



Transport
Canada

Transports
Canada

TP 13563 E

**Unbelted Fatally And Seriously Injured Drivers
Canada, 1993 - 1997**

Prepared by Paul Gutoskie
Road Safety Programs Branch
Road Safety and Motor Vehicle Regulation
Transport Canada
June 1999

Canada

Highlights

- During the 1993-1997 period, 39.7% of fatally injured drivers and 17.9% of those seriously injured (hospitalized for a period of at least 24 hours), were unbelted. These percentages accounted for a yearly average of 643 drivers killed and 1,819 seriously injured.
- Unbelted drivers, both those killed and seriously injured, are over-represented among the younger age groups - particularly those in the 16-19 and 20-24 year old age categories - when compared with distributions of similarly aged licensed drivers.
- The unbelted fatally injured driver phenomenon is equally prevalent in both urban and rural areas. Although the number of drivers killed in rural areas outnumbered those that died in crashes in urban areas by a ratio of four to one, the percentage of fatally injured drivers that were unbelted at the time of crash occurrence was virtually identical in both areas - 40.8% in urban areas and 41.2% in rural areas.
- Non-use of seat belts was highest among fatally and seriously injured drivers involved in single-vehicle incidents - 54.4% for drivers killed in single-vehicle crashes in urban areas and 60.2% for those killed in collisions in rural areas.
- Almost half (48.8%) of unbelted drivers that died in crashes were ejected from their vehicles.
- Non-use of seat belts and alcohol involvement were most prevalent among drivers killed in single-vehicle collisions in rural areas. These same crash characteristics were found among drivers seriously injured in single vehicle crashes in urban areas.
- Almost three of four unbelted drivers killed or seriously injured (73.0% and 71.7%, respectively) in night-time collisions had been drinking or were impaired.
- Non-use of seat belts was more prevalent among motor vehicle passengers than among drivers. During the 1993-1997 period, a yearly average of 41.3% of passengers killed and 25.4% of those injured were unbelted at the time of collision occurrence.
- When combining both driver and passenger fatalities, 40.2% of all occupants killed and 20.8% of those seriously injured were unbelted; this is an annual average of 998 occupants killed and 3,418 seriously injured during the 1993-1997 period.
- Non-use of seat belts among fatally (24.0%) and seriously (11.4%) injured elderly drivers (those aged 65 years or older), were higher than the national non-use rate for all drivers (9.0%), but lower than the unbelted wearing rates among all other age groups of fatally and seriously injured drivers.
- Despite large annual numbers of unbelted drivers killed and seriously injured, improvements have occurred during the 1993-1997 period. The percentage of fatally injured drivers who were unbelted gradually decreased from 43.1% in 1993 to 37.3% in 1997 and from 20% to 16.5% among seriously injured drivers.

Unbelted Fatally and Seriously Injured Drivers

1. Background

Unbelted Fatally and Seriously Injured Drivers — Canada, 1993 - 1997 (TP 13563 E)

- Canada's geographic expansiveness and very low population density have contributed largely to making motor vehicles the primary means of travel in this country and the vehicle ownership rate per capita among the highest in the world. Not surprisingly, the large majority (approximately 80%) of all serious road user casualties (those who are killed or suffer serious injuries) occur to motor vehicle occupants.
- Seat belt use by Canadian motorists is among the highest in the world. Depending on the viewpoint taken, Canada's seat belt usage rate among all light duty vehicle occupants (passenger cars, passenger vans and light duty vans) has remained optimistically constant or pessimistically stagnant, at approximately 89% during the past four years. The seat belt usage rate among drivers has remained stable at approximately 91% during this period.
- The National Occupant Restraint Program 2001 Task Force (NORP 2001) of the Canadian Council of Motor Transport Administrators as well as road safety organizations and agencies in Canada have been working since the beginning of this decade to achieve a seat belt usage rate of 95% among all motor vehicle occupants. With the usage rate having attained a 'plateau' status during the past four years, the NORP 2001 Task Force felt that the provision of information on fatally and seriously injured unbelted drivers may help generate renewed interest and commitment to assist the Task Force in attaining its stated goal of achieving and maintaining a seat belt usage rate of 95% by 2001.

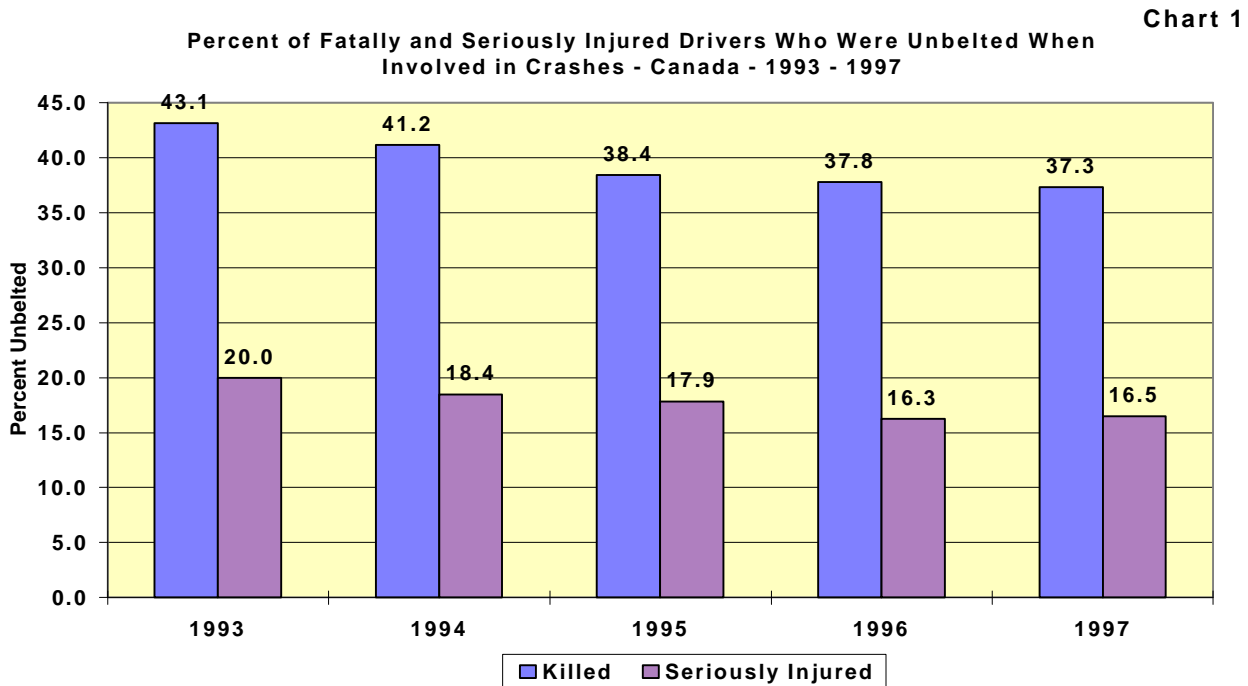
2. Objective

- The objective of this study was to establish a "profile" of fatally and seriously injured "unbelted drivers", with particular emphasis on collisions that occurred in rural areas and those involving elderly drivers. The establishment of information on the collision characteristics of unbelted drivers should provide road safety program and policy makers as well as enforcement agencies with a better focus with which to channel their intervention efforts.

3. **Unbelted Drivers: The Big Picture**

3.1. **Fatally and Seriously Injured Drivers**

- Drivers represent the largest group of unbelted occupant casualties: — 64.4% of those killed and 53.2% of those seriously injured. In real numbers, on average, during each of the past five years, 643 unbelted drivers were killed and 1,819 were seriously injured in traffic collisions. Despite these substantial figures, Chart 1 clearly demonstrates that progress has occurred during the past five years, as the percentage distributions of both fatally and seriously injured unbelted drivers have gradually decreased, from 43.1% to 37.3% and from 20% to 16.5%, respectively.

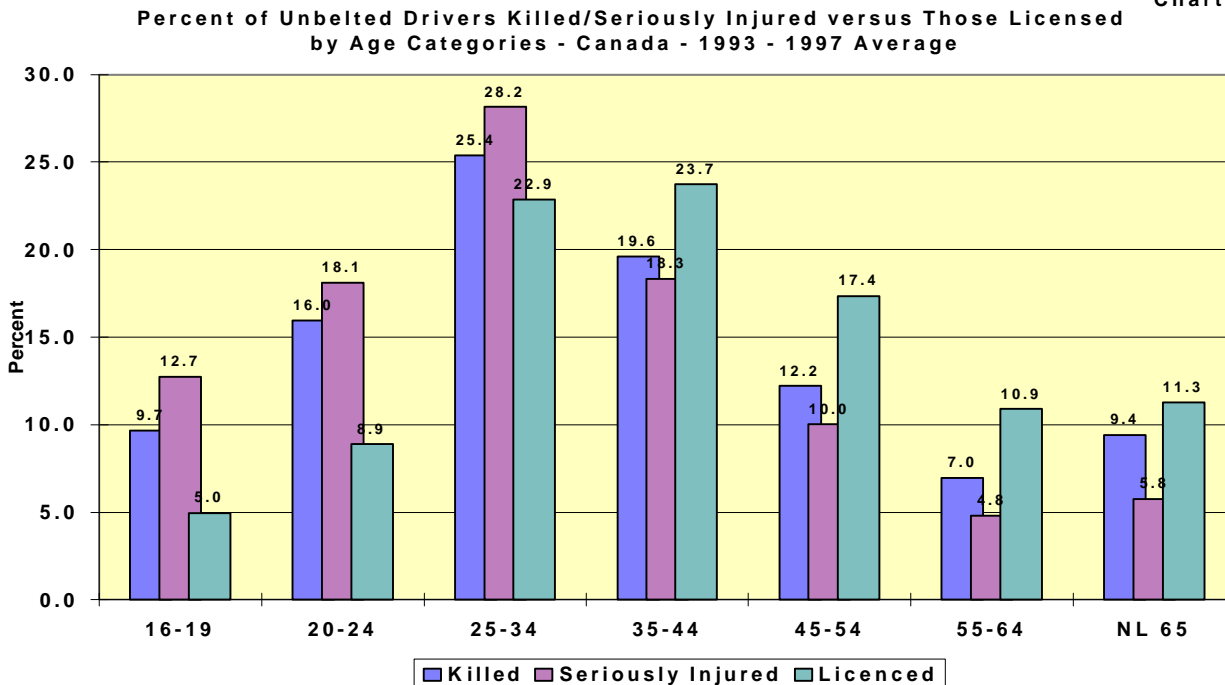


- The vast majority of unbelted fatally and seriously injured drivers were males. They accounted for 86.3% of those killed and 80.6% of those seriously injured during the period being examined.

3.1.1. **Age Categories: Unbelted Versus Licensed**

- Unbelted drivers, both those killed and seriously injured, are disproportionately over-represented among the younger age groups — particularly those in the 16-19 and 20-24 year-old age categories, and to a lesser extent among 25-34 year-old drivers — when compared with comparable distributions of similarly aged licensed drivers. All other age categories of fatally and seriously injured drivers, including those aged 65 years or older, were underrepresented when compared with the same age groups of licensed drivers (see Chart 2 on next page).

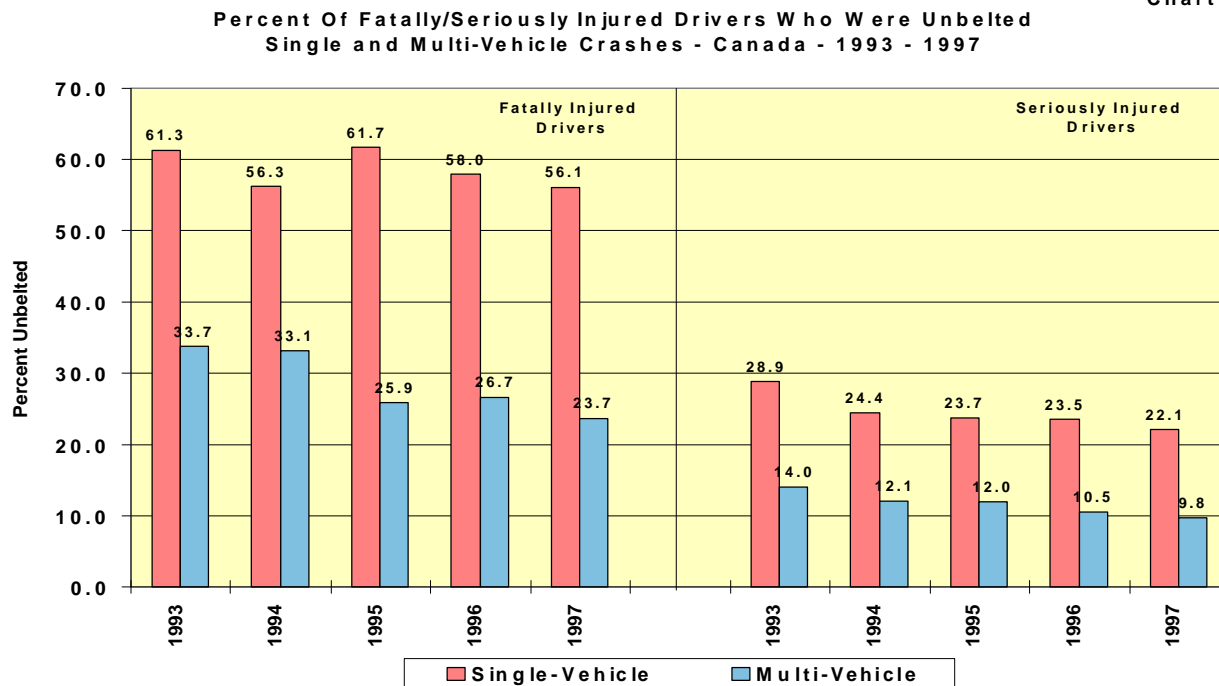
Chart 2



3.1.2. Single- Versus Multi-vehicle Crashes

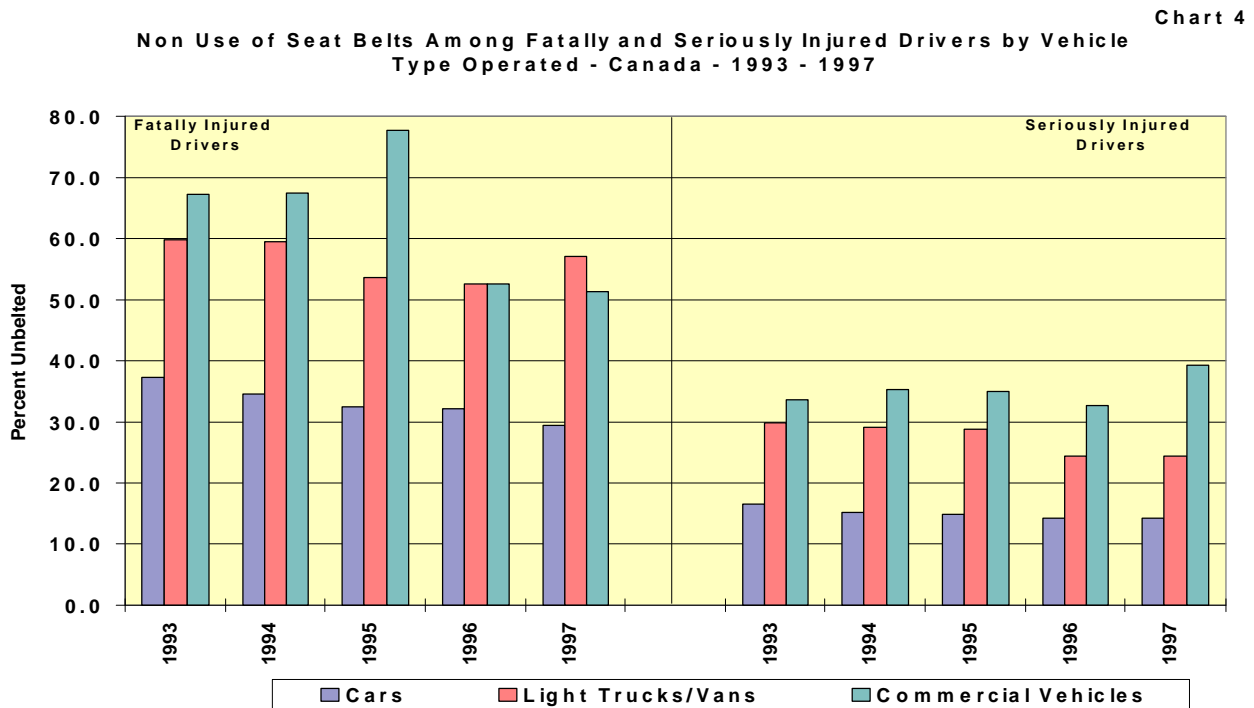
- Chart 3 shows that non-use of seat belts was considerably higher among fatally and seriously injured drivers involved in single-vehicle crashes than among those involved in multi-vehicle collisions. This chart also shows that non-use of seat belts among fatally injured drivers involved in multi-vehicle collisions and among all seriously injured drivers has gradually decreased during the 1993-1997 period.

Chart 3



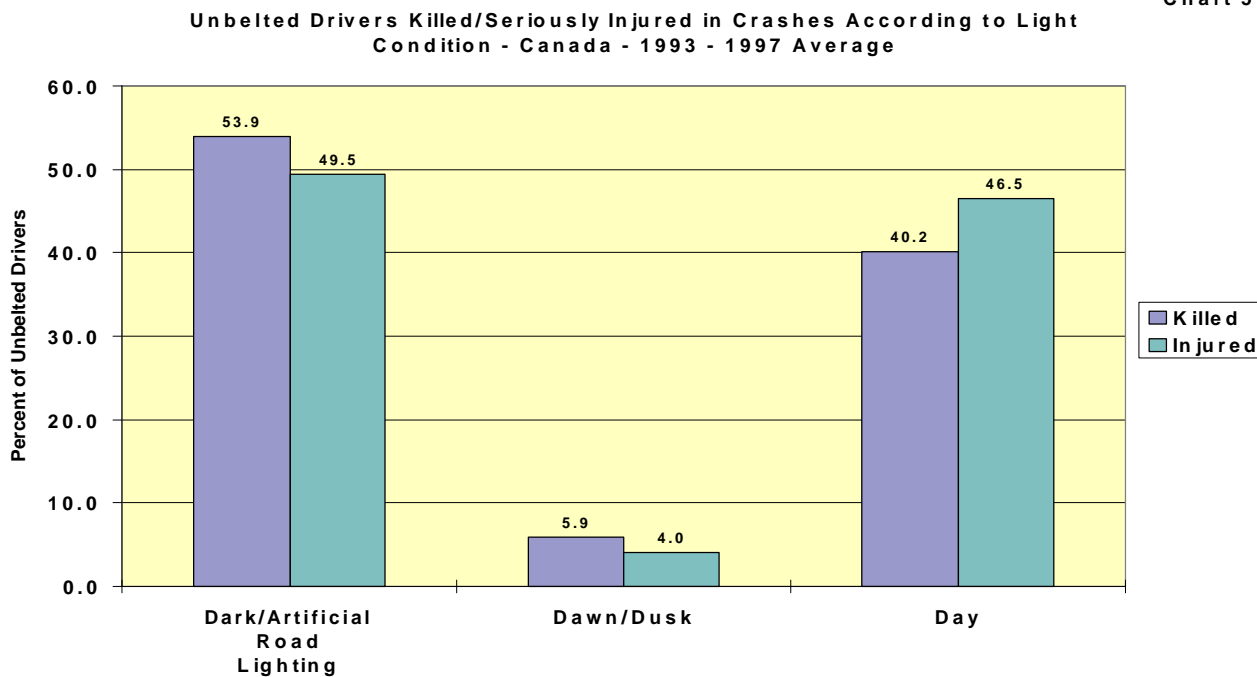
3.1.3. Vehicle Type

- Non-use of seat belts among fatally injured drivers varied considerably according to the vehicle type operated. Car drivers, who accounted for the 71.8% of fatally injured unbelted drivers during the 1993-1997 period, had the lowest rate of seat belt non-use prior to crash involvement (33.4%). Drivers of light trucks and vans and commercial vehicles, who represented 23.8% and 4.4% of dead unbelted drivers, respectively, had considerably higher seat belt non-usage rates at the time of crash occurrence (56.6% and 63.6%, respectively) during the five years examined. The same phenomenon was evident, but on a smaller scale, among seriously injured drivers. Almost three of four seriously injured drivers suffered their injuries while operating a car (74.4%), while drivers of light trucks and vans (21.7%) and heavy trucks (3.9%) comprised the remaining drivers. Non-use of seat belts was lowest among seriously injured car drivers (15.1%), followed by those operating light trucks and vans (27.4%) and commercial vehicles (35.2%).



3.1.4. Light Condition

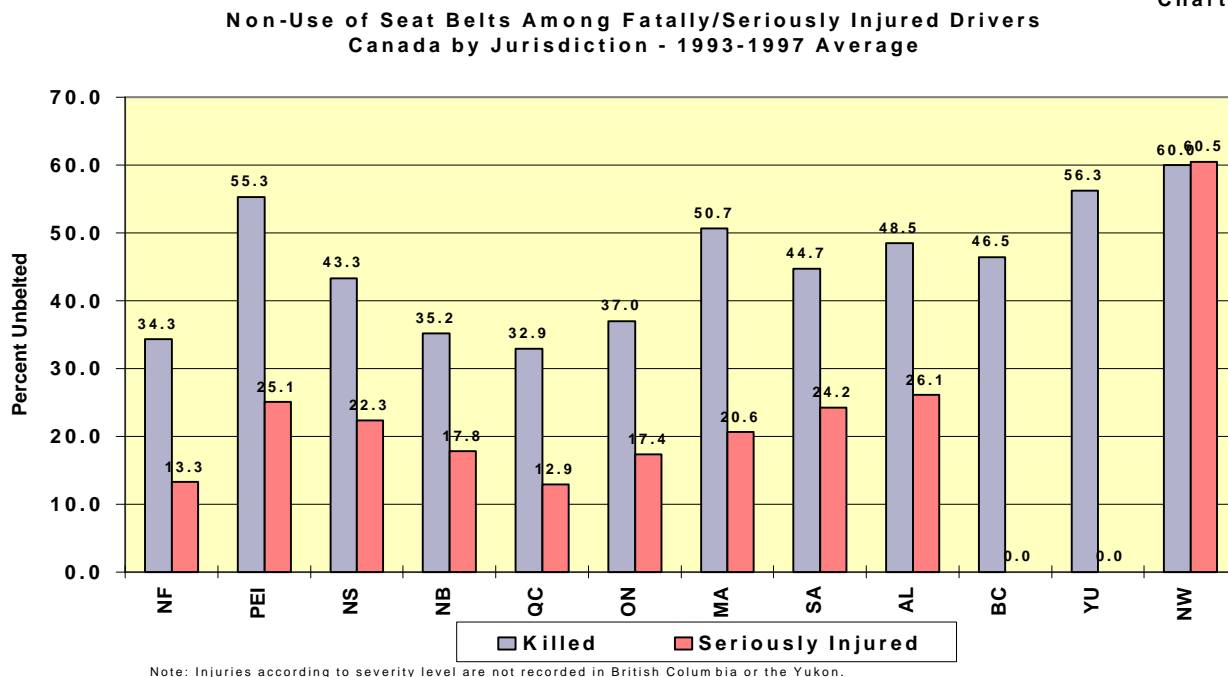
- Slightly more than half (53.9%) of unbelted drivers who were fatally injured in crashes and about half (49.5%) of those that were seriously injured sustained their injuries in conditions that were reported as dark/artificial road lighting. The remaining unbelted driver casualties occurred in daylight conditions (40.2% of those killed and 46.5% of those seriously injured) and during the dawn/dusk period (5.9% and 4%, respectively). The fact that approximately half of these victims suffered their injuries during daylight hours, when enforcement agencies are most active and visible, is encouraging to safety and enforcement agencies who develop programs and policies aimed at increasing seat belt use.



3.1.5. Province/Territory

- Non-use of seat belts among fatally and seriously injured drivers varied considerably among Canadian jurisdictions. Chart 6 demonstrates that non-use of seat belts tended to be considerably lower among drivers killed or seriously injured in traffic collisions in eastern and central Canadian provinces than in western jurisdictions.

Chart 6



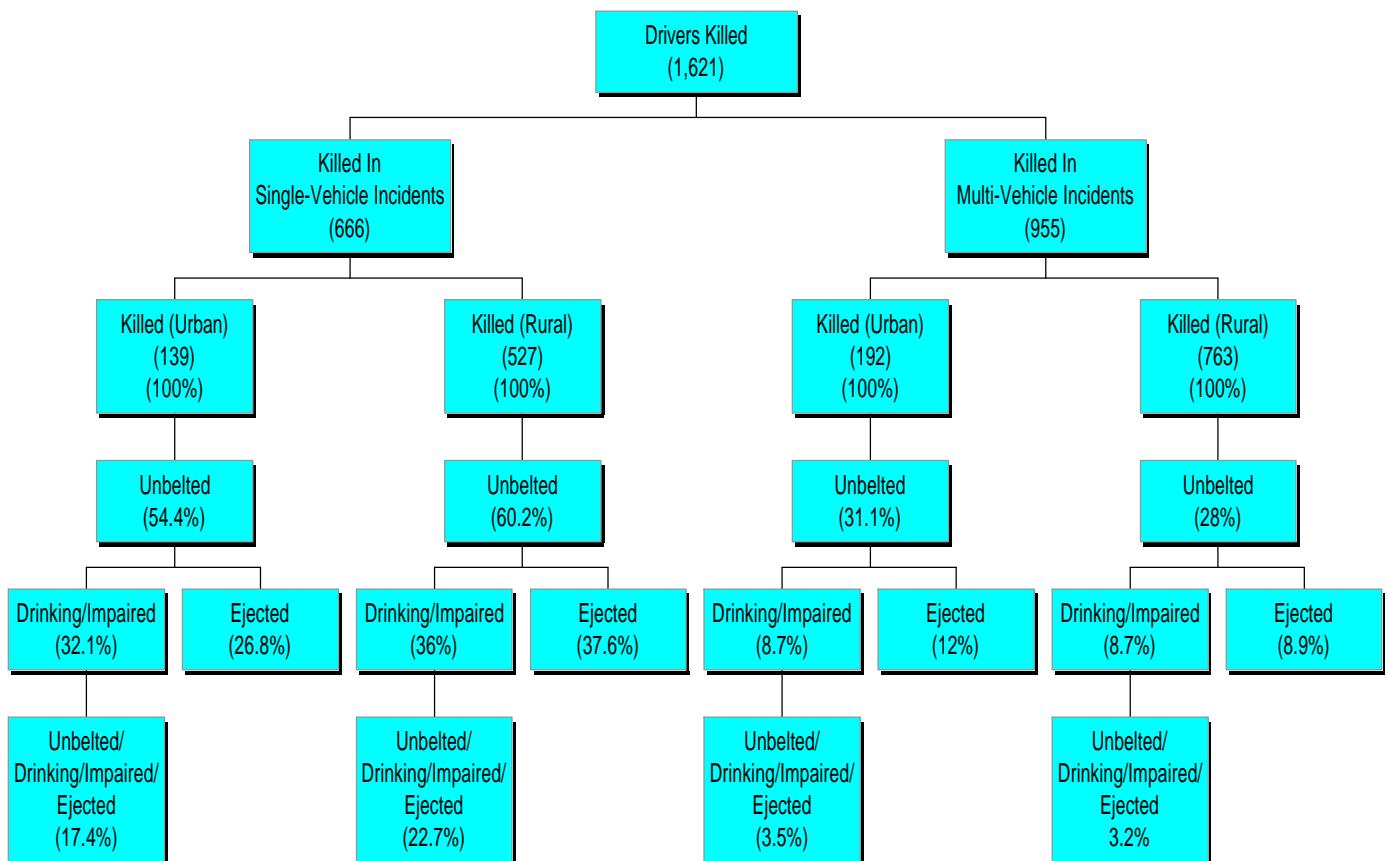
4. Unbelted Fatally and Seriously Injured Drivers - A Closer Look

4.1. Fatally Injured Drivers

- The figures in Chart 7 demonstrate that the number of drivers killed in rural areas outnumbered those that died in crashes in urban areas by a ratio of four to one. They also show that unbelted driver fatalities are prevalent in both urban and rural areas as well as in single- and multi-vehicle collisions. However, the most noteworthy figures found in this chart are those delineating the percentages of fatally injured unbelted drivers that died in single-vehicle crashes (54.4% and 60.2% in urban and rural areas, respectively) and the characteristics that were closely associated with these occurrences — high incidences of alcohol use (32.1% and 36% in urban and rural area crashes, respectively (see Note in Appendix)) and driver ejection (26.8% and 37.6%, respectively).
- When examining only fatally injured unbelted drivers, an average of 60.6% were ejected in single-vehicle incidents during the 1993-1997 period compared with 33.2% in multi-vehicle collisions. More than half of these single-vehicle incidents (51.8%) occurred on roads where the alignment was described as “curved and level” or “curved and gradient”. These road alignment characteristics were found in only 18.1% of multi-vehicle collisions where fatally injured drivers were ejected.

Chart 7

**Selected Characteristics of Drivers Killed in Reportable Crashes
Canada - 1993 - 1997 Average**



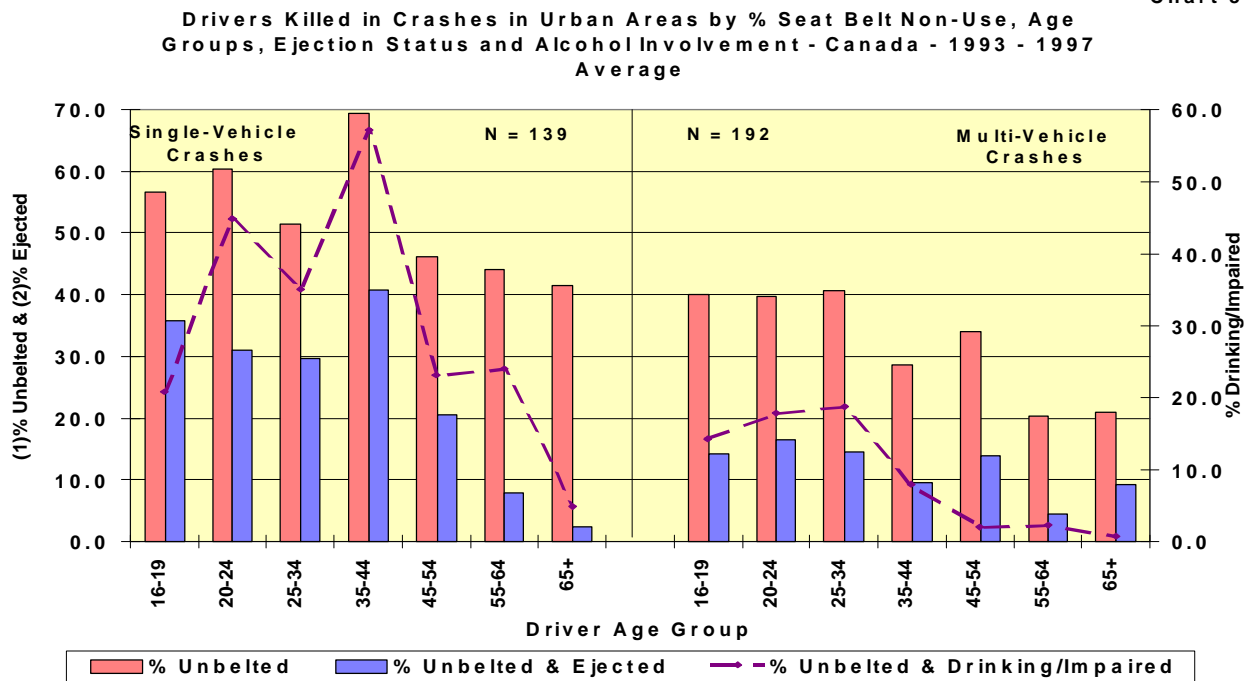
- During this five-year period, only drivers killed in single-vehicle crashes that took place in rural areas, where non-use of seat belts among these victims was highest, exhibited steady year-over-year decreases in the non-use of seat belts (from 64.1% in 1993 to 54.7% during 1997).

4.1.1. Crash Location and Age Categories

- The average national seat belt usage rate among drivers during the 1993-1997 period was approximately 91%. The figures in Charts 8 and 9 show that all age categories of fatally injured drivers, regardless of whether they died in single or multi-vehicle crashes, in urban or rural areas, were unbelted at considerably higher rates than the average national non-use rate (see Table A1 in the Appendix for more detailed information).

4.1.1.1. Urban Areas

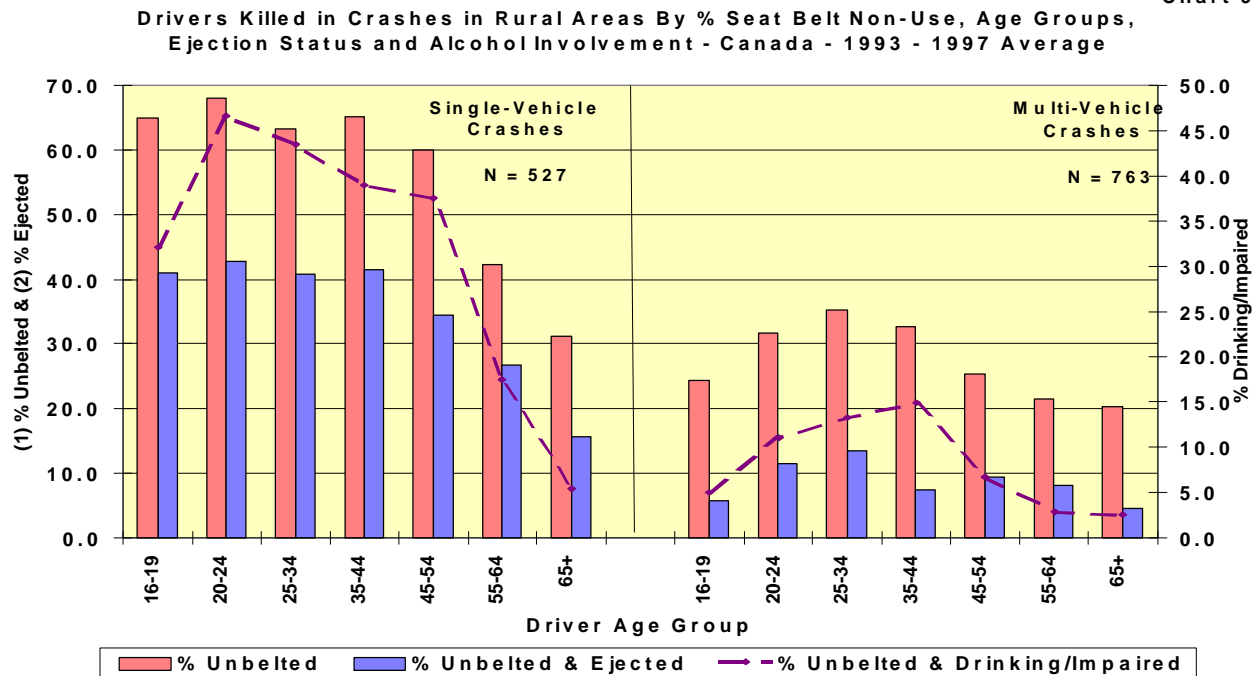
- Chart 8 demonstrates that more than half of all drivers between the ages of 16 and 44 years who were killed in single-vehicle incidents in urban areas were unbelted at the time of crash occurrence (ranging from 51.4% to 69.4%). Not surprisingly, occupant ejection was also prevalent among these age groups of fatally injured drivers (ranging from 29.7% to 40.8%). Although the figures are minimum estimates (see figures and footnote in Table A1), alcohol involvement was highest among dead drivers between the ages of 20 and 44 years. While the absolute numbers were small (drivers that died in crashes in urban areas accounted for only 8.6% of all fatally injured drivers (see Table A1)), it is noteworthy that non-use of belts, alcohol involvement and occupant ejection were by far the highest among fatally injured drivers in the 35-44 year-old age group.
- Non-use of seat belts among drivers fatally injured in multi-vehicle collisions in urban areas was considerably lower than the figures observed for drivers killed in single-vehicle incidents. Non-wearing of seat belts (ranging from 39.7% to 40.6%), occupant ejection (ranging from 14.3% to 16.4%) and alcohol involvement (ranging from 14.3% to 18.8%) were highest among the three youngest age groups of these fatally injured drivers (16-34 years).



4.1.1.2. Rural Areas

- Drivers who were killed in single-vehicle crashes in rural areas accounted for approximately one third (32.5%) of all drivers fatally injured during the 1993-1997 period. Chart 9 demonstrates that the unbelted driver phenomenon is clearly most prevalent among this group of fatally injured drivers. Non-use of seat belts, occupant ejection and alcohol involvement (see Table A1) were not restricted to a few age categories of these dead drivers — it was exceedingly high among almost all age groups, and, in particular, among those between the ages of 16 and 54 years. In fact, among all age categories of fatally injured drivers aged 16-54 years, non-use of seat belts was 60% or higher (with ranges from 60% to 68.1%); non-use of seat belts combined with alcohol involvement ranged from 32.1% to 46.6%; and non-use of seat belts combined with driver ejection ranged from 34.5% to 42.9%. Among all age categories of drivers killed in single-vehicle crashes in rural areas, only drivers in the 35-44 year-old age-category exhibited steady year-over-year decreases in the non-use of seat belts — from 70.3% in 1993 to 54.2% in 1997.

Chart 9



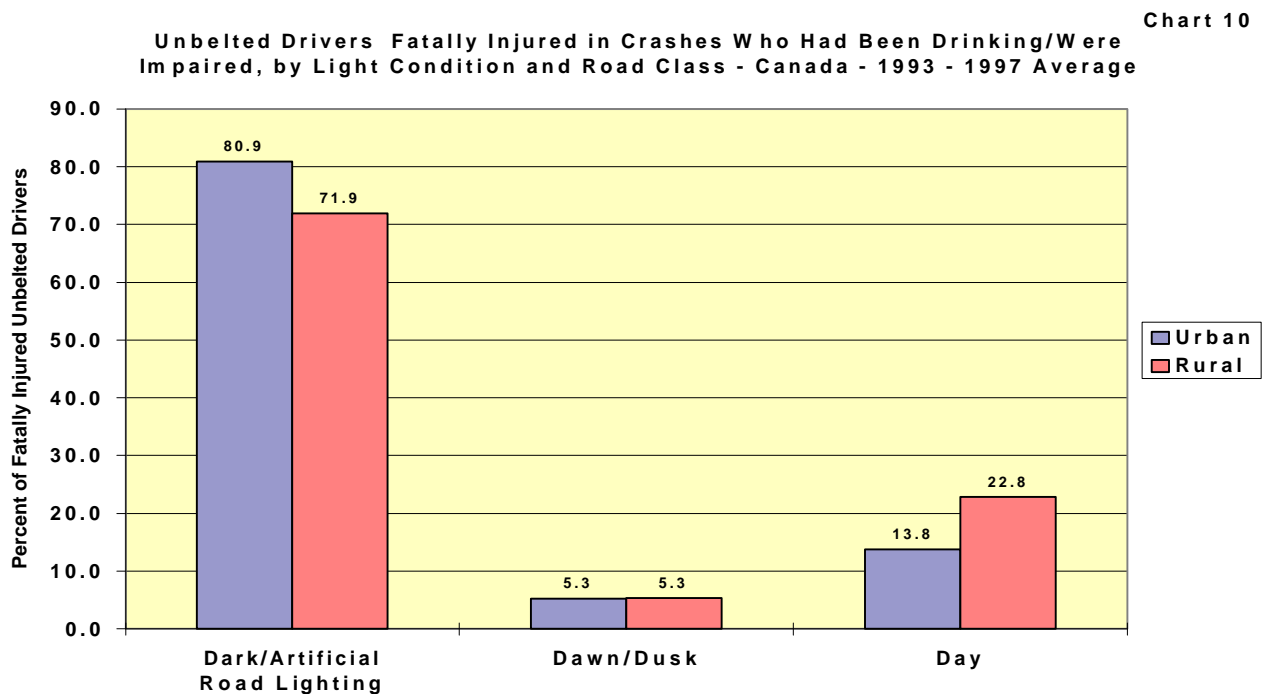
- Drivers that died in multi-vehicle collisions in rural areas accounted for almost half (47.1%) of all drivers killed during the 1993-1997 period. Non-use of seat belts (ranging from 20.3% to 35.3%) and non-use of seat belts combined with alcohol use (2.6% to 14.9%) or driver ejection (4.6% to 13.5%) were, for the most part, lower among all age categories of drivers killed in these circumstances than for drivers fatally injured in single-vehicle or multi-vehicle urban configurations. It is interesting to note that among drivers killed in multi-vehicle collisions, non-use of seat belts was higher among younger drivers who died in urban areas and, in particular, among those aged 16-34 years. For single-vehicle occurrences, the opposite phenomenon was found — non-use of seat belts was higher among younger drivers killed in rural areas.
- Single-vehicle fatal crashes that occurred in urban and rural areas exhibited both similar and dissimilar trends. The crash characteristics were similar in that non-use of seat belts, occupant ejection and alcohol involvement were highest among 16-44 year-old fatally injured drivers that died in both areas. The only exception was found among 16-19 year-old fatally injured drivers. While non-use of seat belts and occupant ejection were in the same range as those found among 20-44 year-old fatally injured drivers, their alcohol involvement rates were considerably lower than those of 20-44 year-old dead drivers. And unlike single-vehicle fatal crashes that occurred in urban areas, where non-use of seat belts, alcohol involvement and occupant ejection were highest among fatally injured drivers in the 35-44 year-old age group, among drivers killed in single-vehicle incidents in rural areas, these same characteristics were found in younger drivers — those aged 20-24 years.
- While the non-use rate of seat belts among fatally injured older drivers — those 65 years of age or older — was consistently higher than the national non-use rate for all drivers (9%), it was also consistently lower than the non-use rate for all other age groups of fatally injured drivers.

4.1.2. Light Condition

- Non-use of seat belts and alcohol formed a deadly combination among drivers fatally injured in night-time

Unbelted Fatally and Seriously Injured Drivers — Canada, 1993 - 1997 (TP 13563 E)

crashes. More than 80% of unbelted drivers killed in night-time collisions in urban areas and more than 70% of those who died in crashes in similar lighting conditions in rural areas had been drinking or were impaired. When examining these figures excluding road class, 73% of all unbelted drivers killed in night-time crashes had consumed alcohol prior to collision occurrence.



4.2. Seriously Injured Drivers

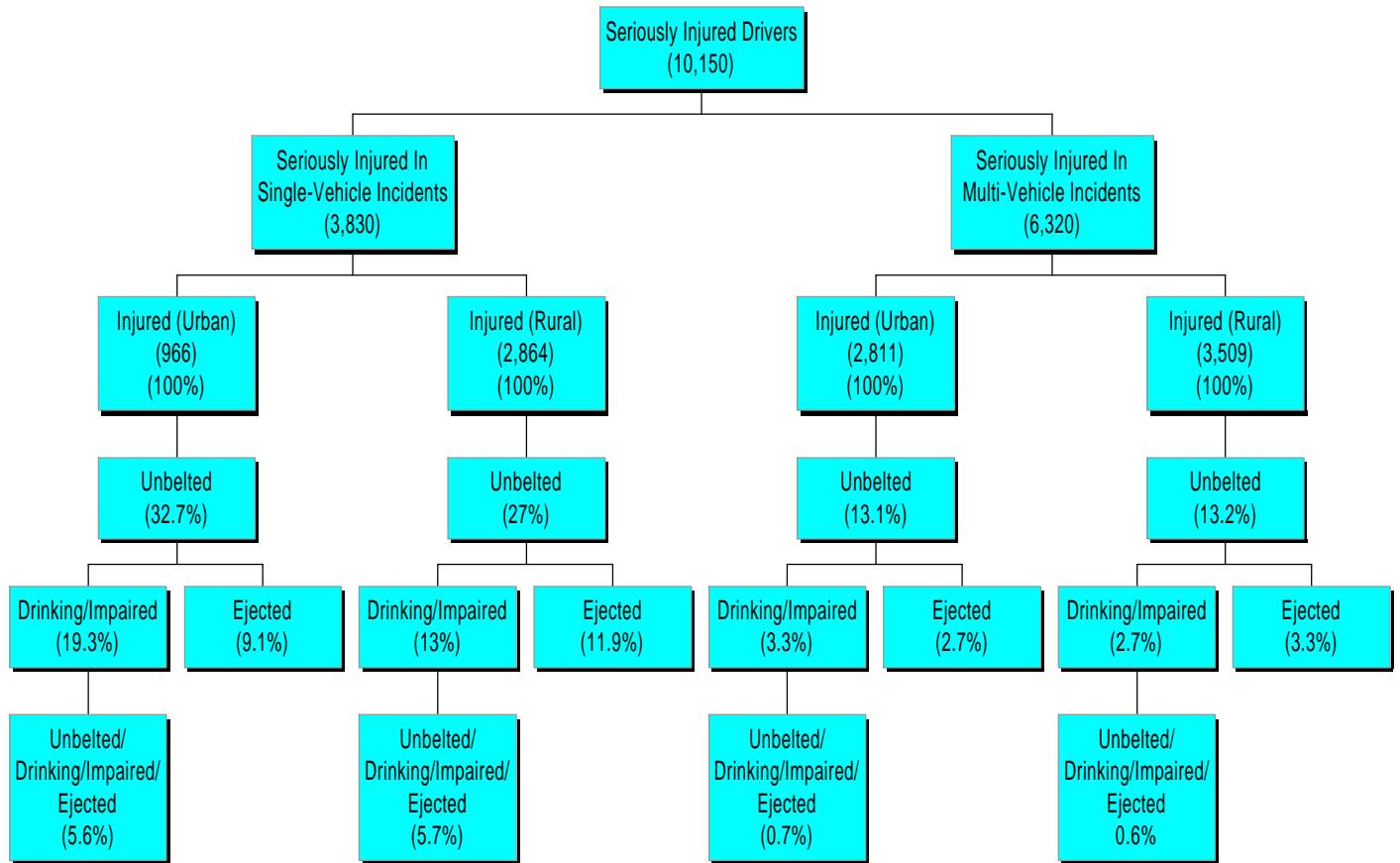
- Chart 11, which presents parallel information on seriously injured drivers as that found in Chart 7 for fatally injured vehicle operators, shows that there are both similarities and dissimilarities.
- The figures in Chart 11 are similar to those in Chart 7 in that they show that approximately 40% of seriously injured drivers sustained their injuries in single-vehicle crashes. Unbelted seriously injured drivers were again most often injured in single-vehicle crashes (32.7% and 27% for urban and rural occurrences, respectively). Alcohol use and occupant ejection were also observed considerably more frequently among these single-vehicle crash victims than among those involved in multi-vehicle collisions. However, the percentage distributions of unbelted drivers, those that had been drinking or were impaired and those that were ejected were all considerably lower than the comparable figures observed for fatally injured drivers.
- The dissimilarities between the figures found in Charts 7 and 11 concern drivers seriously injured in both single- and multi-vehicle collisions. Among drivers seriously injured in single-vehicle occurrences, non-use of seat belts and alcohol involvement were found more often in crashes that occurred in urban areas, whereas the opposite phenomenon was found among fatally injured drivers (these characteristics were more prevalent in crashes that occurred in rural areas). The percentages of drivers seriously injured in multi-vehicle collisions were much more evenly distributed between urban (44.5%) and rural (55.5%) areas than was the case for drivers fatally injured in these types of collisions (20.1% and 79.9%, respectively). In addition, the percentages of these victims that were involved in multi-vehicle collisions were unbelted, had consumed alcohol or were ejected were quite low when compared with comparable figures for drivers seriously injured in single-vehicle incidents or those killed in either single or multi-

vehicle crashes.

- During this five-year period, when examining seriously injured drivers according to road class, the percentages of seriously injured drivers who were unbelted at the time of collision occurrence decreased among all the categories of victims studied except those that were injured in multi-vehicle collisions in rural areas. The percent of unbelted drivers seriously injured in single-vehicle crashes in urban areas, multi-vehicle collisions in urban areas and single-vehicle occurrences in rural areas decreased from 36.4% to 29.4%, 15% to 11.3% and 32.6% to 23.6%, respectively, between 1993 and 1997.

Chart 11

**Selected Characteristics of Drivers Seriously Injured in Reportable Crashes
Canada - 1993 - 1997 Average**



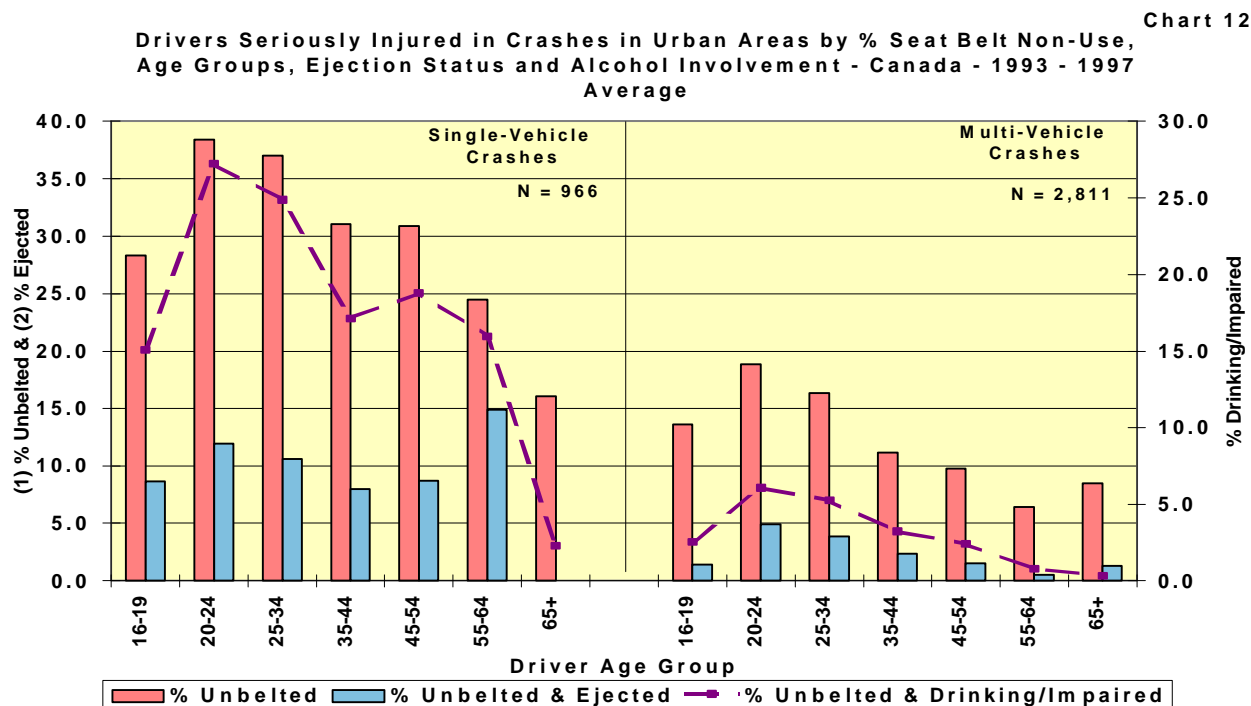
4.2.1 Crash Location and Age Categories

4.2.1.1. Urban Areas

- Of the four groups of seriously injured drivers examined, single-vehicle incidents that occurred in urban areas resulted in the smallest number of serious injuries among drivers (9.5%) during the 1993-1997 period. However, Chart 12 on the next page, and Table A2 in the Appendix show that all age categories in this group of seriously injured drivers consistently had higher seat belt non-usage rates (ranging from 16% to 38.4%, depending on the age group) as well as higher incidences of alcohol involvement (ranging from 15.1% to 27.2% (for drivers aged 16-64 years)) than drivers who were seriously injured in single-vehicle

rural crashes or in multi-vehicle collisions.

- Chart 12 also shows that seat belt non-wearing rates among all seriously injured drivers between the ages of 16 and 44 years who were involved in multi-vehicle collisions in urban areas were somewhat higher than the national non-wearing rate for all drivers, but still considerably lower than the non-wearing rates found among drivers seriously injured in crashes in single-vehicle urban and rural occurrences. Among all age categories of drivers seriously injured in multi-vehicle collisions in urban areas, only drivers in the 25-34 year old age category exhibited gradual year-over-year decreases in the non-use of seat belts — from 19.3% in 1993 to 11.9% in 1997.



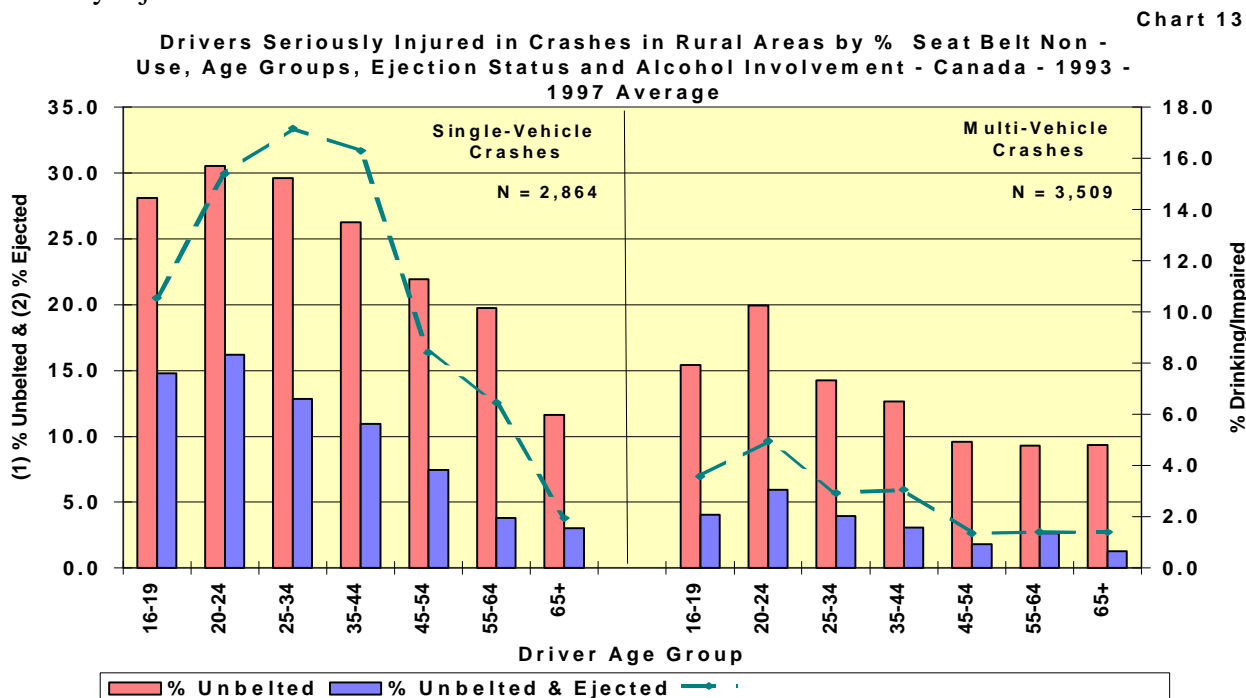
4.2.1.2. Rural Areas

- Drivers seriously injured in single-vehicle crashes that occurred in rural areas accounted for a sizable segment of the seriously injured driver population (28.2% during this five year period). Although non-use of seat belts was not as prevalent as was the case for drivers seriously injured in single-vehicle urban crashes, the figures in Chart 13 and in Table A2, in the Appendix, show that slightly more than one in four seriously injured drivers was unbelted at the time of crash occurrence. It is noteworthy that alcohol involvement was not as prevalent in these crashes (13% of all seriously injured drivers) as it was among drivers seriously injured in single-vehicle incidents that took place in urban areas (19.3%). It is also noteworthy that despite having lower seat belt non-use rates than drivers seriously injured in single-vehicle crashes in urban areas, drivers who were seriously injured in single-vehicle crashes in rural areas had the highest incidences of driver ejection among all seriously injured drivers.
- Multi-vehicle collisions that occurred in rural areas accounted for more than one third of all seriously injured drivers (34.6%). As was the case with drivers seriously injured in multi-vehicle collisions in urban areas, non-use of seat belts among some age categories (those aged 16-44 years) of this group of seriously injured drivers, was only somewhat higher than the national seat belt non-usage rate for all drivers. And, non-use of seat belts among the remaining age categories of seriously injured drivers was about the same as the national non-use rate. Alcohol use and driver ejection were infrequently reported among drivers

Unbelted Fatally and Seriously Injured Drivers — Canada, 1993 - 1997 (TP 13563 E)

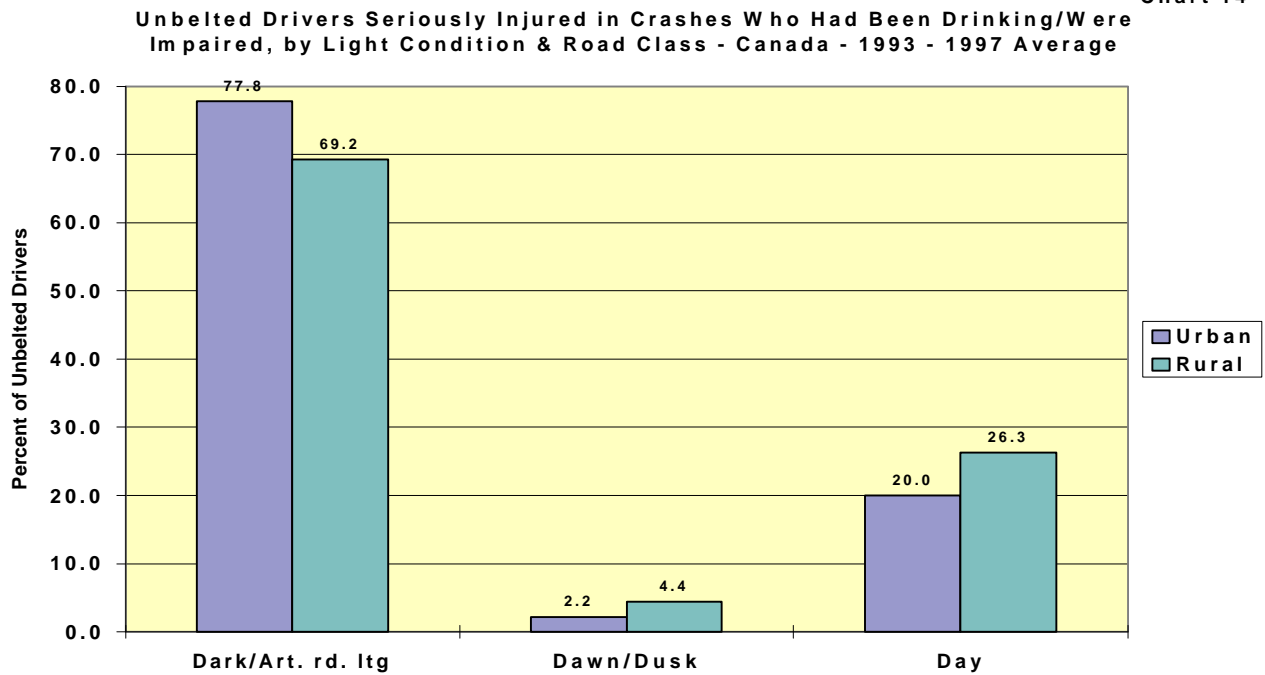
seriously injured in multi-vehicle collisions in rural areas. These collision characteristics were most often reported among seriously injured drivers aged 20-24 years (5% and 5.9%, respectively).

- Non-use of seat belts by elderly drivers who suffered serious injuries was not a common occurrence during the 1993-1997 period. Only drivers aged 65 years or older who were injured in single-vehicle crashes that took place in urban or rural areas had slightly higher unbelted rates (16% and 11.6%, respectively) than the national driver seat belt non-use rate. Seat belt non-use among older drivers seriously injured in multi-vehicle collisions was about the same as the national seat belt non-use rate.



4.2.2. Light Condition

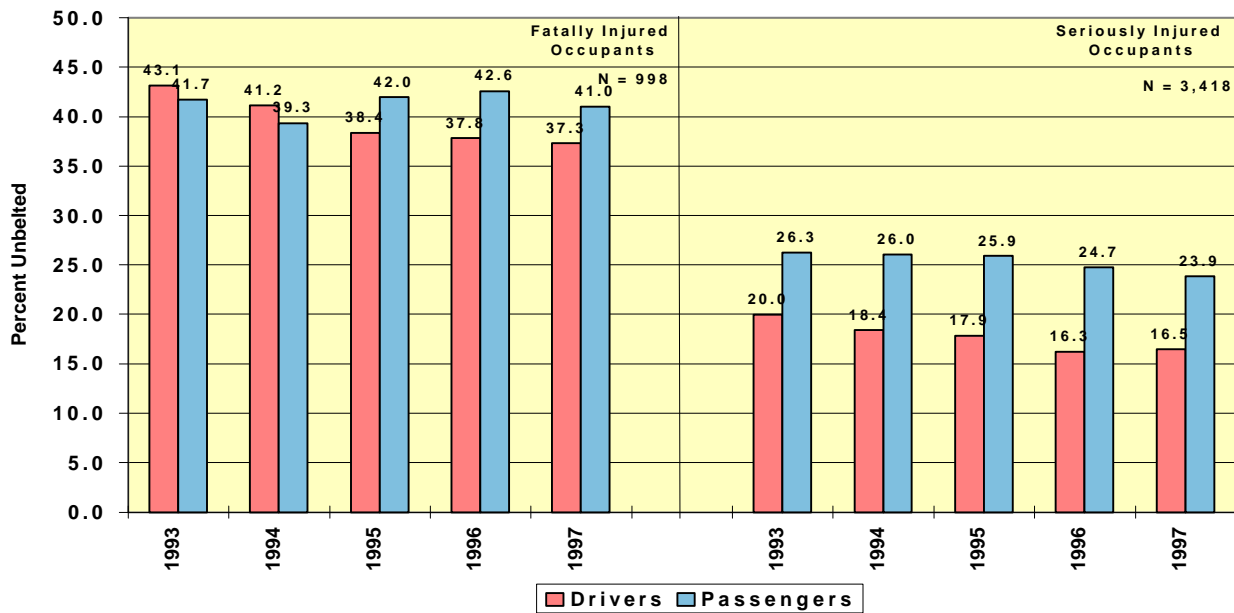
- As was the case for drivers fatally injured in night-time crashes, non-use of seat belts combined with alcohol use were very prevalent among drivers seriously injured in night-time crashes. 77.8% of unbelted drivers seriously injured in night-time collisions in urban areas and 69.2% of those seriously injured in crashes in similar lighting conditions in rural areas had been drinking or were impaired. When examining these figures excluding road class, 71.7% of all unbelted drivers who were seriously injured in night-time crashes had consumed alcohol prior to collision occurrence.



5. Unbelted Occupant Casualties

- While the focus of this report is on unbelted drivers, it is also necessary to include belt use information on fatally and seriously injured passengers in order to ascertain the magnitude of the non belt use problem. During the 1993-1997 period, an annual average of 41.3% of passengers killed and 25.4% of those seriously injured were unbelted prior to collision occurrence. In numerical terms, on average, each year during the five years examined, 355 unbelted passengers were killed and 1,599 were seriously injured. When combined with unbelted driver casualties, an annual average of 998 unbelted occupants were killed and 3,418 seriously injured during the five years examined. Chart 15 demonstrates that, in percentage terms, seat belt non-use among fatally injured passengers during the 1995-1997 period (ranging from 41% to 42.6%) was higher than the rates reported for drivers. And the non-use rate among seriously injured passengers was higher for all years examined. However, the figures in this chart do show steady decreasing trends for non-use of seat belts among fatally injured drivers as well as among both drivers and passengers who were seriously injured.

Percent of Fatally and Seriously Injured Occupants Who Were Unbelted at the Time of Crash Occurrence - Canada - 1993 - 1997



6. Conclusions

- The data presented in this profile on unbelted drivers has demonstrated such characteristics as overrepresentation by males and younger drivers among the casualties. This information is not really surprising. These figures merely reaffirm suspicions long held by road safety researchers.
- However, this brief examination has clearly demonstrated several noteworthy facts, the most prominent of which are itemized below:
 1. During the five years examined, almost 40% of fatally injured drivers and approximately 18% of those seriously injured were unbelted at the time of crash occurrence.
 2. Non-use of seat belts was not restricted to drivers. The problem was also rampant among fatally and seriously injured passengers. The aggregate annual number of fatally and seriously injured occupants is staggering - an average of almost 1,000 killed and more than 3,400 seriously injured each year during the 1993-1997 period. However, on a more positive note, the situation is improving gradually among both fatally and seriously injured drivers and among seriously injured passengers.
 3. The unbelted fatally and seriously injured driver phenomenon is a problem that is very prevalent in both rural and urban areas.
 4. The unbelted driver problem was most often found in single-vehicle crashes. These crashes resulted in high incidences of occupant ejection.
 5. Non-use of seat belts combined with alcohol use was most often found among fatally injured drivers who were killed in single-vehicle crashes in rural areas and among vehicle operators who were seriously injured in single-vehicle incidents that occurred in urban areas.

6. Non-use of seat belts and alcohol use were found among almost three of every four fatally and seriously injured drivers who were involved in night-time crashes.

- While Canadian road safety professionals should feel proud of their efforts to date at achieving a level of seat belt use that is among the highest in the world, the figures presented in this profile demonstrate that considerable work remains to be done. The 10 percent of motorists that do not wear seat belts are involved in very substantial numbers of fatal and serious injury producing crashes. If Canada hopes to continue to improve upon its road safety record, this very sizable segment of the serious casualty population will have to decrease greatly.

Note 1: It was assumed that proportional distributions of known values for all data elements described in this profile were representative of those that were reported as unknown. The unknown figures were factored to national totals. All data described in this report were generated from Transport Canada's national Traffic Collision Data file (TRAID).

Note 2: Figures for some data elements shown in some charts were not available in all jurisdictions. For these charts, national totals were derived by extrapolation.

Note 3: All figures on alcohol use among casualties found in this report were derived from TRAID. Past examinations of this data element from TRAID have demonstrated that alcohol involvement figures are underestimated when compared with blood alcohol concentration (BAC) figures published in reports by the Traffic Injury Research Foundation (TIRF) that delineate alcohol use among fatally injured drivers.

APPENDIX

Table A1

Selected Characteristics of Drivers Killed in Reportable Crashes
Canada - 1993 - 1997 Average

Killed in Single-Vehicle Urban Occurrences						
Driver Age Category	Number Killed	Killed as % of Total Fatalities	% Unbelted	% Unbelted + Drinking/Impaired	% Unbelted + Ejected	% Unbelted + Drinking/Impaired + Ejected
16-19	21	15.1	56.6	20.8	35.8	9.4
20-24	23	16.5	60.3	44.8	31.0	22.4
25-34	32	23.0	51.4	35.1	29.7	23.0
35-44	21	15.1	69.4	57.1	40.8	34.7
45-54	16	11.5	46.2	23.1	20.5	12.8
55-64	10	7.2	44.0	24.0	8.0	4.0
65+	16	11.5	41.5	4.9	2.4	2.4
Total	139	100.0				

Killed in Single-Vehicle Rural Occurrences						
Driver Age Category	Number Killed	Killed as % of Total Fatalities	% Unbelted	% Unbelted + Drinking/Impaired	% Unbelted + Ejected	% Unbelted + Drinking/Impaired + Ejected
16-19	52	9.9	65.0	32.1	40.9	17.5
20-24	90	17.1	68.1	46.6	42.9	31.1
25-34	131	24.9	63.3	43.5	40.8	27.8
35-44	103	19.5	65.1	39.0	41.5	25.7
45-54	65	12.3	60.0	37.6	34.5	21.2
55-64	37	7.0	42.3	17.5	26.8	10.3
65+	49	9.3	31.3	5.5	15.6	3.1
Total	527	100.0				

Killed in Multi-Vehicle Urban Occurrences						
Driver Age Category	Number Killed	Killed as % of Total Fatalities	% Unbelted	% Unbelted + Drinking/Impaired	% Unbelted + Ejected	% Unbelted + Drinking/Impaired + Ejected
16-19	13	6.8	40.0	14.3	14.3	5.7
20-24	28	14.6	39.7	17.8	16.4	8.2
25-34	38	19.8	40.6	18.8	14.6	6.3
35-44	27	14.1	28.6	7.9	9.5	1.6
45-54	19	9.9	34.0	2.0	14.0	2.0
55-64	17	8.9	20.5	2.3	4.5	0.0
65+	50	26.0	20.9	0.8	9.3	0.8
Total	192	100.0				

Killed in Multi-Vehicle Rural Occurrences						
Driver Age Category	Number Killed	Killed as % of Total Fatalities	% Unbelted	% Unbelted + Drinking/Impaired	% Unbelted + Ejected	% Unbelted + Drinking/Impaired + Ejected
16-19	54	7.1	24.3	5.0	5.7	1.4
20-24	88	11.5	31.7	11.0	11.5	4.6
25-34	161	21.1	35.3	13.3	13.5	5.8
35-44	136	17.8	32.7	14.9	7.4	4.0
45-54	112	14.7	25.3	6.8	9.5	2.7
55-64	80	10.5	21.5	2.9	8.1	1.4
65+	132	17.3	20.3	2.6	4.6	0.9
Total	763	100.0				

Table A2

Selected Characteristics of Drivers Seriously Injured in Reportable Crashes
Canada - 1993 - 1997 Average

Seriously Injured in Single-Vehicle Urban Occurrences						
Driver Age Category	Number Injured	Injured as % of Total Injured	% Unbelted	% Unbelted + Drinking/Impaired	% Unbelted + Ejected	% Unbelted + Drinking/Impaired + Ejected
16-19	138	14.3	28.3	15.1	8.7	5.0
20-24	174	18.0	38.4	27.2	11.9	9.0
25-34	252	26.1	37.0	24.9	10.6	6.5
35-44	164	17.0	31.1	17.1	8.0	4.0
45-54	95	9.8	30.9	18.8	8.7	5.4
55-64	61	6.3	24.5	16.0	14.9	4.3
65+	82	8.5	16.0	2.3	0.0	0.0
Total	966	100.0				

Seriously Injured in Single-Vehicle Rural Occurrences						
Driver Age Category	Number Injured	Injured as % of Total Injured	% Unbelted	% Unbelted + Drinking/Impaired	% Unbelted + Ejected	% Unbelted + Drinking/Impaired + Ejected
16-19	408	14.2	28.1	10.5	14.8	5.6
20-24	491	17.1	30.6	15.4	16.2	8.0
25-34	759	26.5	29.6	17.2	12.8	7.3
35-44	516	18.0	26.3	16.3	10.9	6.4
45-54	317	11.1	21.9	8.4	7.4	3.1
55-64	158	5.5	19.8	6.5	3.8	1.5
65+	215	7.5	11.6	1.9	3.0	0.8
Total	2864	100.0				

Seriously Injured in Multi-Vehicle Urban Occurrences						
Driver Age Category	Number Injured	Injured as % of Total Injured	% Unbelted	% Unbelted + Drinking/Impaired	% Unbelted + Ejected	% Unbelted + Drinking/Impaired + Ejected
16-19	214	7.6	13.6	2.5	1.4	0.6
20-24	375	13.3	18.9	6.1	4.9	1.8
25-34	673	23.9	16.3	5.2	3.9	1.1
35-44	558	19.9	11.1	3.2	2.3	0.7
45-54	398	14.2	9.8	2.4	1.5	0.3
55-64	231	8.2	6.5	0.8	0.5	0.0
65+	362	12.9	8.5	0.3	1.3	0.2
Total	2811	100.0				

Seriously Injured in Multi-Vehicle Rural Occurrences						
Driver Age Category	Number Injured	Injured as % of Total Injured	% Unbelted	% Unbelted + Drinking/Impaired	% Unbelted + Ejected	% Unbelted + Drinking/Impaired + Ejected
16-19	262	7.5	15.4	3.6	4.0	0.7
20-24	408	11.6	19.9	5.0	5.9	1.6
25-34	863	24.6	14.2	2.9	4.0	0.7
35-44	707	20.1	12.6	3.1	3.1	0.7
45-54	515	14.7	9.6	1.4	1.8	0.2
55-64	338	9.6	9.3	1.4	2.6	0.2
65+	416	11.9	9.3	1.4	1.3	0.3
Total	3509	100.0				