrest drinking behavior of the jail inmates. The methodology for estimating BAC was supplied by Dr. Alfred J. Farina, Research Psychologist, Research Division, National Highway Traffic Safety Administration.

$$BAC(h) = [(A/(r \times p))/10] - (h \times K)$$

BAC(h) = Blood alcohol concentration at time h

A = grams of ethanol consumed which is equal to:
[(liquid ounces ethanol) x (.82)]/.035

r = reduced body mass (.68 for males and .55 for females)

p = weight in kilograms which is equal to: weight in pounds/2.2046

h = hours drinking

K = estimated rate at which the body metabolizes ethanol (.015 ounces per hour)

Based on this formula, a male DWI offender who weighs 173 pounds (78.47 kilograms) and who consumes 12 beers or about 6 ounces of ethanol (140.57 grams by weight) in 4 hours would have a BAC of .2 when he finished drinking:

$$\begin{aligned} BAC(h) &= [(140.57/((.68 \times 78.47))/10] - \\ &\quad (4 \times .015) \\ &= (2.634/10) - (.06) \\ &= .263 - .06 \\ &= .203 \end{aligned}$$

Methodology

The portion of this study relating to jail inmates is based upon self-report data from the 1983 Survey of Inmates of Local Jails. The Survey used a multi-stage stratified sample of 407 jails with random selection of 5,878 inmates for personal interview. An estimate of the total inmate population on June 30, 1983, was made by weighting sampled cases by selected probabilities and adjusting for nonresponse.

The formulas used for calculating ounces of ethanol and blood alcohol concentration are described below. In cases where extreme outliers or impossible responses were found, data were treated as missing.

Conversion formulas for ethanol

For the purposes of this report the following conversions were used:

1 ounce of ethanol is equal to--

- 24 ounces of beer (4% alcohol content);
- 7 ounces of wine (14% alcohol content);
- 2 ounces of liquor (100 proof or 50% alcohol content).

Mixed drinks were assumed to contain 1.5 ounces of liquor. However, these conversions are approximations since some beer, wine, or liquor may have a different alcoholic content.

Appendix table 3. Number of licensed drivers, number of arrests for DUI, and rate of arrest for DUI, 1970-86 (data for figure 1)

Year	Number of licensed drivers	Number of arrests for DUI	Rate of arrest for DUI per 100,000 drivers
1970	111,542,787	555,700	498
1971	114,425,900	644,100	563
1972	118,414,474	796,800	633
1973	121,545,736	946,800	779
1974	125,426,582	843,600	673
1975	129,790,666	947,100	730
1976	134,035,641	1,029,300	768
1977	138,120,893	1,262,200	914
1978	140,843,907	1,268,700	901
1979	143,283,995	1,324,800	925
1980	145,295,036	1,426,700	982
1981	147,075,169	1,531,400	1,041
1982	150,233,659	1,778,400	1,184
1983	154,389,178	1,921,100	1,244
1984	155,423,709	1,779,400	1,145
1985	156,868,277	1,788,400	1,140
1986	158,594,000	1,793,300	1,131
Percent change 1970-86	42.2%	222.7%	127.1%

Sources: FBI, Crime in the United States (1970-1986), (Washington, D.C.); Federal Highway Administration, Highway Statistics, Summary to 1985, (Washington, D.C.); Federal Highway Administration, Selected Highway Statistics and Charts, 1985, (Washington, D.C.)

Appendix table 4. Estimating the effect of age on DUI arrests, 1975 and 1986

Age	A Number of arrests, 1975	B Arrest rate, 1975 ^a	C Number of licensed drivers, 1986 ^b	D Expected number of arrests, 1986	E Actual number of arrests, 1986	F Difference between actual and expected number of arrests, 1986
Total	945,757	729	158,494	1,141,202 ^c	1,791,575	+ 650,373
Age						
16-17	16,695	352	4,059	14,288	26,248	+ 11,960
18-24	239,311	979	24,901	243,781	516,689	+ 272,908
25-29	141,685	847	20,678	175,143	394,761	+ 219,618
30-34	115,588	867	19,258	166,967	283,201	+ 116,234
35-39	100,549	909	17,225	156,575	199,383	+ 42,808
40-44	92,562	904	13,415	121,272	129,791	+ 8,519
45-49	84,396	812	10,861	88,191	87,420	- 771
50-54	68,760	675	9,933	67,048	60,518	- 6,530
55-59	43,214	490	10,019	49,093	43,519	- 5,574
60-64	25,554	347	9,301	32,274	27,772	- 4,502
65 and older	17,443	141	18,844	26,570	22,273	- 4,297

Note: The expected number of arrests in 1986 (Column D) is calculated by the following formula: (B/100) x C = D. The total for Column D is the sum of expected arrests at each age. The difference between actual and expected arrests (Column F) is

calculated by the following formula: E-D = F.
^aNumber of arrests per 100,000 licensed drivers in each age group.
^bEstimated in thousands.
^cSum of the individual age estimates.

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Bureau of Justice Statistics Special Reports are prepared principally by BJS staff. This report was written by Lawrence A. Greenfeld, corrections unit chief. Statistical review was provided by Christopher A. Innes. Frank D. Balog edited the report. Marilyn Marbrook, publications unit chief, administered production, assisted by Betty Sherman, Jeanne Harris, and Yvonne Shields.

External reviews were provided by Dr. Alfred Farina of the National Highway Traffic Safety Administration, Dr. Terry Zobeck of the Alcohol Epidemiologic Data System, Dr. James Collins of Research Triangle Institute, and Mr. Yoshio Akiyama of the FBI. Their thoughtful comments and assistance are gratefully acknowledged.

February 1988, NCJ-109945

The Assistant Attorney General, Office of Justice Programs, coordinates the activities of the following program offices and bureaus: the Bureau of Justice Statistics, National Institute of Justice, Bureau of Justice Assistance, Office of Juvenile Justice and Delinquency Prevention, and the Office for Victims of Crime.



May 24, 1989

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