FEDERAL GOVERNMENT'S ROAD SAFETY INITIATIVE

YOUNG DRIVER RESEARCH PROGRAM -

MASS CRASH DATA ANALYSIS

FORS FATALITY FILE (1988) - NSW

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CR 131 (3)

1994

FOR THE FEDERAL OFFICE OF ROAD SAFETY

FEDERAL OFFICE OF ROAD SAFETY
REPORT DOCUMENTATION PAGE

Report No	Report Date	Pages	ISBN	ISBN (Series)	ISSN
CR131 (3)	1994	94	0 642 50997 2	0 642 51388 0	0810 770X

Title and sub-title

Young Driver Research Program - Mass Crash Data Analyses:
FORS Fatality File (1988) - NSW

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Abstract

This report is third in a series examining young versus older driver differences in car crashes for both Australian and USA data. Bivariate analyses examining the similarities and differences between drivers of various age groups involved in fatality crashes for NSW (1988) were conducted. Results are presented as a series of tables. The data was also examined for day and night-time differences. Conclusions and comparisons between the two data sets are not presented as the 11th report of the series provides an overview of all findings.

Key Words

YOUNG DRIVER, CRASH ANALYSIS, DAY, NIGHT, CAR DRIVER

Notes

(1) FORS reports are disseminated in the interest of information exchange.
(2) The view expressed are those of the author(s) and do not necessarily represent those of the Commonewealth Government.
(3) The Federal Office of Road Safety publishes four series of research reports:
  (a) reports generated as a result of research done within FORS are published in the OR series
  (b) reports of research conducted by other organizations on behalf of FORS are published in the CR series
  (c) reports based on analyses of FORS' statistical databases are published in the SR series
  (d) minor reports of research conducted by other organizations on behalf of FORS are published in the MR series.

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1 CHARACTERISTICS OF YOUNG DRIVER CRASHES - MASS CRASH DATA ANALYSIS

1.1 INTRODUCTION

The Monash University Accident Research Centre was commissioned by the Federal Office of Road Safety to undertake the Young Driver Research Program as part of the Federal Government's Road Safety Initiative.

One of the research projects in the Young Driver Research Program involved identifying the characteristics of young driver crashes through supplementing previous literature reviews which identify the known characteristics of young driver crashes, behaviour and performance from experimental, field and evaluation studies.

In addition, this project involved deriving information from a systematic analysis of Australian and US mass crash data to complement information from the literature review. The results of this analysis are presented in a series of reports which are outlined below:

Australian data

Report N°	Data File	State	Year(s)
1	Casualty crash	New South Wales	1986-1990
	"	Victoria	1984-1989
2	"	South Australia	1986-1990
3	FORS Fatality	New South Wales	1988
4	"	Victoria	"
5	"	South Australia	"
6	"	NSW, Victoria and SA combined	"

USA data

Report N°	Data File	US Region	Year(s)
7	GES	North-west	1989
8	"	Mid-west	"
9	"	West	"
10	"	South	"

Overview report

Report N°	
11	Reviews the main findings presented in Report N^{os} 1 to 10

The tables presented in the first report are accompanied by a discussion of results highlighting the main findings contained in that report, as well as noting some of the difficulties inherent in analysis of large data sets. Reports 2 to 10 contain results presented in tabular form only, although a brief description of the data used is given. Report N° 11 contains an overview of results comprising two sections: the first notes similarities and differences in results between States and compared to the US data; the second compares results with the the main literature findings (see Macdonald; 1994a and 1994b).

This report (Nº 3 in the series) presents results for fatality crashes in New South Wales during 1988, and outlines, in turn:

- the role of mass crash data in identifying problem areas for young driver safety
- the data set used in the study
- the methodology used
- results:
  - general bivariate patterns
  - daytime vs night-time young driver crashes

This study provides a systematic analysis and review of young driver crashes as represented in mass crash data; to date only ad-hoc, fragmented investigations of young driver crashes using mass crash data have been undertaken. This series of reports, therefore, serve as a comprehensive source document on young driver crashes.

1.2 USING MASS CRASH DATA

Mass crash data provide the most complete and readily available details about crash events, in terms of:

- the temporal and spatial details about the crash incident (where and when it occurred)
- driver (and other involved road user) demographics
- environmental conditions when the crash occurred
- the sequence of events preceding the crash (crash types), including the traffic context and vehicle/road user actions.

Due to reporting criteria, these data are also more representative of crashes involving injury (particularly more serious injury) to the road user(s) involved in the crash than of less severe crashes (eg. property damage only crashes).

Information derived from analysis of mass crash data is essential for identifying target areas or 'problems' where countermeasures should be directed. Analysis of mass crash data allows:

- the magnitude of the 'problem' to be ascertained
- the stability of the 'problem' to be determined
- the generality/specificity of the 'problem' to be determined (eg. Are both males and females affected? Does the 'problem' occur at both day and night; in metropolitan and rural locations?).

In using mass crash data to describe the young driver 'problem' and identify target areas, it is important to balance the need to disaggregate the crash problem into homogeneous sub-problems (with similar characteristics), with the number of levels by which the problem is disaggregated. The more homogeneous the sub-problem, the more likely it is that an appropriate countermeasure can be developed that will be effective in reducing that sub-problem; however, in terms of cost-effectiveness, the sub-problem must be sufficiently large for the cost of the countermeasure to be distributed amongst sub-problem members to allow benefits of the countermeasure to, at least, match its costs (Cameron, 1990).

Countermeasures are also more likely to be cost-effective if they target a sub-problem which has a higher than average risk of crash involvement, or of severe injury when involved (Cameron, 1990). The lack of comparable exposure data to determine crash or severity risk of sub-problems compared with average risks, however, means that 'high' risk sub-problems cannot be identified directly in this study.

Information derived from analysis of mass crash data is inherently descriptive in nature; that is, it does not provide information regarding the causal mechanisms or factors leading to a crash occurring. Road user 'errors' or factors causally related to the behaviour and context identified in a crash may only be inferred.

To be successful, a countermeasure must either:

- control and decrease the opportunity for the occurrence of behaviour related to crash problem types via external impositions, or

- 'correct' the causes and behavioural problem related to the critical actions leading to the crash.

Although the former approach has been applied successfully to other road safety problems, it has not led to significant gains in the young driver area. This is because the over-involvement of young drivers in crashes is **not** limited to a small number of crash types (where each could be addressed by a specific strategy), but is a more general phenomenon (Drummond & Triggs, 1991).

In the case of young driver safety, the latter approach is more likely to lead to more **efficient** countermeasures (those which provide greater overlap between a behavioural problem and a countermeasure). However, this can only be achieved by obtaining a better understanding of the behavioural problem (a product of the interaction between performance and motivational factors). A better understanding of the driving process, skilled performance and motivational factors is the first step to achieving this. A description of the behavioural problem may lead to effective countermeasures, but these will be generally less efficient.

Notwithstanding the limitations of mass crash data analysis outlined above, the identification of sub-problems by their relative incidence within the population of young driver crashes is an important criterion for selecting targets for cost-beneficial countermeasures and understanding/interpreting other young driver performance findings.

2 FORS FATALITY FILE (1988) - NSW - BIVARIATE ANALYSES

2.1 INTRODUCTION

Data was obtained from the FORS Fatality File (1988) of fatality crashes in New South Wales for 1988. Prior to conducting bivariate analyses (age by variable of interest), the data was modified as follows:

- As the focus of primary interest was young *car* drivers, a driver-based file consisting of car and car derivative drivers was created. Included were drivers of cars (sedans and tourers), station wagons, panel vans and utilities.

- Age of drivers was grouped as follows: 0-16, 17 to 25 (17 being the minimum licensing age in New South Wales), 26 to 40, 41-55 and 56-98 years. The benefit of this grouping is that there are only four age group categories which facilitates presentation and discussion of results. The term 'young drivers' refers to 17-25 year old drivers only.

- All 'not known' cases (eg. not known age group, not known day of week, etc) were collapsed with other missing cases. The proportion of not known or missing data generally formed only 3-4% of the total sample.

- Reporting of all categories within some variables (eg. Definition for Classifying Accidents) would have been unwieldy and often unnecessary due to low frequency counts for certain categories. The general practice has been to present categories with a reasonable number of cases and collapse all others. A guide to how variables were collapsed appears in Appendix 1.

2.2 TABLES - BIVARIATE ANALYSES

The tables on the following pages present frequencies for each variable of interest distributed by age group. Consistent with the data presented in the first report, the tables have been grouped as follows (page numbers have been included here for the convenience of the reader):

FORS FATAL FILE (1988) - NSW*
PERSON RESPONSIBLE FOR CRASH BY AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
This driver responsible	4	225	144	65	98	536
This driver not responsible		53	78	52	39	222
Pedestrian responsible		35	32	17	6	90
More than one person responsible	1	8	4	4	2	19
No fault	1	2	4	2	2	11
Unit/person in prior event only		3	2	1		6
	6	326	264	141	147	884

Missing cases = 34

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
NUMBER OF VEHICLES INVOLVED BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
1	1	162	112	43	40	358
2	5	157	138	92	102	494
3		9	13	8	6	36
4			3		1	4
	6	328	266	143	149	892

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
NUMBER OF PERSONS IN CRASH BY DRIVER AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
1		38	35	10	20	103
2		113	71	52	54	290
3	4	65	49	22	27	167
4		50	42	24	24	140
5	2	26	29	16	8	81
6		17	13	7	9	46
7 or more		16	26	12	7	61
	6	325	265	143	149	888

Missing cases = 30

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
NUMBER OF PERSONS INJURED IN CRASH BY DRIVER AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
0	1	140	118	59	57	375
1	2	90	59	32	50	233
2	2	42	33	20	19	116
3	1	28	18	14	8	69
4		11	24	6	3	44
5		8	6	4	6	24
6 or more		9	8	7	6	30
	6	328	266	142	149	891

Missing cases = 27

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
NUMBER OF PERSONS INJURED IN THIS VEHICLE BY DRIVER AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
0	1	176	158	74	83	492
1	2	92	59	40	46	239
2	2	37	23	13	13	88
3	1	12	14	7	4	38
4 or more	0	11	12	9	3	35
	6	328	266	143	149	892

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
NUMBER OF FATALITIES IN CRASH BY DRIVER AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
1	6	289	222	127	132	776
2		31	38	11	14	94
3 or more		8	6	5	3	22
	6	328	266	143	149	892

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
NUMBER OF FATALITIES IN THIS VEHICLE BY DRIVER AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
0	3	136	123	70	43	375
1	3	168	124	64	93	452
2 or more		24	19	9	13	65
	6	328	266	143	149	892

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
DAY OF WEEK BY AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
Monday	1	33	36	15	22	107
Tuesday		31	36	19	23	109
Wednesday		30	22	24	20	96
Thursday		39	32	20	19	110
Friday	2	53	41	22	26	144
Saturday	1	73	54	24	24	176
Sunday	2	69	45	19	15	150
	6	328	266	143	149	892

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
WEEKDAY VERSUS WEEKEND BY AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
Weekday	3	186	167	100	110	566
Weekend	3	142	99	43	39	326
	6	328	266	143	149	892

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
TIME PERIOD BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
12 am - 6 am	1	89	47	10	10	157
6 am - 12 pm	2	55	58	45	43	203
12 pm - 6 pm	1	79	89	54	67	290
6 pm - 12 am	2	105	72	34	29	242
	6	328	266	143	149	892

Missing cases =26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
TIME PERIOD BY WEEKDAY/WEEKEND BY AGE GROUP N = 918

WEEKDAY

	0-16	17-25	26-40	41-55	56-98	Total
12 am - 6 am		35	22	3	5	65
6 am - 12 pm	2	45	42	35	31	155
12 pm - 6 pm	1	45	52	38	56	192
6 pm - 12 am		61	51	24	18	154
	3	186	167	100	110	566

WEEKEND

	0-16	17-25	26-40	41-55	56-98	Total
12 am - 6 am	1	54	25	7	5	92
6 am - 12 pm		10	16	10	12	48
12 pm - 6 pm		34	37	16	11	98
6 pm - 12 am	2	44	21	10	11	88
	3	142	99	43	39	326

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
CITY/RURAL BOUNDARIES BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
Capital city	3	161	116	62	50	392
Provincial urban		54	37	20	33	144
General rural	3	112	112	61	66	354
Remote rural			1			1
Remote town		1				1
	6	328	266	143	149	892

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
ROAD TYPE BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
National highway	1	11	9	12	13	46
State highway		26	30	30	28	114
Other rural road	1	27	39	15	27	109
Major arterial city road	1	23	22	18	12	76
Other urban		47	47	24	30	148
	3	134	147	99	110	493

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
LOCATION BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
Mid-block	5	249	221	106	89	670
Within intersection	1	53	30	27	49	160
Related to intersection		25	15	9	10	59
	6	327	266	142	148	889

Missing cases = 29

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
INTERSECTION TYPE BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
X-intersection	1	32	21	18	29	101
Y-intersection		3	1	1	3	8
T-intersection		41	22	17	28	108
Multi-intersection		2	1			3
	1	78	45	36	60	220

Missing cases = 698**

* Frequencies comprise drivers of cars and car derivatives only

** It appears that coders have coded non-intersection accidents as missing rather than the categroy of 'not applicable' as specified in the Documentation of File Structure. Thus the high number of missing cases.

FORS FATAL FILE (1988) - NSW*
ROAD CONFIGURATION BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
One way		3	5	2	3	13
Two way undivided	5	201	189	94	73	562
Divided road (dual carriageway)		42	23	7	11	83
Single carriageway - freeway		1		1		2
Dual carriageway - freeway		3	3	3	2	11
Other			1			1
	5	250	221	107	89	672

Missing cases = 246

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
SPEED LIMIT BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
40		1				1
60	2	188	124	64	64	442
65				1		1
80		26	27	11	15	79
100	4	110	111	64	69	358
110		1	1	3	1	6
	6	326	263	143	149	887

Missing cases = 31

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
LAND USE BY AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
Residential	1	102	61	39	36	239
Part residential/part commercial		42	29	22	14	107
Non-residential-commercial/industrial		13	18	1	3	35
Urban parkland		8	3	2	1	14
Urban parkland-highway/freeway		5	2	6	4	17
Rural	4	121	125	63	76	389
	5	291	238	133	134	801

Missing cases = 117

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
HORIZONTAL ROAD ALIGNMENT BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
Straight	5	208	158	91	102	564
Curved	1	118	108	52	47	326
	6	326	266	143	149	890

Missing cases = 28

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
VERTICAL ROAD ALIGNMENT BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
Level	3	217	189	93	101	603
Crest of hill		16	14	10	12	52
Bottom of hill		4	3	2		9
Slope - gentle	3	45	29	19	22	118
Slope - steep		4	3	3	2	12
Slope - undefined		41	27	16	12	96
	6	327	265	143	149	890

Missing cases = 28

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
ROAD SURFACE CONDITION BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
Sealed/paved	5	320	256	138	143	862
Unsealed	1	8	10	5	6	30
	6	328	266	143	149	892

Missing cases = 26

*• Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
TYPE OF TRAFFIC CONTROLS PRESENT BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
None present mid-block	5	223	195	92	84	599
None present at intersection		35	19	11	18	83
Stop sign		7	6	4	15	32
Give way sign	1	12	6	8	15	42
Double unbroken lines		23	20	11	6	60
Flashing signals		1				1
Traffic control signals - car only		7	8	9	5	29
Traffic control signals with walk/don't walk		8	7	2	2	19
Give way to right sign					1	1
Railway crossing lights					1	1
Pedestrian crossing with lights		2		2		4
Pedestrian crossing (no lights)		5	3	1		9
Police officer/road patrol/railway worker		1			1	2
Warning signs		2	1	3	1	7
	6	326	265	143	149	889

Missing cases = 29

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
ELECTRONIC TRAFFIC CONTROLS FUNCTIONING BY AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
On, fully functioning		19	15	13	8	55
No electronic traffic controls	6	308	251	130	141	836
	6	327	266	143	149	891

Missing cases = 27

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
SEX OF DRIVER BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
Male	5	257	201	108	121	692
Female	1	71	65	35	27	199
	6	328	266	143	148	891

Missing cases = 27

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
BAC GROUP OF DRIVER BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
0 - <.02	4	197	162	108	111	582
<.05		7	5	1	1	14
.05 - .079		13	1		2	16
.08 - .12		15	8	2	3	28
.12 - .15		14	10	3	2	29
>.15		45	45	10	6	106
	4	291	231	124	125	775

Missing cases = 143

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
RESTRAINT USE BY DRIVER BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
Restraint worn	5	245	213	124	125	712
Restraint not worn	1	51	31	14	15	112
	6	296	244	138	140	824

Missing cases = 94

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
LICENCE TYPE BY AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
Standard	1	233	240	127	140	741
Learner's permit	3	2				5
Provisional		51	4	1		56
Disqualified		2	2	1		5
Other		2	2	1	1	6
	4	290	248	130	141	813

Missing cases = 105

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
YEARS DRIVING EXPERIENCE BY AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
Less than 1	3	33	2			38
1	1	40	5			46
2		47	1			48
3		26	2			28
4		24	3			27
5		33	5			38
6 or more		51	189	110	111	461
	4	254	207	110	111	686

Missing cases = 232

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
STATE OF LICENCE ISSUE BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
New South Wales	4	267	234	119	129	753
Victoria		12	3	5	5	25
Queensland		7	6	6	5	24
South Australia		2	1	2	2	7
Western Australia		1	3			4
Tasmania		1			1	2
Australian Capital Territory		3	3	3		9
Overseas	1	3	2			6
Other (eg. surrendered licence)		2				2
Never held licence	1	19	9	1	4	34
	6	317	261	136	146	866

Missing cases = 52

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
NUMBER OF OCCUPANTS BY DRIVER AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
1		149	133	75	77	434
2	4	97	59	30	45	235
3	1	40	34	18	17	110
4		23	26	11	8	68
5 or more	1	18	14	9	2	44
	6	327	266	143	149	891

Missing cases = 27

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
SPEED CATEGORY BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
Stationary			8	3	5	16
Reversing			1			1
Not over/unlikely over speed limit	5	177	170	116	116	584
Possibly over speed limit		41	37	5	9	92
Definitely over speed limit	1	72	27	1	4	105
Within legal limit, but excessive for road conditions		5	3	1	1	10
	6	295	246	126	135	808

Missing cases = 110

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
SPEED OF VEHICLE AT TIME OF CRASH BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
0 - 20	2	13	15	9	19	58
21 - 40		20	14	10	14	58
41 - 60		62	50	29	17	158
61 - 80	1	40	31	11	15	98
81 - 100	2	29	35	24	10	100
Over 101	1	19	4		1	25
	6	183	149	83	76	497

Missing cases = 421

* *Frequencies comprise drivers of cars and car derivatives only*

FORS FATAL FILE (1988) - NSW*
YEAR OF VEHICLE MANUFACTURE BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
1986-1988		29	56	27	25	137
1981-1985	2	86	83	53	53	277
1976-1980	3	94	67	34	34	232
1971-1975		83	38	19	20	160
1970 and earlier	1	25	12	4	10	52
	6	317	256	137	142	858

Missing cases = 60

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
NATURAL LIGHT BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
Day	3	130	140	96	107	476
Night	2	185	109	41	29	366
Dawn		4	1	1	3	9
Dusk	1	9	14	5	9	38
	6	328	264	143	148	889

Missing cases = 29

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
STREET LIGHT CONDITIONS BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
Operating (visibility good)		32	18	10	5	65
Poor/inadequate (visibility impaired)		14	4	3	1	22
Operating (visibility status not stated)	1	61	36	12	11	121
Not operating (visibility impaired - dark)		10	2	5	5	22
Street lighting doesn't exist (visibility impaired - dark)	2	80	65	17	17	181
Existence unknown		1			1	2
	3	198	125	47	40	413

Missing cases = 505**

* Frequencies comprise drivers of cars and car derivatives only

** It appears that coders have coded daylight accidents as missing rather than the category of 'not applicable' as specified in the Documentation of File Structure. Thus the high number of missing cases.

FORS FATAL FILE (1988) - NSW*
WEATHER CONDITIONS BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
Fine	6	267	200	107	125	705
Light/moderate rain		46	48	25	18	137
Heavy rain		14	12	7	4	37
Fog		1	4	1		6
Strong winds				1		1
Other (smoke, dust)				1		
	6	328	264	142	147	887

Missing cases = 31

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
PRIMARY ACCIDENT CLASS BY AGE GROUP N=918

	0-16	17-25	26-40	41-55	56-98	Total
Motor vehicles - collisions						
- other motor vehicle	4	154	140	93	104	495
- other road vehicle		4	2	3	3	12
- train			1		1	2
- pedestrian		63	48	21	8	140
- object		92	61	19	29	201
- animal		1		1		2
Motor vehicles - non-collisions						
- overturn on carriageway		5	1	1	1	8
- overturn off carriageway	1	8	11	3	1	24
- run off road				1		1
- falling from	1	1				2
- other				1	1	2
Non-motor vehicles - collisons						
- other road vehicle			2		1	3
	6	328	266	143	149	892

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
DCA EVENT BY AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
Pedestrian on foot or in toy/pram						
- near side		25	11	7	3	46
- far side		20	22	7	4	53
- other		18	15	7	1	41
Vehicles from adjacent directions (intersection only)						
- cross traffic	1	17	12	15	18	63
- right far		1	1		2	4
- right near		5	4	3	14	26
Vehicles from opposing directions						
- head on (not overtaking)	1	90	95	50	46	282
- right thru		11	8	6	11	36
Vehicles from same direction						
- rear end	1	5	4	7	6	23
- other		5	5	3	2	15
Manoeuvring		5	6	1	5	17
Overtaking						
- head on		10	4	6	2	22
- other		6	3	2	2	13
On path	6	5	6			17
Off path, on straight						
- left off carriageway into object/parked vehicle	1	23	10	5	10	49
- right off carriageway into object/parked vehicle		21	9	4	3	37
- other	1	5	7	1	1	15
Off path, on curve or turning						
- off carriageway, left on right bend into object/parked vehicle		16	13	1	7	37
- off carriageway, right on left bend into object/parked vehicle		15	8	1	3	27
- other		21	19	8	6	54
Passengers/miscellaneous	1	3	5	3	3	15
	12	327	267	137	149	892

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
MAJOR FACTOR BY AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
Driver						
- blackout					2	2
- illness			1	2	4	7
- intoxication		78	70	15	14	177
- other drug		2	4	1	2	9
- alcohol + drug		1	2			3
- asleep or fatigued		16	7	5	8	36
Passenger - high risk behaviour	1	1				2
Attention distracted	1	9	1		2	13
Error manipulating controls	1	5	5	3	4	18
Too close to other vehicle		1	1			2
Inadequate supervision (learner)	2	7	2	2	1	14
Excessive speed	1	43	25	10	6	85
Skylarking/drag racing		1				1
Dangerous manoeuvre		5	2	1	5	13
Failure to observe person or vehicle		20	17	17	20	74
Vision obscured		6	12	8	2	28
Road surface problem		5	17	17	6	45
Pedestrian or cyclist at fault		40	31	13	9	93
Failure to observe traffic control (car/m/cycle)		20	15	15	29	79
Failure to observe traffic control (cyclist)		1				1
Pedestrian failed to observe don't walk sign		2				2
Critical vehicle defect		4	4	6		14
Other		35	40	16	23	114
	6	302	256	131	137	832

Missing cases = 86

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
ORIGIN OF TRIP BY AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
Home		25	16	11	17	69
Work		16	14	9	6	45
Recreation	2	74	43	19	9	147
Private business		1	5	1	1	8
Other		1	1			2
	2	117	79	40	33	271

Missing cases = 647

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
DESTINATION OF TRIP BY AGE GROUP

N=918

	0-16	17-25	26-40	41-55	56-98	Total
Home		49	40	20	15	124
Work		13	13	4	8	38
Recreation	2	34	15	9	9	69
Private business		4	5	4	4	17
Other		1				1
	2	101	73	37	36	249

Missing cases = 669

* Frequencies comprise drivers of cars and car derivatives only

3 FORS FATALITY FILE (1988) - NSW - DAY/NIGHT COMPARISONS

3.1 INTRODUCTION

Bivariate analyses which showed drivers who were involved in fatality crashes in New South Wales during 1988 split by age group appeared in the previous chapter. There are numerous ways in which the data can be analysed and an important consideration is any age group differences arising as a result of the time of day, given the increased risk of night-time driving relative to driving during the day. The current chapter re-examines the casualty crash data with the following modifications:

- 'day' was operationally defined as the period between 6.00 am and 5.59 pm while 'night' was defined as the period between 6.00 pm and 5.59 am.

- All 'not known' cases (eg. not known age group, not known day of week, etc) were collapsed with other missing cases. The proportion of not known or missing data generally formed only 3-4% of the total sample.

3.2 INTERPRETATION OF TABLES

The day/night comparisons revealed that young drivers (drivers aged between 17 and 25 years) formed 27% (n=134) of all drivers involved in fatal daytime crashes and 49% (n=194) of all drivers involved in fatal night-time crashes.

What information can be gleaned from these tables? As an example, the variable listing responsibility for the crash showed that young drivers made up 30% of all drivers responsible for fatal daytime crashes and 54% of drivers responsible for fatal night-time crashes. The total number of drivers responsible for daytime and night-time crashes was similar (269 and 267 respectively). Young drivers, however, showed an increase in numbers from day to night (80 and 145 respectively). Hence, in absolute terms, there was about a 75% increase in the number of young drivers who were responsible for fatal night-time crashes.

Similar proportions to the above were observed for young drivers involved in daytime (26%) and night-time (44%) crashes during the working week. The actual number of drivers involved in such daytime crashes (n=347), however, was far greater than the number of drivers involved in similar night-time crashes (n=219). Care must be taken, therefore, in interpreting proportions resulting from different sample sizes because an apparently large proportional increase may actually address the same number (or fewer) crashes.

Ratio comparisons between drivers is another way of interpreting the results. The number of young male drivers involved in daytime fatal crashes was 96 compared to 38 young female drivers. This gives a ratio of 2.5:1. Where night-time crashes were concerned, the number of young male drivers involved in fatal crashes was 161 compared to 33 young female drivers: a ratio of 5:1. This difference between daytime and night-time ratios between male and female drivers clearly indicates that the probability of young male drivers being involved in fatal crashes relative to young female drivers is greater at night than during the day.

There are a few important points to keep in mind when interpretation of these results are made:

- It is necessary to note the sample size or the number of cases present when making comparisons between pie charts. For example, when making day/night comparisons, in most cases, the sample size of drivers involved in night-time crashes is less than those of drivers involved in daytime crashes, despite the higher proportion of young drivers involved in night-time crashes.

- The number of years that make up each age group differ. For example, young drivers (17-25 years) covers eight years while the 26-40 age group covers 15 years. Thus, similar proportions between these age groups indicate an over-involvement of young drivers of almost two per year of age.

- The increase in young driver proportions involved in night-time crashes may be a result of any of the following reasons:

    - young drivers allocate a higher proportion of their total driving to night-time driving, and/or young drivers having a greater propensity to engage in risky driving behaviour at night.

    - older drivers allocate a lower proportion of their total driving to night-time driving, and/or older drivers tend to engage in safe driving behaviour at night.

Hence, the over-involvement of one age group may be a result of a relative under-involvement of other age groups.

3.3 TABLES - DAY/NIGHT COMPARISONS

Variables and page numbers are listed here for the convenience of the reader:

FORS FATAL FILE (1988) - NSW*
PERSON RESPONSIBLE FOR CRASH BY AGE GROUP

N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
This driver responsible	2	80	71	43	73	269
This driver not responsible		31	45	41	30	147
Pedestrian responsible		13	20	8	4	45
More than one person responsible		6	4	3	1	14
No fault	1	2	4	2	1	10
Unit/person in prior event only		1	1	1		3
	3	133	145	98	109	488

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
This driver responsible	2	145	73	22	25	267
This driver not responsible		22	33	11	9	75
Pedestrian responsible		22	12	9	2	4
More than one person responsible	1	2		1	1	5
No fault					1	1
Unit/person in prior event only		2	1			3
	3	193	119	43	38	396

Missing cases = 34

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
NUMBER OF VEHICLES INVOLVED BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
1	1	57	48	25	23	154
2	2	72	89	69	81	313
3		5	7	5	5	22
4			3		1	4
	3	134	147	99	110	493

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
1		105	64	18	17	204
2	3	85	49	23	21	181
3		4	6	3	1	14
4						
	3	194	119	44	39	399

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
NUMBER OF PERSONS IN CRASH BY DRIVER AGE GROUP

N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
1		5	8	6	11	30
2		54	40	34	39	167
3	2	29	26	15	24	96
4		19	23	18	19	79
5	1	9	16	11	5	42
6		9	13	5	6	33
7 or more		9	20	10	6	45
	3	134	146	99	110	492

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
1		33	27	4	9	73
2		59	31	18	15	123
3	2	36	23	7	3	71
4		31	19	6	5	61
5	1	17	13	5	3	39
6		8		2	3	13
7 or more		7	6	2	1	16
	3	191	119	44	39	396

Missing cases = 30

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
NUMBER OF PERSONS INJURED IN CRASH BY DRIVER AGE GROUP

N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
0		54	64	37	40	195
1	1	34	29	26	38	128
2	1	22	18	12	14	67
3	1	8	7	9	7	32
4		7	18	5	3	33
5		5	5	3	3	16
6 or more		4	6	6	5	21
	3	134	147	98	110	492

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
0	1	86	54	22	17	180
1	1	56	30	6	12	105
2	1	20	15	8	5	49
3		20	11	5	1	37
4		4	6	1		11
5		3	1	1	3	8
6 or more		5	2	1	1	9
	3	194	119	44	39	399

Missing cases = 27

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
NUMBER OF PERSONS INJURED IN THIS VEHICLE BY DRIVER AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
0		70	87	48	61	266
1	1	34	32	29	36	132
2	1	17	11	9	9	47
3	1	6	9	6	2	24
4 or more		7	8	7	2	24
	3	134	147	99	110	493

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
0	1	106	71	26	22	226
1	1	58	27	11	10	107
2	1	20	12	4	4	41
3		6	5	1	2	14
4 or more		4	4	2	1	11
	3	194	119	44	39	399

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
NUMBER OF FATALITIES IN CRASH BY DRIVER AGE GROUP

N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
1	3	126	126	92	99	446
2		8	18	4	10	40
3 or more			3	3	1	7
	3	134	147	99	110	493

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
1	3	163	96	35	33	330
2		23	20	7	4	54
3 or more		8	3	2	2	15
	3	194	119	44	39	399

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
NUMBER OF FATALITIES IN THIS VEHICLE BY DRIVER AGE GROUP

N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
0	1	66	77	52	36	232
1	2	63	60	44	66	235
2		5	7	2	7	21
3			2		1	3
4						0
5			1	1		2
	3	134	147	99	110	493

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
0	2	70	46	18	7	143
1	1	105	64	20	27	217
2		14	8	4	4	30
3		4	1	2	1	8
4		1				1
5						0
	3	194	119	44	39	399

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
DAY OF WEEK BY AGE GROUP

N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Monday	1	16	16	13	19	65
Tuesday		15	24	14	18	71
Wednesday		18	17	18	16	69
Thursday		18	16	11	16	61
Friday	2	23	21	17	18	81
Saturday		21	33	14	14	82
Sunday		23	20	12	9	64
	3	134	147	99	110	493

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Monday		17	20	2	3	42
Tuesday		16	12	5	5	38
Wednesday		12	5	6	4	27
Thursday		21	16	9	3	49
Friday		30	20	5	8	63
Saturday	1	52	21	10	10	94
Sunday	2	46	25	7	6	86
	3	194	119	44	39	399

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
WEEKDAY VS WEEKEND BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Weekday	3	90	94	73	87	347
Weekend		44	53	26	23	146
	3	134	147	99	110	493

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Weekday		96	73	27	23	219
Weekend	3	98	46	17	16	180
	3	194	119	44	39	399

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
TIME BY WEEKDAY/WEEKEND BY AGE GROUP N=918

		DAY					
		0-16	17-25	26-40	41-55	56-98	Total
Weekday:	6 am - 12 pm	2	45	42	35	31	155
	12 pm - 6 pm	1	45	52	38	56	192
Weekend:	6 am - 12 pm		10	16	10	12	48
	12 pm - 6 pm		34	37	16	11	98
		3	134	147	99	110	493

		NIGHT					
		0-16	17-25	26-40	41-55	56-98	Total
Weekday:	6 pm - 12 am		61	51	24	18	154
	12 am - 6 am		35	22	3	5	65
Weekend:	6 pm - 12 am	2	44	21	10	11	88
	12 am - 6 am	1	54	25	7	5	92
		3	194	119	44	39	399

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
CITY/RURAL BOUNDARIES BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Capital city	1	67	65	39	36	208
Provincial urban		21	18	13	26	78
General rural	2	46	63	47	48	206
Remote rural			1			1
Remote town						0
	3	134	147	99	110	493

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Capital city	2	94	51	23	14	184
Provincial urban		33	19	7	7	66
General rural	1	66	49	14	18	148
Remote rural						0
Remote town		1				1
	3	194	119	44	39	399

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
ROAD TYPE BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
National highway	1	11	9	12	13	46
State highway		26	30	30	28	114
Other rural road	1	27	39	15	27	109
Major arterial city road	1	23	22	18	12	76
Other urban		47	47	24	30	148
	3	134	147	99	110	493

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
National highway	1	16	5	4	7	33
State highway		28	15	7	6	56
Other rural road		47	46	12	9	114
Major arterial city road		40	17	11	7	75
Other urban	2	63	36	10	10	121
	3	194	119	44	39	399

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
LOCATION BY AGE GROUP N=918

	DAY					
	0-16	17-25	26-40	41-55	56-98	Total
Mid-block	3	102	113	72	61	351
Within intersection		24	25	22	42	113
Related to intersection		8	9	4	7	28
	3	134	147	98	110	492

	NIGHT					
	0-16	17-25	26-40	41-55	56-98	Total
Mid-block	2	147	108	34	28	7
Within intersection	1	29	5	5	7	47
Related to intersection		17	6	5	3	2
	3	193	119	44	38	397

Missing cases = 29

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
INTERSECTION TYPE BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
X-intersection		18	16	15	25	74
Y-intersection			1	1	3	5
T-intersection		14	16	10	21	61
Multi-intersection			1			1
		32	34	26	49	141

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
X-intersection	1	14	5	3	4	27
Y-intersection		3				3
T-intersection		27	6	7	7	47
Multi-intersection		2				2
	1	46	11	10	11	79

Missing cases = 698**

* Frequencies comprise drivers of cars and car derivatives only
** It appears that coders have coded non-intersection accidents as missing rather than the categroy of 'not applicable' as specified in the Documentation of File Structure. Thus the high number of missing cases.

FORS FATAL FILE (1988) - NSW*
ROAD CONFIGURATION BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
One way		3	3	1	1	8
Two way undivided	3	76	96	64	53	292
Divided road (dual carriageway)		20	10	5	7	42
Single carriageway - freeway		1		1		2
Dual carriageway - freeway		2	3	2		7
Other			1			1
	3	102	113	73	61	352

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
One way			2	1	2	5
Two way undivided	2	125	93	30	20	270
Divided road (dual carriageway)		22	13	2	4	41
Single carriageway - freeway						0
Dual carriageway - freeway		1		1	2	4
Other						0
	2	148	108	34	28	320

Missing cases = 246

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
SPEED LIMIT BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
60		76	64	41	47	228
65				1		1
80		10	17	9	9	45
100	3	46	63	46	54	212
110		1	1	2		4
	3	133	145	99	110	490

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
60		1				1
65	2	112	60	23	17	214
80		16	10	2	6	34
100	1	64	48	18	15	146
110				1	1	2
	3	193	118	44	39	397

Missing cases = 31

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
LAND USE BY AGE GROUP

N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Residential		40	32	25	27	124
Part residential/part commercial		17	11	12	10	50
Non-residential-commercial/industrial		6	11	1	3	21
Urban parkland		3	3	1	1	8
Urban parkland-highway/freeway		2	1	5	1	9
Rural	3	47	71	47	57	225
	3	115	129	91	99	437

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Residential	1	62	29	14	9	115
Part residential/part commercial		25	18	10	4	57
Non-residential-commercial/industrial		7	7			14
Urban parkland		5		1		6
Urban parkland-highway/freeway		3	1	1	3	8
Rural	1	74	54	16	19	164
	2	176	109	42	35	364

Missing cases = 117

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
HORIZONTAL ROAD ALIGNMENT BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Straight	2	93	95	63	82	335
Curved	1	41	52	36	28	158
	3	134	147	99	110	493

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Straight	3	115	63	28	20	229
Curved		77	56	16	19	168
	3	192	119	44	39	397

Missing cases = 28

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
VERTICAL ROAD ALIGNMENT BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Level	2	96	100	61	76	335
Crest of hill		6	8	8	8	30
Bottom of hill		2	1	2		5
Slope - gentle	1	13	19	15	15	63
Slope - steep		3	1	2	2	8
Slope - undefined		13	17	11	9	50
	3	133	146	99	110	491

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Level	1	121	89	32	25	268
Crest of hill		10	6	2	4	22
Bottom of hill		2	2			4
Slope - gentle	2	32	10	4	7	55
Slope - steep		1	2	1		4
Slope - undefined		28	10	5	3	46
	3	194	119	44	39	399

Missing cases = 28

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
ROAD SURFACE CONDITION BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Sealed/paved	2	131	143	96	106	478
Unsealed	1	3	4	3	4	15
	3	134	147	99	110	493

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Sealed/paved	3	189	113	42	37	384
Unsealed		5	6	2	2	15
	3	194	119	44	39	399

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
TYPE OF TRAFFIC CONTROLS PRESENT BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Non present mid-block	3	90	101	61	56	311
None present at intersection		8	15	9	11	43
Stop sign		4	6	4	14	28
Give way sign		9	5	6	14	34
Double unbroken lines		9	8	8	6	31
Flashing signals						0
Traffic control signals - car only		4	7	7	3	21
Traffic control signals with walk/don't walk		3	2		2	7
Give way to right sign					1	1
Railway crossing lights					1	1
Pedestrian crossing with lights		1		1		2
Pedestrian crossing (no lights)		4	2			6
Police officer/road patrol/railway worker		1			1	2
Warning signs		1		3	1	5
	3	134	146	99	110	492

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Non present mid-block	2	133	94	31	28	288
None present at intersection		27	4	2	7	40
Stop sign		3			1	4
Give way sign	1	3	1	2	1	8
Double unbroken lines		14	12	3		29
Flashing signals		1				1
Traffic control signals - car only		3	1	2	2	8
Traffic control signals with walk/don't walk		5	5	2		12
Give way to right sign						0
Railway crossing lights						0
Pedestrian crossing with lights		1		1		2
Pedestrian crossing (no lights)		1	1	1		3
Police officer/road patrol/railway worker						0
Warning signs		1	1			2
	3	192	119	44	39	397

Missing cases = 29

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
ELECTRONIC TRAFFIC CONTROLS FUNCTIONING BY AGE GROUP

N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
On, fully functioning		8	9	8	6	31
No electronic traffic controls	3	126	138	91	104	462
	3	134	147	99	110	493

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
On, fully functioning		11	6	5	2	24
No electronic traffic controls	3	182	113	39	37	374
	3	193	119	44	39	398

Missing cases = 27

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
SEX OF DRIVER BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Male	3	96	100	76	86	361
Female		38	47	23	23	131
	3	134	147	99	109	492

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Male	2	161	101	32	35	331
Female	1	33	18	12	4	68
	3	194	119	44	39	399

Missing cases = 27

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
BAC GROUP OF DRIVER BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
0 - <.02	3	106	110	82	87	388
<.05			3			3
.05 - .079		1			2	3
.08 - .12		2	1	1	2	6
.12 - .15		1	1	1		3
>.15		5	7	1		13
	3	115	122	85	91	416

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
0 - <.02	1	91	52	26	24	194
<.05		7	2	1	1	11
.05 - .079		12	1			13
.08 - .12		13	7	1	1	22
.12 - .15		13	9	2	2	26
>.15		40	38	9	6	93
	1	176	109	39	34	359

Missing cases = 143

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
RESTRAINT USE BY DRIVER BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Restraint worn	2	108	121	91	93	415
Restraint not worn	1	14	12	6	10	43
	3	122	133	97	103	458

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Restraint worn	3	137	92	33	32	297
Restraint not worn		37	19	8	5	69
	3	174	111	41	37	366

Missing cases = 94

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
LICENCE TYPE BY AGE GROUP

N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Standard		98	132	90	102	422
Learner's permit	2					2
Provisional		23	2	1		26
Disqualified		1				1
Other			1	1	1	3
	2	122	135	92	103	454

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Standard	1	135	108	37	38	319
Learner's permit	1	2				3
Provisional		28	2			30
Disqualified		1	2	1		4
Other		2	1			3
	2	168	113	38	38	359

Missing cases = 105

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
YEARS DRIVING EXPERIENCE BY AGE GROUP

N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Less than 1	2	9	1			12
1		19	3			22
2		17	1			18
3		10	2			12
4		14	1			15
5		15	3			18
6 or more		22	103	77	84	286
	2	106	114	77	84	383

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Less than 1	1	24	1			26
1	1	21	2			24
2		30				30
3		16				16
4		10	2			12
5		18	2			20
6 or more	1	29	86	33	27	176
	3	148	93	33	27	304

Missing cases = 231

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
STATE OF LICENCE ISSUE BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
New South Wales	2	107	127	82	92	410
Victoria		5	2	2	5	14
Queensland		6	4	6	4	20
South Australia		2	1	2	2	7
Western Australia			2			2
Tasmania		1			1	2
Australian Capital Territory		1	1	2		4
Overseas		2	1			3
Other (eg. surrendered licence)						0
Never held licence	1	6	5	1	3	16
	3	130	143	95	107	478

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
New South Wales	2	160	107	37	37	343
Victoria		7	1	3		11
Queensland		1	2		1	4
South Australia						0
Western Australia		1	1			2
Tasmania						0
Australian Capital Territory		2	2	1		5
Overseas	1	1	1			3
Other (eg. surrendered licence)		2				2
Never held licence		13	4		1	18
	3	187	118	41	39	388

Missing cases = 52

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
NUMBER OF OCCUPANTS BY AGE GROUP

N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
1		65	68	48	58	239
2	2	34	31	26	33	126
3		17	18	11	14	60
4		9	19	7	4	39
5 or more	1	9	11	7	1	29
	3	134	147	99	110	493

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
1		84	65	27	19	195
2	2	63	28	4	12	109
3	1	23	16	7	3	50
4		14	7	4	4	29
5 or more		9	3	2	1	15
	3	193	119	44	39	398

Missing cases = 27

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
SPEED CATEGORY BY AGE GROUP N=918

	DAY					
	0-16	17-25	26-40	41-55	56-98	Total
Stationary			6	2	2	10
Reversing			1			1
Not over/unlikely over speed limit	2	92	106	82	91	373
Possibly over speed limit		12	11	2	5	30
Definitely over speed limit	1	16	11	1	3	32
Within legal limit, but excessive for road conditions		2	2	1		5
	3	122	137	88	101	451

	NIGHT					
	0-16	17-25	26-40	41-55	56-98	Total
Stationary			2	1	3	6
Reversing						0
Not over/unlikely over speed limit	3	85	64	34	25	211
Possibly over speed limit		29	26	3	4	62
Definitely over speed limit		56	16		1	73
Within legal limit, but excessive for road conditions		3	1		1	5
						0
	3	173	109	38	34	357

Missing cases = 110

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
SPEED OF VEHICLE AT TIME OF CRASH BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
0 - 20		9	12	8	16	45
21 - 40		11	9	4	10	34
41 - 60		28	32	20	15	95
61 - 80	1	19	19	9	10	58
81 - 100	1	13	23	19	9	65
Over 101	1	4	2		1	8
	3	84	97	60	61	305

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
0 - 20	2	4	3	1	3	13
21 - 40		9	5	6	4	24
41 - 60		34	18	9	2	63
61 - 80		21	12	2	5	40
81 - 100	1	16	12	5	1	35
Over 101		15	2			17
	3	99	52	23	15	192

Missing cases = 421

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
YEAR OF VEHICLE MANUFACTURE BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
1986-1988		14	30	21	18	83
1981-1985	1	40	51	37	41	170
1976-1980	1	38	33	24	23	119
1971-1975		29	22	12	15	78
1970 and earlier	1	8	7	3	7	26
	3	129	143	97	104	476

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
1986-1988		15	26	6	7	54
1981-1985	1	46	32	16	12	107
1976-1980	2	56	34	10	11	113
1971-1975		54	16	7	5	82
1970 and earlier		17	5	1	3	26
	3	188	113	40	38	382

Missing cases = 60

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
STREET LIGHT CONDITIONS BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Operating (visibility good)		1	3	1	2	7
Poor/inadequate (visibility impaired)		1				1
Operating (visibility status not stated)		3	4	1	2	10
Not operating (visibility impaired - dark)		3		3	1	7
Street lighting doesn't exist (visibility impaired - dark)	1	4	13	2	7	27
Existence unknown		1			1	2
	1	13	20	7	13	54

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Operating (visibility good)		31	15	9	3	58
Poor/inadequate (visibility impaired)		13	4	3	1	21
Operating (visibility status not stated)	1	58	32	11	9	111
Not operating (visibility impaired - dark)		7	2	2	4	15
Street lighting doesn't exist (visibility impaired - dark)	1	76	52	15	10	154
Existence unknown						0
	2	185	105	40	27	359

Missing cases = 505**

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* Frequencies comprise drivers of cars and car derivatives only

** It appears that coders have coded daylight accidents as missing rather than the category of 'not applicable' as specified in the Documentation of File Structure. Thus the high number of missing cases.

FORS FATAL FILE (1988) - NSW*
WEATHER CONDITIONS BY AGE GROUP N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Fine	3	110	108	74	96	391
Light/moderate rain		17	27	19	11	74
Heavy rain		7	11	5	3	26
Fog			1			1
Strong winds				1		1
Other (smoke, dust)						
	3	134	147	99	110	493

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Fine	3	157	92	33	29	314
Light/moderate rain		29	21	6	7	63
Heavy rain		7	1	2	1	11
Fog		1	3	1		5
Strong winds						0
Other (smoke, dust)				1		1
	3	194	117	43	37	394

Missing cases = 31

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
PRIMARY ACCIDENT CLASS BY AGE GROUP N=918

	DAY					
	0-16	17-25	26-40	41-55	56-98	Total
Motor vehicles - collisions						
- other motor vehicle	2	73	90	69	81	315
- other road vehicle		2	1	2	3	8
- train			1		1	2
- pedestrian		29	29	10	5	73
- object		25	17	15	18	75
- animal				1		1
Motor vehicles - non-collisions						
- overturn on carriageway		3	1		1	5
- overturn off carriageway	1	2	6	1		10
- run off road				1		1
- falling from						0
- other						0
Non-motor vehicles - collisons						
- other road vehicle			2		1	3
	3	134	147	99	110	493

	NIGHT					
	0-16	17-25	26-40	41-55	56-98	Total
Motor vehicles - collisions						
- other motor vehicle	2	81	50	24	23	180
- other road vehicle		2	1	1		4
- train						0
- pedestrian		34	19	11	3	67
- object		67	44	4	11	126
- animal		1				1
Motor vehicles - non-collisions						
- overturn on carriageway		2		1		3
- overturn off carriageway		6	5	2	1	14
- run off road						0
- falling from	1	1				2
- other				1	1	2
Non-motor vehicles - collisons						
- other road vehicle						0
	3	194	119	44	39	399

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
DCA EVENT BY AGE GROUP

N=918

	DAY					
	0-16	17-25	26-40	41-55	56-96	Total
Pedestrian on foot or in toy/pram						
- near side		14	9	3	2	28
- far side		11	13	2	2	28
- other		4	7	5	1	17
Vehicles from adjacent directions (intersection only)						
- cross traffic		9	10	13	18	50
- right far			1		1	2
- right near		3	4	2	13	22
Vehicles from opposing directions						
- head on (not overtaking)	1	39	52	36	33	161
- right thru		6	8	5	7	26
Vehicles from same direction						
- rear end	1	1	3	5	4	14
- other		3	2	3	2	10
Manoeuvring		5	6	1	4	16
Overtaking						
- head on		5	3	3	2	13
- other		3	3	2	2	10
On path		1	1	3		5
Off path, on straight						
- left off carriageway into object/parked vehicle		7	1	3	8	19
- right off carriageway into object/parked vehicle		7	5	4	1	17
- other		1	3	6	1	11
Off path, on curve or turning						
- off carriageway, left on right bend into object/parked vehicle		4	5		4	13
- off carriageway, right on left bend into object/parked vehicle		1	1	1	1	4
- other		6	3	5	3	17
Passengers/miscellaneous		2	4	2	2	10
	2	132	144	104	111	493

FORS FATAL FILE (1988) - NSW*
DCA EVENT BY AGE GROUP

N=918

	NIGHT					
	0-16	17-25	26-40	41-55	56-98	Total
Pedestrian on foot or in toy/pram						
- near side		11	2	4	1	18
- far side		9	9	5	2	25
- other		14	8	2		24
Vehicles from adjacent directions (intersection only)						
- cross traffic	1	8	2	2		13
- right far		1			1	2
- right near		2		1	1	4
Vehicles from opposing directions						
- head on (not overtaking)		51	43	14	13	121
- right thru		5		1	4	10
Vehicles from same direction						
- rear end		4	1	2	2	9
- other		2	3			5
Manoeuvring					1	1
Overtaking						
- head on		5	1	3		9
- other		3				3
On path		5	4	3		12
Off path, on straight						
- left off carriageway into object/parked vehicle	1	16	9	2	2	30
- right off carriageway into object/parked vehicle		14	4		2	20
- other		2	1		1	4
Off path, on curve or turning						
- off carriageway, left on right bend into object/parked vehicle		12	8	1	3	24
- off carriageway, right on left bend into object/parked vehicle		14	7		2	23
- other		15	16	3	3	37
Passengers/miscellaneous	1	1	1	1	1	5
	3	194	119	44	39	399

Missing cases = 26

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
MAJOR FACTOR BY AGE GROUP

N=918

	DAY					
	0-16	17-25	26-40	41-55	56-98	Total
Driver						
- blackout					1	1
- illness				2	4	6
- intoxication		10	13	3	4	30
- other drug		1	3	1	1	6
- alcohol + drug		1				1
- asleep or fatigued		3	2	4	4	13
Passenger - high risk behaviour						0
Attention distracted		5	1		2	8
Error manipulating controls		4	5	2	2	13
Too close to other vehicle						0
Inadequate supervision (learner)	2	1	1	2	1	7
Excessive speed	1	12	11	5	3	32
Skylarking/drag racing		1				1
Dangerous manoeuvre		3	2	1	4	10
Failure to observe person or vehicle		17	17	13	18	65
Vision obscured		4	8	6	1	19
Road surface problem		3	12	13	4	32
Pedestrian or cyclist at fault		16	19	7	7	49
Failure to observe traffic control (car/m/cycle)		11	12	12	24	59
Failure to observe traffic control (cyclist)		1				1
Pedestrian failed to observe don't walk sign						0
Critical vehicle defect		3	4	6		13
Other		23	30	12	19	84
	3	119	140	89	99	450

FORS FATAL FILE (1988) - NSW*
MAJOR FACTOR BY AGE GROUP N=918

	NIGHT					
	0-16	17-25	26-40	41-55	56-98	Total
Driver						
- blackout					1	1
- illness			1			1
- intoxication		68	57	12	10	147
- other drug		1	1		1	3
- alcohol + drug			2			2
- asleep or fatigued		13	5	1	4	23
Passenger - high risk behaviour	1	1				2
Attention distracted	1	4				5
Error manipulating controls	1	1		1	2	5
Too close to other vehicle		1	1			2
Inadequate supervision (learner)		6	1			7
Excessive speed		31	14	5	3	53
Skylarking/drag racing						0
Dangerous manoeuvre		2			1	3
Failure to observe person or vehicle		3		4	2	9
Vision obscured		2	4	2	1	9
Road surface problem		2	5	4	2	13
Pedestrian or cyclist at fault		24	12	6	2	44
Failure to observe traffic control (car/m/cycle)		9	3	3	5	20
Failure to observe traffic control (cyclist)						0
Pedestrian failed to observe don't walk sign		2				2
Critical vehicle defect		1				1
Other		12	10	4	4	30
	3	183	116	42	38	382

Missing cases = 86

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
ORIGIN OF TRIP BY AGE GROUP

N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Home		15	11	11	13	50
Work		6	9	6	6	27
Recreation	1	12	14	11	4	42
Private business		1	5		1	7
Other		1	1			2
	1	35	40	28	24	128

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Home		10	5		4	19
Work		10	5	3		18
Recreation	1	62	29	8	5	105
Private business				1		1
Other						0
	1	82	39	12	9	143

Missing cases = 647

* Frequencies comprise drivers of cars and car derivatives only

FORS FATAL FILE (1988) - NSW*
DESTINATION OF TRIP BY AGE GROUP

N=918

DAY

	0-16	17-25	26-40	41-55	56-98	Total
Home		10	16	8	9	43
Work		9	9	3	7	28
Recreation	1	10	11	9	7	38
Private business		3	4	4	4	15
Other						0
	1	32	40	24	27	124

NIGHT

	0-16	17-25	26-40	41-55	56-98	Total
Home		39	24	12	6	81
Work		4	4	1	1	10
Recreation	1	24	4		2	31
Private business		1	1			2
Other		1				1
	1	69	33	13	9	125

Missing cases = 669

* Frequencies comprise drivers of cars and car derivatives only

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