Federal Office of Road Safety

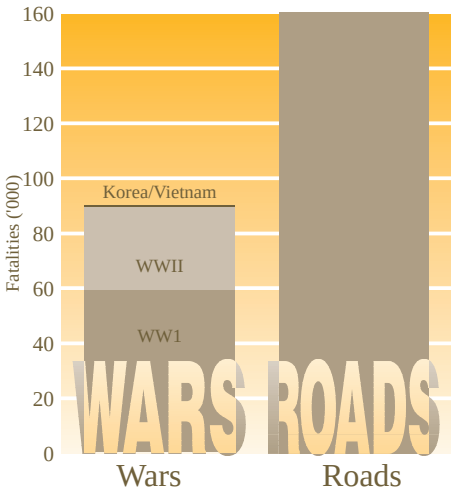
THE HISTORY OF ROAD FATALITIES IN AUSTRALIA

The war on the roads

Road crashes are a major cause of death and injury in Australia, and incur costs estimated to be in excess of $6 billion annually[1]. Table 1 provides a year by year summary of Australian road crash deaths since records commenced in 1925, and gives a comparison to changes in Australian vehicle ownership and population over that period.

Some 160,670 lives have been lost overall. As Figure 1 shows, this death toll greatly surpasses the aggregate Australians killed in the four major wars in which this country has been involved (89,850 deaths). Whereas this should be an ongoing cause for concern to all Australians, it is worth noting what has been achieved to date in eliminating the problem.

Fig. 1 Australians killed at war this century and killed on Australian roads since 1925



A trend reversed

Figure 2 compares the trends in Australian vehicle ownership and road fatalities since 1925. Until 1970, each year other than during the great depression and the Second World War had seen a steady growth in motor vehicle ownership and a corresponding increase in road deaths. By 1970 the number of vehicles had increased 16 fold over the number in 1925, and the road toll had increased about 5.5 fold to reach its high water mark of 3,798. Whereas today there exists a high degree of community awareness about road safety, in the days of an emerging new transport technology road safety matters were not a major consideration.

Since 1970, however, broad sweeping road safety initiatives and a corresponding heightening of community awareness about road safety have broken the old rule that road deaths must rise with increased vehicle ownership. In fact, last year's road toll (1,764 fatalities) was less than half that seen in 1970 (3,798 fatalities).

Figure 2 Number of road fatalities and registered vehicles, Australia 1925-97

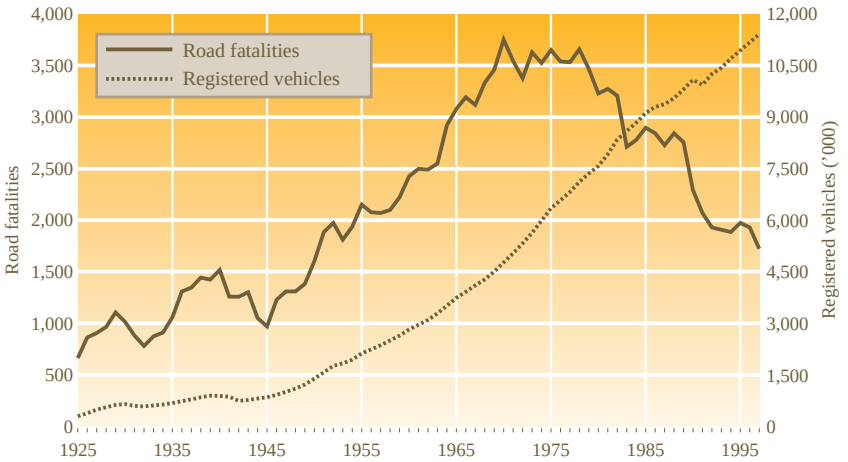
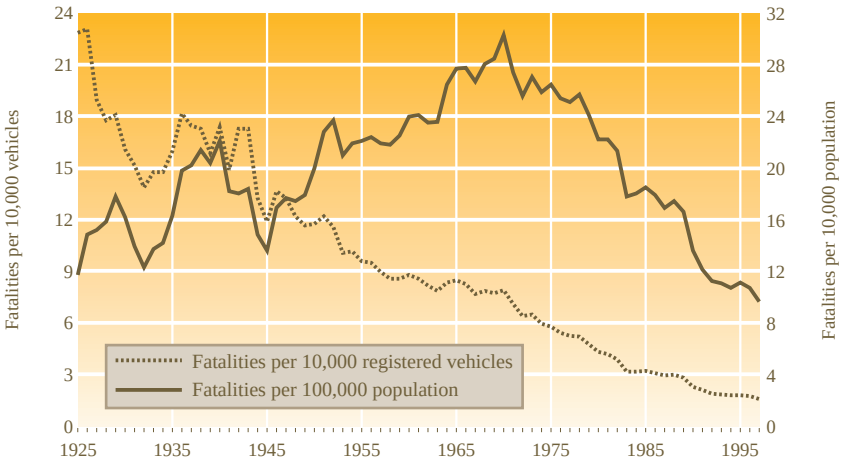


Figure 3 Road fatalities per 10,000 registered vehicles and 100,000 population, Australia 1925-97



Fatality rate trends

The turnaround in Australia's road fatality record is especially notable when compared with the increase in vehicle ownership since 1970. Whereas in 1970 there were 7.96 road fatalities per 10,000 registered vehicles, this rate has decreased to 1.58 in 1997 (Figure 3). It is also notable when compared with the increase in Australia's population since 1970. Whereas in 1970 there were 30.4 fatalities per 100,000 of population, this rate has decreased to 9.7 in 1997.

Contributors to the turnaround

Major contributions to the turnaround have come from improvements to roads

and vehicles, enactment of road safety legislation, intensive public education, and enhanced police enforcement aided by improved enforcement technology. The following are some of the key developments.

Vehicle safety enhancements

From 1 January 1970, through the application of Australian Design Rules for Motor Vehicle Safety, it became mandatory to fit seat belts in new passenger vehicles. This requirement has been progressively extended to include other motor vehicles, retractable belts, and anchorages for child restraints.

The Australian Design Rules have also been the mechanism for implementing a host of other mandatory safety requirements. These include requirements for improved vehicle brakes, tyres, lights, indicators and glazing, head restraints, increased vehicle impact resistance and increased bus roll-over strength, occupant protection in buses and fitting of limiters on the speed heavy vehicles.

Wearing of seat belts and motor cycle helmets

By 1973, legislation had been passed in all Australian States and Territories for compulsory wearing of fitted seat belts in motor vehicles and for the wearing of protective helmets by motor cycle riders and their pillion passengers.

Initiatives against drink driving

From 1976 random breath testing was progressively introduced nationwide. Victoria, in 1976, was the first State to legislate, followed by the Northern Territory in 1980, South Australia in 1981, New South Wales and the Australian Capital Territory in 1982, Tasmania in 1983, and Queensland and Western Australia in 1988.

Since then, random breath testing has been progressively intensified and refined to be one of the most extensive programs for mass breath testing of drivers worldwide.

A raft of complementary measures has put in place lower and nationally consistent 0.05 driver blood alcohol limits, zero limits for special driver groups, a well structured system of penalties and mass public education and media campaigns. Commencing with South Australia in 1973, a number of jurisdictions have also legislated for compulsory blood testing on crash participants who attend hospital.

Attitudinal change has seen drink driving become largely unacceptable within the general Australian population.

Wearing of bicycle helmets

In 1990 Victoria made the wearing of bicycle helmets compulsory, and through 1991 and 1992 the other States and Territories followed suit. At that time no other country or administration had compulsory wearing of bicycle helmets.

Improved enforcement technology

Significant reductions in crash rates have been achieved as a result of police having access to improved enforcement technology to deter risky road use.

Speed cameras have made a major impact since being introduced in the late 1980s, first in Victoria and later in most other jurisdictions. Other noteworthy innovations include laser based speed measuring devices and red light cameras.

Improved roads

Australia's roads are today significantly safer than in the past. The Commonwealth Government's Black Spots programs have encouraged individuals and groups to nominate dangerous sections of road for specific improvement.

Commonwealth funding has seen major upgrading of the National Highway. Other roads have been the target of considerable work by State and local governments in shoulder sealing, use of audible edge-lining and other delineation treatments, removal of roadside hazards and improved speed zoning.

The Future

All levels of government in Australia are heavily committed to further reducing the number and severity of road crashes and improving the efficiency of the road network. The turnaround that has been achieved in Australia's road safety performance since 1970 has highlighted the effectiveness of a resolute coordinated approach by government.

Notwithstanding the progress attained so far, much remains to be achieved. Recent work [2] has suggested that a reduction to 860 annual road fatalities is potentially achievable by the year 2020. The Commonwealth, State and Territory Governments recently agreed to set a target of no more than 1,600 annual road crash deaths by the year 2005. While no level of crash death or injury is acceptable, this target is intended to focus efforts over the next few years.

Road safety stakeholders have already set down a detailed road safety strategy and implementation plan[3] for the immediate years ahead. These identify medium-term targets and set out a detailed action plan of coordinated policies and legislation, supported by enforcement, sanctions, community involvement and public education activities.

Notes

1. Bureau of Transport & Communications Economics, 1992, *Social cost of transport accidents in Australia.* Report 79, AGPS, Canberra.
2. Vulcan, P., 1997, *Predicting road fatalities for 2001 and beyond.* Paper presented to the 1997 Road Safety Research and Enforcement Conference, Hobart, November 1997.
3. National Road Safety Strategy and Action Plan 1996, published by the Federal Office of Road Safety on behalf of the National Road Safety Implementation Task Force.

Table 1 Road fatalities, registered motor vehicles, fatalities per 10,000 registered vehicles, population, and fatalities per 100,000 population, Australia 1925-97

Year	Road fatalities	Registered vehicles ('000)[a]	Fatalities per 10,000 registered vehicles	Population ('000,000)[b]	Fatalities per 100,000 population
1925	700	306	22.9	5.94	11.8
1926	901	390	23.1	6.06	14.9
1927	943	496	19.0	6.18	15.3
1928	1,003	565	17.8	6.30	15.9
1929	1,145	634	18.1	6.39	17.9
1930	1,054	656	16.1	6.46	16.3
1931	916	604	15.2	6.53	14.0
1932	818	588	13.9	6.58	12.4
1933	914	617	14.8	6.63	13.8
1934	952	645	14.8	6.68	14.3
1935	1,100	688	16.0	6.73	16.4
1936	1,350	743	18.2	6.78	19.9
1937	1,387	792	17.5	6.84	20.3
1938	1,483	857	17.3	6.90	21.5
1939	1,426	900	15.9	6.97	20.5
1940	1,558	895	17.4	7.04	22.2
1941	1,298	872	14.9	7.11	18.3
1942	1,297	751	17.3	7.18	18.1
1943	1,340	776	17.3	7.23	18.5
1944	1,089	820	13.3	7.31	14.9
1945	1,011	854	11.9	7.39	13.7
1946	1,270	928	13.7	7.47	17.0
1947	1,346	1,013	13.3	7.58	17.8
1948	1,348	1,107	12.2	7.71	17.5
1949	1,424	1,225	11.7	7.91	18.0
1950	1,643	1,397	11.8	8.18	20.1
1951	1,926	1,580	12.2	8.42	22.9
1952	2,054	1,770	11.6	8.64	23.8
1953	1,856	1,840	10.1	8.82	21.1
1954	1,976	1,947	10.2	8.99	22.0
1955	2,042	2,130	9.6	9.20	22.2
1956	2,119	2,246	9.5	9.43	22.5
1957	2,113	2,366	9.0	9.64	22.0
1958	2,146	2,506	8.6	9.84	21.9
1959	2,264	2,649	8.6	10.06	22.6
1960	2,468	2,824	8.8	10.28	24.1
1961	2,542	2,963	8.6	10.55	24.2
1962	2,535	3,101	8.2	10.74	23.6
1963	2,598	3,292	7.9	10.95	23.7
1964	2,966	3,516	8.4	11.17	26.6
1965	3,164	3,744	8.45	11.39	27.8
1966	3,242	3,920	8.27	11.60	27.9
1967	3,166	4,107	7.71	11.80	26.8
1968	3,382	4,279	7.90	12.01	28.2
1969	3,502	4,508	7.77	12.26	28.6
1970	3,798	4,772	7.96	12.51	30.4
1971	3,590	5,039	7.12	13.07	27.5
1972	3,422	5,325	6.43	13.30	25.7
1973	3,679	5,634	6.53	13.50	27.2
1974	3,572	5,986	5.97	13.72	26.0
1975	3,694	6,347	5.82	13.89	26.6
1976	3,583	6,581	5.44	14.03	25.5
1977	3,578	6,818	5.25	14.19	25.2
1978	3,705	7,115	5.21	14.36	25.8
1979	3,508	7,358	4.77	14.52	24.2
1980	3,272	7,574	4.32	14.70	22.3
1981	3,321	7,918	4.19	14.92	22.3
1982	3,252	8,346	3.90	15.18	21.4
1983	2,755	8,590	3.21	15.39	17.9
1984	2,822	8,833	3.19	15.58	18.1
1985	2,941	9,118	3.23	15.79	18.6
1986	2,888	9,291	3.11	16.02	18.0
1987	2,772	9,374	2.96	16.26	17.0
1988	2,887	9,544	3.02	16.53	17.5
1989	2,801	9,806	2.86	16.81	16.7
1990	2,331	10,081	2.31	17.07	13.7
1991	2,113	9,934	2.13	17.28	12.2
1992	1,974	10,247	1.93	17.49	11.3
1993	1,953	10,432	1.87	17.66	11.1
1994	1,928	10,699	1.80	17.85	10.8
1995	2,017	10,935	1.84	18.06	11.2
1996	1,970	11,171[c]	1.77	18.31	10.8
1997	1,764	11,407[c]	1.58	18.56[c]	9.7

Notes

Fatality counts for 1925 to 1961 exclude Northern Territory data. To accommodate this gap, Northern Territory population and vehicle registrations counts have been excluded when calculating Australian fatality rates for this period.

(a) Vehicles on register at 30 June (Australian Bureau of Statistics).

(b) Estimated resident population at 30 June (Australian Bureau of Statistics).

(c) Preliminary estimate.

Table 2. Road fatalities by State and Territory 1950-97

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1950	561	501	202	170	142	64	-	3	1,643
1951	699	581	218	197	167	57	-	7	1,926
1952	741	603	251	172	194	87	-	6	2,054
1953	663	515	301	136	182	56	-	3	1,856
1954	728	569	278	153	175	67	-	6	1,976
1955	798	528	273	173	206	57	-	7	2,042
1956	808	582	298	167	185	72	-	7	2,119
1957	774	589	325	185	168	65	-	7	2,113
1958	794	571	342	200	164	70	-	5	2,146
1959	833	661	333	185	178	68	-	6	2,264
1960	939	698	359	203	180	79	-	10	2,468
1961	934	773	353	203	197	75	-	7	2,542
1962	876	808	403	194	177	61	8	8	2,535
1963	900	780	398	223	198	75	16	8	2,598
1964	1,010	904	461	238	222	89	25	17	2,966
1965	1,151	929	467	243	252	93	14	15	3,164
1966	1,143	955	466	270	253	104	34	17	3,242
1967	1,117	887	502	253	256	101	27	23	3,166
1968	1,211	949	477	275	320	118	18	14	3,382
1969	1,188	1,011	556	251	311	114	45	26	3,502
1970	1,309	1,061	537	349	351	118	42	31	3,798
1971	1,249	923	594	292	332	130	50	20	3,590
1972	1,092	915	572	312	340	106	53	32	3,422
1973	1,230	935	638	329	358	105	55	29	3,679
1974	1,275	806	589	382	334	111	44	31	3,572
1975	1,288	910	635	339	304	122	64	32	3,694
1976	1,264	938	569	307	308	108	51	38	3,583
1977	1,268	954	572	306	290	112	47	29	3,578
1978	1,384	869	612	291	345	106	68	30	3,705
1979	1,288	846	616	309	279	93	53	24	3,508
1980	1,303	657	557	269	293	100	63	30	3,272
1981	1,291	766	594	222	238	111	70	29	3,321
1982	1,253	709	602	270	236	96	60	26	3,252
1983	966	664	510	266	203	70	48	28	2,755
1984	1,037	657	505	232	221	83	50	37	2,822
1985	1,067	683	502	268	243	78	67	33	2,941
1986	1,029	668	481	288	228	91	71	32	2,888
1987	959	705	442	256	213	77	84	36	2,772
1988	1,037	701	539	223	230	75	51	31	2,887
1989	960	776	428	222	242	80	61	32	2,801
1990	797	548	399	226	196	71	68	26	2,331
1991	663	503	395	184	207	77	67	17	2,113
1992	649	396	416	165	200	74	54	20	1,974
1993	581	435	396	218	209	58	44	12	1,953
1994	646	377	418	159	211	59	41	17	1,928
1995	620	418	456	181	209	57	61	15	2,017
1996	581	417	385	181	247	64	72	23	1,970
1997	578	377	358	147	197	31	60	16	1,764