

Research Report
KTC-93-20

EVALUATION OF THE LEXINGTON-FAYETTE
COUNTY SAFETY BELT ORDINANCE

by

Kenneth R. Agent
Research Engineer

Kentucky Transportation Center
College of Engineering
University of Kentucky
Lexington, Kentucky

in cooperation with

Lexington-Fayette Urban County Government

and

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

The contents of this report reflect the views of the author, who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the University of Kentucky, Lexington-Fayette Urban County Government or the National Highway Transportation Safety Administration. This report does not constitute a standard, specification, or regulation.

September 1993

1. Report No. KTC-93-20		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle Evaluation of the Lexington-Fayette County Safety Belt Ordinance				5. Report Date September 1993	
				6. Performing Organization Code	
7. Author(s) Kenneth R. Agent				8. Performing Organization Report No. KTC-93-20	
9. Performing Organization Name and Address Kentucky Transportation Center College of Engineering University of Kentucky Lexington, KY 40506-0043				10. Work Unit No. (TRAILS)	
				11. Contract or Grant No.	
				13. Type of Report and Period Covered Final	
12. Sponsoring Agency Name and Address Lexington-Fayette Urban County Government 200 East Main Street Lexington, KY 40507				14. Sponsoring Agency Code	
15. Supplementary Notes Prepared in cooperation with US Department of Transportation; National Highway Transportation Safety Administration					
16. Abstract A mandatory safety belt ordinance was enacted in Fayette County with an effective date of July 1, 1990. One objective of this study was to conduct usage surveys after the ordinance had been in effect for approximately three years. This would allow comparisons to be made of safety belt usage before and immediately after the effective date of the ordinance to that found a substantial time period after enactment of the ordinance. A second objective of the study was to compare accident data before and after the ordinance became effective. The would allow an analysis of the effect the ordinance had on accident severity. The third objective involved an analysis of citation data in order to determine the level of enforcement of the ordinance. The usage rate for drivers was approximately 37 percent before enactment of the ordinance. After the ordinance became effective and enforcement began on July 1, 1990, the usage rate for drivers increased to approximately 76 percent. However, after approximately three years, the usage rate for drivers has dropped to about 59 percent. Citation data were summarized for the three-year period after enactment of the ordinance. The citation data show that enforcement has continued over the study period although most of the secondary citations are dismissed. Accident data show that the number of fatalities has been reduced after enactment of the law. The number of non-incapacating injuries was also reduced with no reduction found in the number of incapacating injuries. Comparing actual with projected numbers shows that the actual number of fatalities was 18 percent lower than the projected number with the number of non-incapacating injuries 12 percent less than the projected number.					
17. Key Words Safety Belt Ordinance Citations Accidents			18. Distribution Statement Unlimited with Lexington-Fayette Urban County Government Approval		
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of Pages 23	22. Price

TABLE OF CONTENTS

	Page
Introduction	1
Procedure	2
Results	4
Conclusions	6
References	9
Figure	10
Tables	11
Appendix	18

INTRODUCTION

While mandatory safety belt laws have been adopted in almost all states, Kentucky has not enacted such a law. The only statewide law in this area in Kentucky has been the requirement for children under forty inches in height to be placed in a safety seat. The child restraint law was enacted in 1982 with a penalty added in 1988. In the absence of a statewide law, a mandatory safety belt ordinance was enacted in Lexington-Fayette County with an effective date of July 1, 1990.

The city of Lexington is the second largest city in Kentucky. The government is a merged city and county government with a population of slightly over 200,000 compared to a statewide population of over 3.7 million. Fayette County is one of 120 counties in Kentucky, but it is a major activity center and attracts visitors from a large section of the state.

The Lexington ordinance requires each driver and each occupant 16 years of age or older of a passenger automobile to wear a safety belt and requires the driver to secure any passenger under 16 years of age in a safety belt or child safety restraint. The safety belt ordinance is enforced as a secondary offense such that a vehicle cannot be stopped solely to determine compliance with this ordinance. A fine of not more than \$25 was established. A copy of the ordinance is given in the appendix. The ordinance also stated that a program be established for disseminating information to the public concerning the requirements of the ordinance.

Additional local ordinances have been enacted in Kentucky in the absence of a statewide law. Local ordinances have been enacted in Louisville, Jefferson County, Kenton County, Bowling Green, Bardstown, Murray, Corbin and Midway.

Lexington has been included in past statewide safety belt usage surveys which started in 1982. Lexington has always been observed to have a high usage rate compared to statewide statistics. Prior to enactment of the local ordinance, the results of the 1989 statewide survey found Lexington to have the highest usage of the 19 cities in which data were collected (1). The statewide survey indicated usage of safety belts by drivers of 42 percent at a limited number of survey sites in Lexington compared to a statewide usage rate of 26 percent. A detailed safety belt survey was conducted in Lexington in August 1989 at a larger number of observation sites (2). A driver usage rate of 38 percent was obtained considering the large number of sites.

A detailed study was conducted to determine safety belt usage before and after enactment of the ordinance in Lexington. The usage rate increased from about 37 percent before enactment of the ordinance (using data collected in

August and December 1989) to approximately 76 percent in the two-month period after the effective date of the ordinance (3).

One objective of this study was to conduct additional usage surveys after the ordinance had been in effect for approximately three years. This would allow comparisons to be made between safety belt usage before and immediately after the effective date of the ordinance to that found a substantial time period after enactment of the ordinance. A second objective of the study was to compare accident data before and after the ordinance became effective. This would allow an analysis of the effect the ordinance had on accident severity. The third objective involved an analysis of citation data in order to determine the level of enforcement of the ordinance.

PROCEDURE

USAGE SURVEYS

The data collection form used in the survey is shown in Figure 1. Usage was recorded for drivers and front-seat passengers sitting in the outboard position. The exception was for children under four years of age for which data were collected for all positions in the front and the rear. Drivers were classified into three age categories and were classified by sex. Passengers were classified into several age categories. For drivers and front-seat passengers (over three years of age), usage was classified as either using a harness or belt or no restraint. For children one to three years of age, the categories included safety seat, booster seat, harness or belt, or no restraint. For children under one year of age, the categories were either safety seat or no restraint. When a safety seat was used, an attempt was made to determine if there was an obvious misuse.

Data were collected at intersections having either a traffic signal or four-way stop control. Observers stood at the curb or at the edge of the roadway and observed stopped cars. Data were also obtained for cars as they began to move through a signalized intersection if the car was moving sufficiently slow to allow accurate observation. Passenger cars, station wagons, vans, and pickup trucks were included in the survey. Data were collected during daylight hours on weekdays at various times throughout the day. Two sets of data were collected at each site. Data were collected for two hours during each period giving four hours of data at each site.

The following list of guidelines for data collection was given to each observer with each data collector going through a training period.

1. Always include the driver so the number of vehicles included in the sample will be known.

2. Include all vehicles at low-volume locations. When taking data on a multi-lane road, include only vehicles in the curb or near lane.

3. Collect data on only one approach at the intersection.
4. If traffic volume is too heavy to collect data for all vehicles, record data for the next vehicle in view after recording data for the prior vehicle.
5. Obtain a random sample of vehicles independent of whether the occupants are wearing a safety belt. (Do not attempt to include all vehicles with an occupant wearing a safety belt at a location where all vehicles cannot be obtained.)
6. Attempt to include data for children under four years of age for any vehicle in the sample in which such a child is a passenger.
7. Only include vehicles either stopped or moving so slowly that occupants can be readily observed.
8. Excluding children under four years of age, collect data only for drivers and passengers in the right-front seat (exclude the center front and rear seating positions).
9. Do not include old passenger cars not equipped with a safety belt (those without a head rest).
10. Collect data during daylight hours on weekdays and weekends.
11. Collect data for two hours at each site for each set of data. Data will be collected two times at each of the 24 sites or four hours per site.
12. Begin and end data collection at a specified time not considering whether the occupants are using a safety belt.
13. Collect data for cars, vans, and light trucks.
14. Do not include a vehicle in the count if use by the driver cannot be determined.
15. Put the starting time on the first data sheet and the ending time on the last data sheet during the two-hour data collection period, and number the data sheets.

Lexington-Fayette County was divided into geographic zones based on 12 zones used by the police department at the time of the original surveys. While the zone boundaries have changed slightly since the original data were collected, the same locations have been used to maintain consistent data. Data were obtained at two locations in each zone such that data were collected at 24 locations. A list of the intersections at which data were collected is given in Table 1. Four hours of data were taken at each location giving 96 hours of data.

Usage rates for drivers and passengers were obtained for each zone. The rates for each zone were then combined (using traffic volumes as the method of weighting) to give a percent usage for Lexington. Confidence limits for a given probability (probability of 0.99) were obtained for each category using the sample size and percent usage (4). Data from the various zones were compared using the driver data.

ACCIDENT DATA

Accident data for the five-year time period of 1988 through 1992 were used in the analysis. This allowed a comparison of 2.5-year time periods before and after enactment of the ordinance. The analysis primarily dealt with comparisons of accident severity and usage rates.

CITATION DATA

The citations issued for violation of this ordinance for the time period of July 1990 through June 1993 were analysed. In addition to documenting the number of citations, other information such as the age and sex of the individual receiving the citation was summarized.

RESULTS

USAGE SURVEYS

Three sets of data were compared. The comparisons were between the data taken: 1) prior to enactment of the ordinance in August and December 1989, 2) shortly after enactment of the ordinance in July and August 1990, and 3) almost three years after enactment (primarily in May 1993).

Usage rates obtained for drivers during these three periods are listed in Table 2. Percent usage, sample size, and confidence limits (plus or minus the given confidence range) are listed for each survey period. Usage rates for drivers was 37 percent before the safety belt ordinance was enacted. Usage increased dramatically to 76 percent in July and August 1990 after the law became effective on July 1. This compared to a statewide driver usage rate in 1990 of 32 percent

(5). There has been a reduction in the usage rate in the three years after enactment of the law. The usage rate for drivers was determined to be 59 percent in 1993.

Usage rates for front-seat occupants (over three years of age) are presented in Table 3. For each age category, percent usage, sample size, and confidence limits are given for each survey period. As for drivers, usage increased dramatically in July and August 1990. The rates for the various age categories immediately after implementation of the ordinance were consistent at 70 to 71 percent. These rates also decreased in 1993. The 1993 usage rate for all front-seat passengers was 55 percent.

Usage rates for children under four years of age are summarized in Table 4. Separate rates are given for the children one to three years of age and for infants under one year old. Data are also given for both the front and rear seat. A statewide law applied to this age group prior to the first detailed survey in August 1989. Usage has remained at a very high level for this age category. The usage rates were somewhat lower in the first surveys taken in 1989. The usage rate was higher in the rear seat than the front. It was also higher for infants under one year of age than for children one to three years of age. The most recent rates were 77 percent for children one to three years of age and 90 percent for infants.

Data by age and sex of the driver are summarized in Table 5. Percent usage, sample size, and confidence limits are given for each category. Usage increased for each category after the effective date of the law and then dropped in 1993 for all age categories. The usage rate for females has consistently been higher than for males. There were only minor differences in usage when age is considered.

A summary of driver usage rates by geographical zone is presented in Table 6. Rates increased in each zone after the effective date of the ordinance. The range of usage rates for the July and August 1990 data collection varied from 65 percent in zone 3 to 87 percent in zone 2. The trend immediately after passage of the ordinance was for the rates to be more consistent from one zone to another with no clear section of the county where usage was lowest. However, the 1993 data tend to show differences in usage rates which may be related to certain areas. The usage rates for the 1993 data ranged from 46 percent in zone 2 to 67 percent in zone 10. The boundaries of zone 2 are Third Street, North Limestone Street and Loudon Avenue. Zone 10 is generally between Nicholasville Road and Harrodsburg Road. Zone 3, which is adjacent to zone 2 (north of zone 2 to New Circle Road), had the second lowest rate. This showed an area in the northeast area of central Lexington having the lowest usage rate.

ACCIDENT DATA

Accident statistics for a 2.5-year period prior to enactment of the ordinance (January 1988 through June 1990) were compared to a 2.5-year period after enactment of the ordinance (July 1990 through December 1992). The usage rate as well as injury information were determined for all occupants. Data for pedestrians and for individuals riding a bicycle or motorcycle were excluded.

The accident data indicated a dramatic increase in usage rates in the after period. For example, the reported usage rate for drivers was 55 percent in the before period and 89 percent in the after period. The usage rate in 1992 for drivers was 90 percent according to the accident data. The observational surveys show the actual usage rate was substantially less than that indicated by the accident data. Past studies have shown that the usage rates given in accident data are higher than determined in observational surveys. In most instances, the accident data simply report what the occupant informed the police officer. Given the ordinance requiring the use of safety belts, it appears there were many instances in which the police were told the safety belt was worn when, in fact, it was not used.

Even though the percentages are high, comparisons can be made between the relative percentages before and after enactment of the ordinance. The data show that the usage rate increased dramatically after the ordinance. Usage was slightly higher for female drivers than male drivers. Considering all occupants, usage increased for all age categories with the largest increase for the 13 to 19 years of age category. Usage was highest for out-of-state drivers both before and after the ordinance. Prior to the law, usage rates for Kentucky drivers who were from Fayette County was almost identical to drivers from other counties. After the law, the usage rates for Fayette County drivers was slightly higher than for other Kentucky drivers. Prior to the law, usage rates increased as speed limit increased but, after the law, usage rates were similar for all types of roadways, regardless of speed limit.

There were 32,075 accidents in Fayette County in the 2.5-year period from January 1988 through June 1990 compared to 30,568 accidents in the 2.5-year period of July 1990 through December 1992. This represents a 4.7 percent reduction in total accidents. A summary of the general accident statistics for these two time periods is given in Table 7.

There was a reduction of approximately 25 percent in the number of fatal accidents and a 20 percent reduction in the number of fatalities in the 2.5-year time period after enactment of the ordinance compared to the 2.5-year time period before enactment. There was an 11 percent reduction in injury accidents. While the numbers of incapacitating injuries were basically the same during the two

time periods, the number of non-incapacitating injuries was reduced by about 14 percent.

Using the number of total accidents, fatalities and injuries in the 2.5-year before period, the number of fatalities and injuries can be projected for the after period. Comparing actual with projected numbers shows that the actual number of fatalities was 18 percent lower than the projected number with the number of non-incapacitating injuries 12 percent less than the projected number. The actual number of incapacitating injuries was slightly more (about four percent) than the projected number.

The dollar benefits from the reduction in fatalities can be estimated using accident cost estimates developed by the Federal Highway Administration (6) of \$1.5 million per fatality. Comparison of the projected number with actual number of fatalities in the after period results in a reduction of 11 fatalities. This would relate to an accident cost savings of approximately \$16.5 million or \$6.6 million per year.

A comparison of the injuries to the occupants involved in accidents who were wearing or not wearing their safety belt supports the benefits associated with the use of a safety belt. As shown in Table 8, there was a 54 percent reduction in the chances of a driver sustaining a fatal or severe injury in a traffic accident if a safety belt was worn compared to not wearing a safety belt.

CITATION DATA

A summary of the number of citations issued relating to the safety belt ordinance is given in Table 9. The numbers of citations are given in six-month intervals. There have been over 11,600 citations issued in the three-year period after the effective date of the ordinance. There has been an average of about 320 citations per month. The number of citations issued in any month has ranged from 94 in January 1992 to 578 in June 1992. The lowest number of citations was issued in the first six months after the effective date. The data show that enforcement has continued, and generally increased, in the three-year period.

The majority of the citations were issued to males (64 percent). When age is considered, the largest percentage was issued to the 20 to 29 years of age category (45 percent), followed by the 30 to 39 years of age category (27 percent) and the 40 to 49 years of age category (13 percent). Approximately 72 percent of the citations were issued to a resident of Fayette County compared to 26 percent to a Kentucky resident outside Fayette County and two percent to an out-of-state vehicle occupant.

The results of the citation was only available for a portion of the file. However, the information showed that only a small percentage of the citations resulted in a fine. The safety belt citation is a secondary offense. Typically, a penalty was given for the original offense with the safety belt offense dismissed.

CONCLUSIONS

Enactment of a mandatory safety belt ordinance in local jurisdictions such as Lexington-Fayette County in a state (Kentucky) where there is no statewide law has proven to be an effective means of increasing safety belt usage. Specifically, the usage rate for drivers was approximately 37 percent before enactment of the ordinance. After the ordinance became effective and enforcement began on July 1, 1990, the usage rate for drivers increased to approximately 76 percent. However, after approximately three years, the usage rate for drivers has dropped to about 59 percent.

The results of the surveys support research which shows that an effective safety belt program must include an integrated enforcement and PI&E effort to achieve continued high safety belt compliance. Citation data were summarized for the three-year period after enactment of the ordinance. The citation data show that enforcement has continued over the study period although most of the secondary citations are dismissed.

Accident data show that the number of fatalities has been reduced after enactment of the law. The number of non-incapacating injuries was also reduced with no reduction detected in the number of incapacating injuries. While the enactment of the safety belt ordinance has had a positive effect on fatalities and injuries, the extent of the reduction is less than would be expected given the accident reduction benefits found to be associated with safety belt usage. It appears that a segment of the driving population, which has a high accident involvement, continues to fail to use a safety belt. The very high usage rates found with the accident data, compared to observations, indicate many occupants report use of a safety belt when it was not used.

The success of the local ordinance in Fayette County shows the dramatic increase in safety belt usage that can be obtained through a mandatory safety belt law. Therefore, such a law should be considered by the Kentucky General Assembly. In the event a statewide law is not enacted, additional local governments should continue to consider enacting mandatory safety belt laws.

The reduction in safety belt usage, with no reduction in enforcement, shows that continued public information is required to maintain a high usage level.

REFERENCES

1. Agent, K. R.; "1989 Usage Rates and Effectiveness of Safety Belts and Child Safety Seats in Kentucky", University of Kentucky, Transportation Center, Report KTC-89-42, September 1989.
2. Agent, K. R.; "Safety Belt Usage in Lexington and Opinion of a Mandatory Safety Belt Law", University of Kentucky, Transportation Center, Report KTC-89-43, September 1989.
3. Agent, K. R.; "Safety Belt Usage Before and After Enactment of a Mandatory Usage Ordinance (Lexington-Fayette County, Kentucky), University of Kentucky, Transportation Center, Report KTC-90-20, October 1990.
4. Votaw, D. F. and Levinson, H. S.; Elementary Sampling for Traffic Engineers, Eno Foundation for Highway Traffic Control, 1962.
5. Agent, K. R.; "1990 Safety Belt Usage Survey and Evaluation of Effectiveness in Kentucky", University of Kentucky, Transportation Center, Report KTC-90-18, September 1990.
6. FHWA Technical Advisory T 7570.1, June 30, 1988.

Figure 1. Data Collection Form.

DATA COLLECTION FORM

Date: _____ Starting Time: _____ Ending Time: _____
 Location: _____ Sheet No: _____
 Observer: _____ Comment: _____

DRIVER USAGE

Age & Sex	Harness or Belt	None
16-30 M		
31-50 M		
> 50 M		
16-30 F		
31-50 F		
> 50 F		

FRONT-SEAT OCCUPANT USAGE (OVER 3 YEARS OF AGE)

Age	Harness or Belt	None
4-5		
6-12		
13-19		
Over 19		

USAGE FOR CHILDREN 1-3 YEARS OF AGE

	Safety Seat	Safety Seat (Improper)	Booster Seat	Harness or Belt	None
Front					
Rear					

USAGE FOR INFANTS (UNDER 1 YEAR OF AGE)

	Safety Seat	Safety Seat (Improper)	None
Front			
Rear			

TABLE 1. DATA COLLECTION SITES

ZONE	LOCATION
1	Vine Street - Limestone Street Main Street - Upper Street
2	Rose Street - Third Street Martin Luther King Boulevard - Third Street
3	Loudon Avenue - Maple Avenue North Broadway - Withers Avenue
4	Bryan Station Pike - Eastin Road New Circle Road - Eastland Parkway
5	New Circle Road - Russell Cave Pike North Broadway - Fifth Street
6	Newtown Pike - Nandino Boulevard Russell Cave Pike - Winburn Drive
7	Leestown Road - Greendale Road Leestown Road - Forbes Road
8	Versailles Road - Alexandria Drive South Broadway - Bolivar Street
9	Rose Street - Euclid Avenue Tates Creek Road - Cooper Drive
10	Nicholasville Road - Reynolds Road Reynolds Road - Lansdowne Drive
11	Alumni Drive - Yellowstone Parkway Fontaine Road - Lakeshore Drive
12	Richmond Road - Patchen Drive Woodhill Drive - Todds Road

TABLE 2. DRIVER USAGE RATES

SURVEY DATE	USAGE RATE (PERCENT)	CONFIDENCE RANGE (PERCENT)*	SAMPLE SIZE
August/ December 1989	37	0.4	80,421
July/August 1990	76	0.7	21,922
May 1993	59	0.7	36,315

* The usage rate would be plus or minus the percent confidence range.

TABLE 3. USAGE RATES FOR FRONT-SEAT OCCUPANTS (OVER 4 YEARS OF AGE)

SURVEY DATE	AGE (YEARS)	USAGE RATE (PERCENT)	CONFIDENCE RANGE (PERCENT)*	SAMPLE SIZE
August/ December 1989	4-5	35	3.4	1,284
	6-12	33	3.8	1,028
	13-19	28	1.8	4,069
	Over 19	31	1.0	13,796
July/August 1990	4-5	71	7.2	268
	6-12	70	6.2	369
	13-19	71	3.7	983
	Over 19	70	1.8	4,392
May 1993	4-5	49	6.5	387
	6-12	51	6.9	346
	13-19	51	3.5	1,384
	Over 19	55	1.5	6,880

* The usage rate would be plus or minus the percent confidence range.

TABLE 4. USAGE RATE FOR CHILDREN UNDER FOUR YEARS OF AGE

SURVEY DATE	SEATING POSITION	AGE (YEARS)	USAGE RATE (PERCENT)	CONFIDENCE RANGE (PERCENT)*	SAMPLE SIZE
August/ December 1989	Front	Under 1	78	5.9	322
		1-3	54	3.7	1,213
	Rear	Under 1	88	6.7	155
		1-3	76	3.2	1,185
	All	Under 1	82	4.5	477
		1-3	64	2.5	2,398
July/ August 1990	Front	Under 1	79	8.8	142
		1-3	72	6.8	289
	Rear	Under 1	88	8.6	94
		1-3	90	3.5	493
	All	Under 1	83	6.3	236
		1-3	84	3.4	782
May 1993	Front	Under 1	84	7.7	151
		1-3	68	5.5	485
	Rear	Under 1	95	3.2	311
		1-3	81	3.4	884
	All	Under 1	90	3.6	462
		1-3	77	2.9	1,369

* The usage rate would be plus or minus the percent confidence range.

TABLE 5. DRIVER USAGE RATES BY AGE AND SEX

SURVEY DATE	SEX	AGE (YEARS)	USAGE RATE (PERCENT)	CONFIDENCE	
				RANGE (PERCENT)*	SAMPLE SIZE
August/ December 1989	Male	16-30	28	1.5	5,833
		31-50	37	1.4	8,365
		Over 50	33	2.1	3,415
	Female	16-30	38	1.7	5,616
		31-50	45	1.7	5,814
		Over 50	34	2.8	1,940
July/ August 1990	Male	16-30	70	1.8	4,397
		31-50	73	1.5	5,746
		Over 50	71	2.7	1,825
	Female	16-30	80	1.5	4,605
		31-50	82	1.5	4,371
		Over 50	74	3.6	978
May 1993	Male	16-30	52	1.4	8,663
		31-50	55	1.4	8,072
		Over 50	55	1.8	4,839
	Female	16-30	65	1.5	6,736
		31-50	66	1.6	5,645
		Over 50	68	2.5	2,360

* The usage rate would be plus or minus the percent confidence range.

TABLE 6. DRIVER USAGE RATES BY GEOGRAPHIC ZONES

SURVEY DATE	ZONE	USAGE RATE (PERCENT)	CONFIDENCE RANGE (PERCENT)*	SAMPLE SIZE
August/ December 1989	1	33	1.6	6,047
	2	33	1.6	5,589
	3	34	1.6	5,717
	4	36	1.6	6,041
	5	35	1.3	8,579
	6	33	1.6	5,553
	7	36	1.6	6,250
	8	42	1.4	7,979
	9	41	1.5	6,733
	10	40	1.1	12,047
	11	38	1.8	5,023
	12	40	1.8	4,863
July/ August 1990	1	80	2.6	1,583
	2	87	2.6	1,112
	3	65	2.9	1,820
	4	69	2.3	2,666
	5	75	2.6	1,885
	6	76	2.5	1,862
	7	85	2.8	1,111
	8	74	2.5	1,973
	9	76	1.9	3,225
	10	80	2.7	1,424
	11	79	2.5	1,845
	12	71	3.1	1,416
May 1993	1	60	2.0	3,801
	2	46	2.3	3,219
	3	53	2.6	2,429
	4	59	2.5	2,542
	5	59	2.0	3,927
	6	57	2.7	2,253
	7	61	2.2	3,176
	8	56	2.0	3,888
	9	63	2.1	3,418
	10	67	2.7	2,408
	11	66	2.5	2,478
	12	55	2.3	3,136

* The usage rate would be plus or minus the percent confidence range.

TABLE 7. COMPARISON OF ACCIDENT STATISTICS BEFORE AND AFTER ENACTMENT OF SAFETY BELT ORDINANCE

CATEGORY CHANGE	BEFORE ORDINANCE*	AFTER ORDINANCE**	PERCENT CHANGE
Total Accidents	32,075	30,568	-4.7
Fatal Accidents	69	52	-24.6
Injury Accidents	3,475	3,099	-10.8
Fatalities	76	61	-19.7
Incapacitating Injuries	1,447	1,439	-0.6
Non-incapacitating Injuries	3,801	3,228	-15.1

* Two and one-half year period from January 1988 through June 1990.

** Two and one-half year period from July 1990 through December 1992.

TABLE 8. ACCIDENT SEVERITY VERSUS SAFETY BELT USAGE (DRIVERS)*

TYPE OF INJURY	NOT WEARING SAFETY BELT		WEARING SAFETY BELT		PERCENT REDUCTION
	NUMBER	PERCENT	NUMBER	PERCENT	
Fatal	53	.193	14	.020	90
Incapacitating	756	2.76	954	2.76	51
Non-incapacitating	1,809	6.59	2,394	3.38	49
Fatal or Incapacitating	809	2.95	968	1.37	54

* Based on 1988 through 1992 data. Total sample size for not wearing a safety belt was 27,436 compared to 70,759 for wearing a safety belt.

TABLE 9. SAFETY BELT CITATIONS ISSUED

TIME PERIOD	NUMBER OF CITATIONS
July 1990-December 1990	1,082
January 1991-June 1991	1,793
July 1991-December 1991	1,980
January 1992-June 1992	2,261
July 1992-December 1992	2,678
January 1993-June 1993	1,845

APPENDIX
LEXINGTON-FAYETTE COUNTY URBAN COUNTY GOVERNMENT
SAFETY BELT ORDINANCE

WHEREAS, the Commonwealth of Kentucky has adopted KRS 189.125 to require child safety restraints for children traveling with their parents in their automobiles, but has not spoken in the area of other uses of child safety restraints, nor in the case of seat belts; and

WHEREAS, the Lexington-Fayette Urban County Government has, based upon information provided to its Services Committee in recent sessions and upon the professional opinions of its various officers, departments and divisions, determined that the protection of the public health, safety and welfare demands that all those traveling in passenger automobiles in Fayette County be required to "buckle up"; and

WHEREAS, KRS 67A.070(2) empowers the Urban County Government to enact ordinances not in conflict with the general laws of this state;

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT:

Section 1 - That Section 18-23.1 of the Code of Ordinances be and hereby is enacted to read as follows:

- (1) As used in this section, the following terms shall have the meanings given:
 - (a) "Highway" means any public road, street, avenue, alley, or boulevard, bridge, viaduct or trestle and the approaches to them and includes off-street parking facilities offered for public use, whether publicly or privately owned, except for-hire parking facilities listed in KRS 189.700;
 - (b) "Passenger automobile" means any self-propelled vehicle which is capable of transporting one (1) or more persons, but shall not include motorcycles as defined in section 18-1(14); school buses, church buses, or other public conveyance vehicles; and road rollers, road graders, farm tractors, vehicles on which power shovels are mounted and such other construction and farming equipment customarily only used on the site of construction or farming and which is not practical for the transportation of persons or property upon the highways; and
 - (c) "Roadway" means that portion of a highway improved, designed, or ordinarily used for vehicular travel, exclusive of the berm or shoulder. In the event a highway includes two (2) or more separate roadways the term "roadway" as used herein shall refer to any roadway separately but not to all such roadways collectively.
- (2) Each driver and each occupant of sixteen (16) years of age or older of a passenger automobile operated on the roadways, streets and highways of Fayette County shall wear a properly adjusted and fastened safety belt as provided for under Federal Motor Vehicle Safety Standard 208.
- (3) The driver of a passenger automobile operated on the roadways, streets and highways of Fayette County shall secure or cause to be secured in a properly adjusted and fastened safety belt system or child safety restraint any passenger under sixteen (16) years of age to whom the provisions of KRS 189.125 do not apply.
- (4) The provisions of this section shall not apply to the following:
 - (a) A passenger automobile manufactured before July 1, 1966;

- (b) An automobile operator or passenger with a physically or psychologically handicapping condition which would prevent appropriate restraint in a safety belt or child safety restraint, provided, however, that the condition is duly certified by a physician who shall state the nature of the handicap, as well as the reason such restraint is inappropriate, and provided, further, that the written certification is in the possession of the driver or passenger, as applicable, at the time of the conduct in question; or
 - (c) A passenger automobile which is not required to be equipped with a safety belt system under federal law.
- (5) No person shall be stopped, inspected or detained solely to determine compliance with this section.
- (6) Any person who violates the provisions of this section shall be fined not more than Twenty-Five Dollars (\$25.00).

Section 2 - The Lexington-Fayette Urban County Government Office of the Mayor and Division of Police shall immediately establish a program for disseminating information to the public about the requirements of this section.

Section 3 - That this Ordinance shall become effective upon July 1, 1990.

PASSED URBAN COUNTY COUNCIL: January 25, 1990