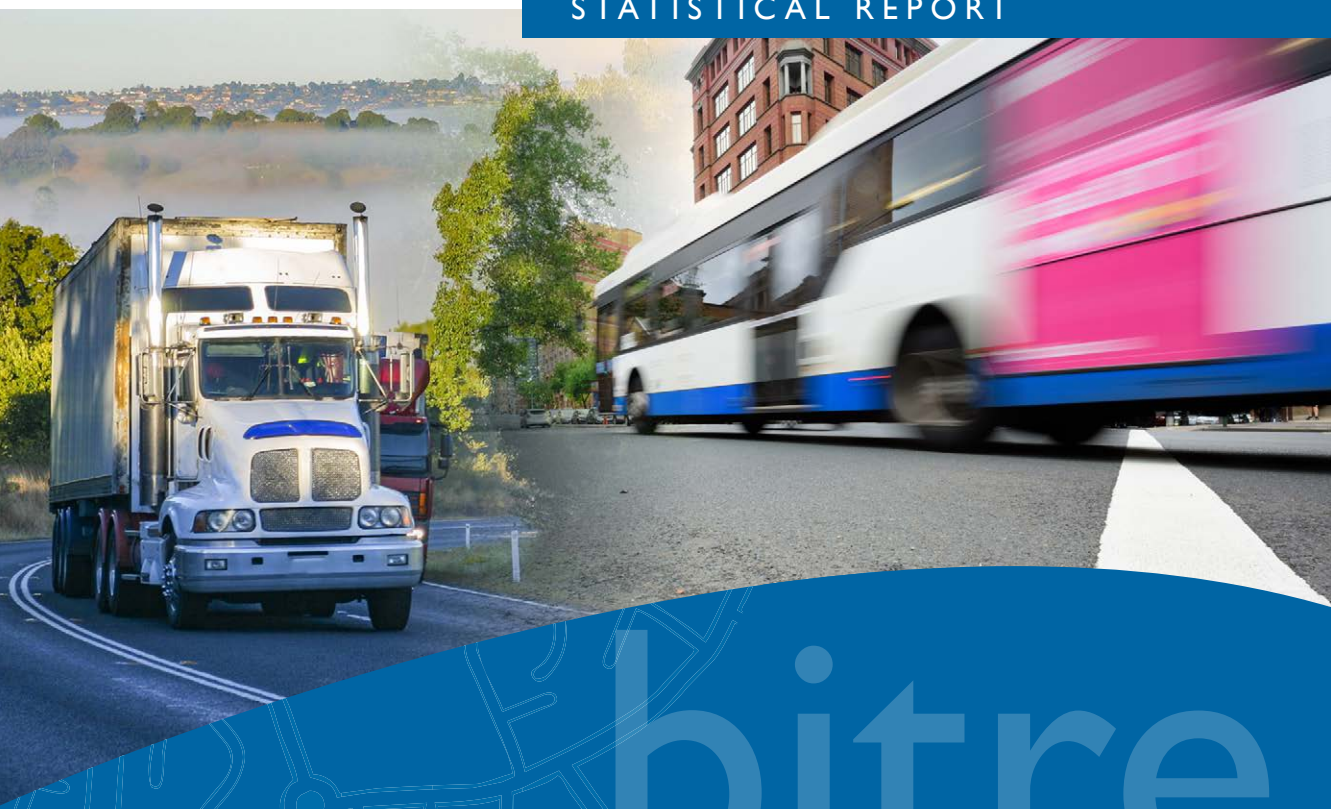
Australian Government

Department of Infrastructure, Transport,
Regional Development, Communications and the Arts

STATISTICAL REPORT



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Safety

Road trauma involving heavy vehicles 2021 statistical summary

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Bureau of Infrastructure and Transport Research Economics

Road trauma involving heavy vehicles
2021 statistical summary

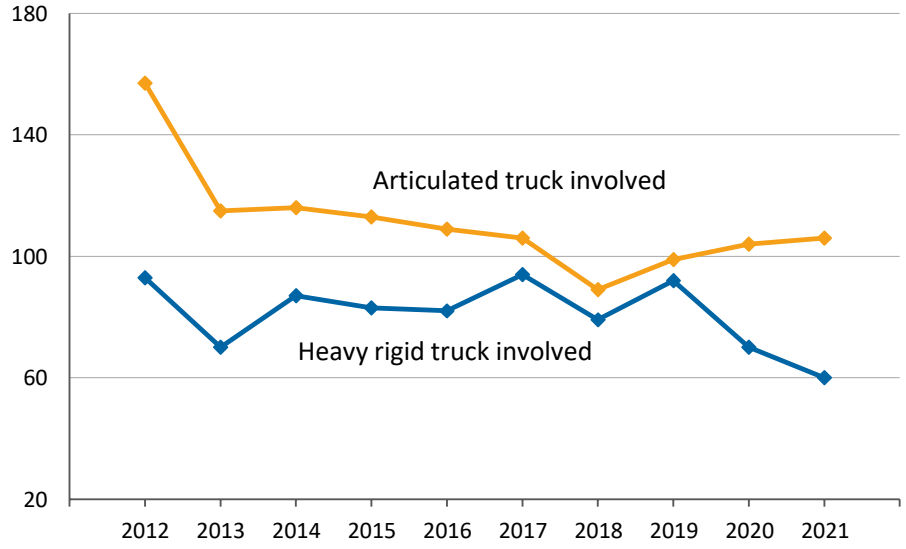
Department of Infrastructure, Transport, Regional Development, Communications and the Arts
Canberra, Australia

At a glance

This report presents the latest available detailed information on road crashes involving heavy trucks or buses. The focus is on annual counts of fatalities, and tabulations include road user type, crash and vehicle type, road type, geographic region, and posted speed limit. Related BITRE publications include Excel data for the tables in this report, a quarterly heavy vehicle bulletin and a heavy vehicle dashboard.

Note: Comparative percentages in At a Glance are based on the last three years.

Annual counts of fatalities in crashes involving heavy trucks, 2012–2021

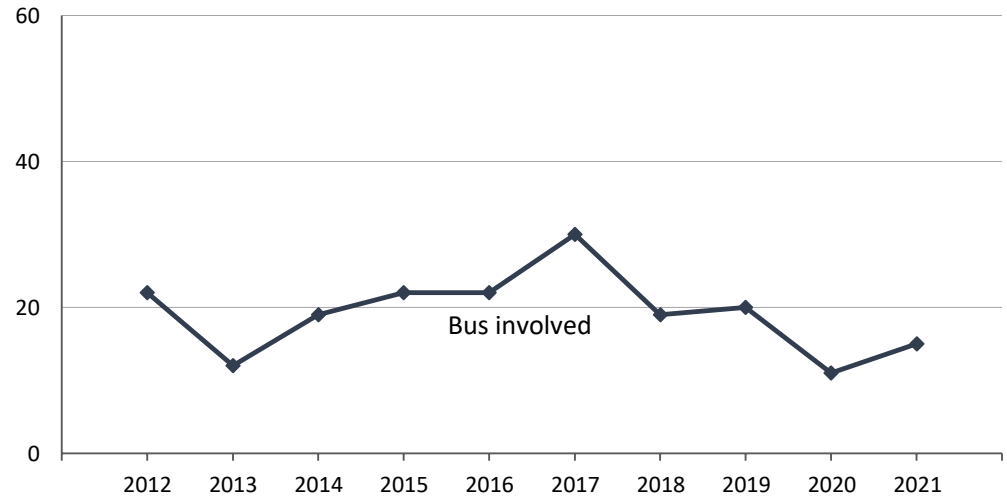


- In 2021, a total of 163 people were killed in crashes involving heavy trucks. This represents 15.4 per cent of total road deaths (Table 1.1).
- Over the three years to 2021, deaths in crashes involving an articulated truck increased by an average of 3.5 per cent per year. For heavy rigid involvement, the trend was decreasing at 19.2 per cent per year (Table 1.1).
- Approximately 80 per cent of fatalities in fatal crashes involving a heavy truck are multiple vehicle crashes (Table 1.4).
- Of the people killed in these fatal crashes, approximately 50 per cent are occupants in a light vehicle, 25 per cent are occupants in the heavy truck and 25 per cent are other road users (pedestrian, motorcyclist or pedal cyclist) (Table 1.3).
- Approximately 70 per cent of fatalities in crashes involving a heavy rigid truck occur in a Major City or Inner Regional area. The corresponding proportion for crashes involving an articulated truck is 50 per cent (Table 1.6).

- The latest hospitalisation data (2019) shows that approximately 510 heavy truck occupants are hospitalised from road crashes each year (Table 1.8).

- Over the decade, registrations of articulated trucks increased by an average of 2.3 per cent per year. Heavy rigid truck registrations increased by 1.4 per cent per year (Table 3.1).

Annual counts of fatalities in crashes involving a bus, 2012–2021



- There was a total of 15 people killed in crashes involving a bus. The trend over the last three years shows a reduction of 13.4 per cent per year (Table 2.1).

- Over 90 per cent of fatalities occur in multiple vehicle crashes (Table 2.3).

- Of the people killed in these bus-involved fatal crashes, approximately 11 per cent are occupants of the bus, 33 per cent are occupants of a light vehicle and 57 per cent are other road users (Table 2.2).

- Approximately 80 per cent of fatalities in crashes involving a bus occur in a Major City or Inner Regional area (Table 2.5).

- Approximately 254 bus occupants are hospitalised from crashes each year (Table 2.6).

- Over the decade, registrations of buses increased by an average of 0.9 per cent per year (Table 3.1).

Data Sources

Crash data in this report are sourced from the National Crash Database. This database is collated by BITRE using data from the states' and territories' road safety agencies. The scope is both fatal and injury crashes, and at present it covers the years 2012 to 2021. It is updated annually. Only fatal crash data is utilised in this report.

Non-fatal road traffic crash casualty data (referred to here as 'hospitalised injury') is collated from the Australian Institute of Health and Welfare (AIHW).

Vehicle registrations and vehicle kilometres travelled are sourced from The Australian Bureau of Statistics and BITRE.

Acknowledgements

Department of Infrastructure, Transport, Regional Development, Communications and the Arts would like to acknowledge the provision of data and assistance from the following agencies:

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VicRoads
Department of Transport and Main Roads, Queensland
Department for Infrastructure and Transport, South Australia
Western Australia Police
Department of State Growth, Tasmania
Department of Infrastructure, Planning and Logistics, Northern Territory
Transport Canberra and City Services Directorate, Australian Capital Territory
National Injury Surveillance Unit, Flinders University
Australian Institute of Health and Welfare
Australian Bureau of Statistics

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Section 1
HEAVY TRUCKS

Table 1.1 Deaths from crashes involving heavy trucks[a]

	Any heavy truck involved[b]	*Articulated truck involved*	*Heavy rigid truck involved*	*All crashes*[c]
2012	245	157	93	1,300
2013	181	115	70	1,184
2014	202	116	87	1,150
2015	193	113	83	1,205
2016	186	109	82	1,295
2017	191	106	94	1,223
2018	160	89	79	1,135
2019	188	99	92	1,187
2020	172	104	70	1,097
2021	163	106	60	1,116
Change last 12 months (%)	-5.2	1.9	-14.3	1.7
Ave. trend change p.a.(%)				
- for last 10 calendar years	-2.9	-3.4	-2.2	-1.2
- for last 3 calendar years	-6.9	3.5	-19.2	-3.0

a Crashes involving a heavy truck may also involve other vehicles and vehicle types.
b Crash involves either an articulated truck or a heavy rigid truck (or both).
c All road crash deaths - whether or not involving a heavy truck.

Figure 1.1 Deaths in crashes involving heavy trucks – with trends

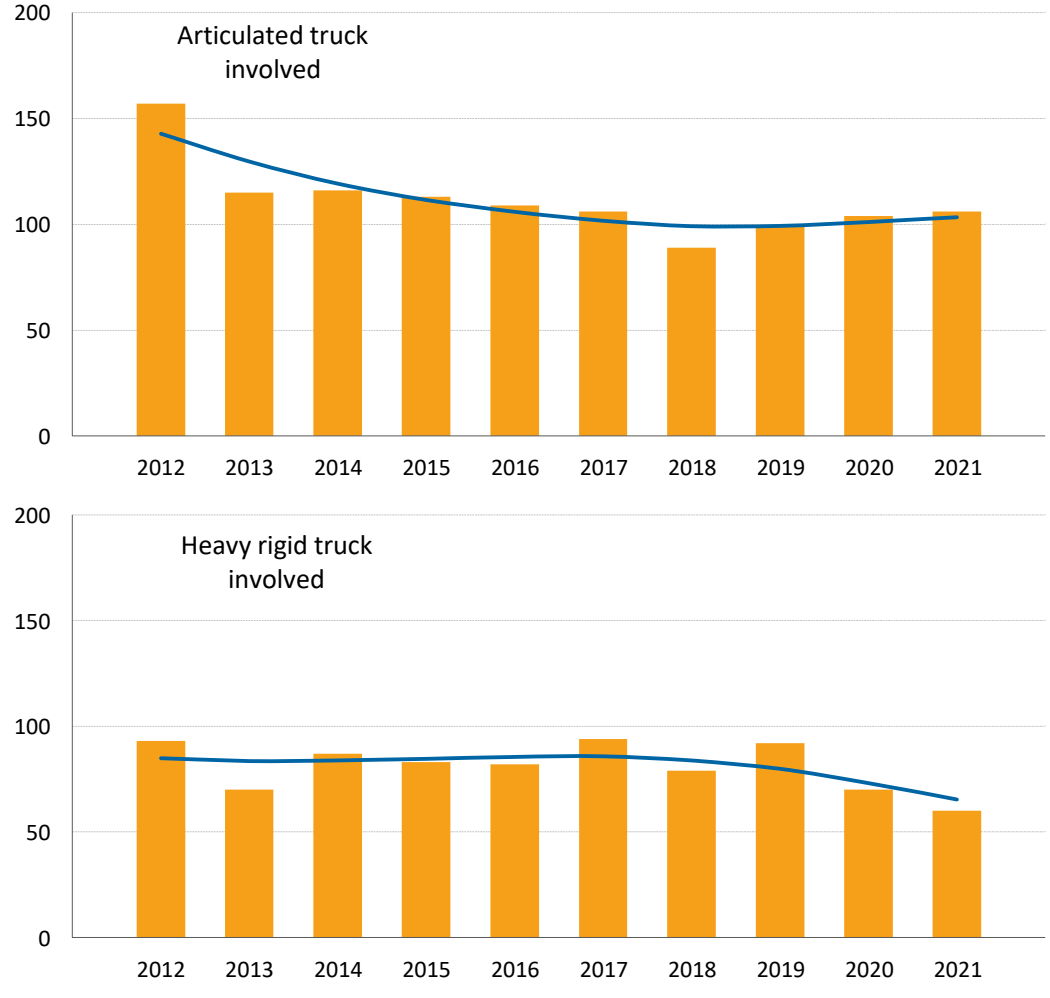


Table 1.2 Deaths from crashes involving heavy trucks by state/territory

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Any heavy truck involved									
2012	72	45	73	17	29	6	3	0	245
2013	53	28	52	15	27	2	4	0	181
2014	51	56	39	27	21	6	0	2	202
2015	57	41	48	18	18	9	1	1	193
2016	56	40	40	18	19	7	5	1	186
2017	79	38	33	11	22	7	1	0	191
2018	52	24	53	10	17	4	0	0	160
2019	55	45	36	28	17	5	1	1	188
2020	56	35	46	10	18	6	1	0	172
2021	52	29	48	13	13	4	2	2	163
Change last 12 months (%)	-7.1	-17.1	4.3	30.0	-27.8	-33.3	100.0	-	-5.2
Ave. trend change p.a.(%)									
- for last 10 calendar years	-1.3	-3.1	-2.9	-4.3	-6.5	0.4	-	-	-2.9
- for last 3 calendar years	-2.8	-19.7	15.5	-31.9	-12.6	-10.6	41.4	-	-6.9
Articulated truck involved									
2012	50	30	45	10	17	3	2	0	157
2013	32	15	35	11	16	2	4	0	115
2014	31	27	31	12	10	3	0	2	116
2015	34	21	28	15	11	3	0	1	113
2016	26	22	25	11	13	6	5	1	109
2017	49	20	19	6	11	1	0	0	106
2018	26	14	29	6	12	2	0	0	89
2019	23	22	18	23	10	2	0	1	99
2020	28	23	35	5	10	2	1	0	104
2021	27	14	40	10	11	2	2	0	106
Change last 12 months (%)	-3.6	-39.1	14.3	100.0	10.0	0.0	100.0	0.0	1.9
Ave. trend change p.a.(%)									
- for last 10 calendar years	-4.8	-3.7	-2.4	-3.3	-4.2	-5.1	-	-	-3.4
- for last 3 calendar years	8.3	-20.2	49.1	-34.1	4.9	0.0	-	-	3.5
Heavy rigid truck involved									
2012	23	15	30	7	13	4	1	0	93
2013	24	13	17	4	12	0	0	0	70
2014	21	29	8	15	11	3	0	0	87
2015	25	20	21	3	7	6	1	0	83
2016	32	19	15	7	7	2	0	0	82
2017	33	20	15	5	14	6	1	0	94
2018	29	10	27	5	6	2	0	0	79
2019	34	24	18	5	7	3	1	0	92
2020	29	12	11	5	9	4	0	0	70
2021	26	16	9	3	2	2	0	2	60
Change last 12 months (%)	-10.3	33.3	-18.2	-40.0	-77.8	-50.0	0.0	-	-14.3
Ave. trend change p.a.(%)									
- for last 10 calendar years	3.3	-1.8	-5.4	-6.1	-11.9	-	-	-	-2.2
- for last 3 calendar years	-12.6	-18.4	-29.3	-22.5	-46.5	-18.4	-	-	-19.2

Table 1.3 Deaths from crashes involving heavy trucks by road user

	Heavy truck occupant	*Light vehicle occupant*	*Pedestrian*	*Motor-cyclist*	*Pedal cyclist*	*Total*[a]
Any heavy truck involved						
2012	41	146	29	21	3	245
2013	25	107	26	12	8	181
2014	34	117	20	21	7	202
2015	37	119	16	11	9	193
2016	33	114	13	18	6	186
2017	31	109	25	17	3	191
2018	38	86	13	12	10	160
2019	52	89	17	17	10	188
2020	31	98	23	11	8	172
2021	44	77	23	11	6	163
Change last 12 months (%)	41.9	-21.4	0.0	0.0	-25.0	-5.2
Ave. trend change p.a.(%)						
- for last 10 calendar years	2.6	-5.2	-2.2	-4.3	4.7	-2.9
- for last 3 calendar years	-8.0	-7.0	16.3	-19.6	-22.5	-6.9
Articulated truck involved						
2012	35	93	18	8	0	157
2013	21	70	13	6	2	115
2014	24	68	9	9	3	116
2015	28	67	9	5	3	113
2016	23	68	6	7	4	109
2017	18	67	10	5	1	106
2018	26	52	3	4	3	89
2019	31	50	5	7	4	99
2020	20	61	16	5	1	104
2021	35	52	9	6	2	106
Change last 12 months (%)	75.0	-14.8	-43.8	20.0	100.0	1.9
Ave. trend change p.a.(%)						
- for last 10 calendar years	0.3	-5.0	-6.2	-3.6	-	-3.4
- for last 3 calendar years	6.3	2.0	34.2	-7.4	-29.3	3.5
Heavy rigid truck involved						
2012	8	55	12	13	3	93
2013	7	38	13	6	6	70
2014	10	50	11	12	4	87
2015	12	52	7	6	6	83
2016	14	47	7	11	2	82
2017	16	46	16	13	2	94
2018	18	36	10	8	7	79
2019	24	39	12	10	6	92
2020	12	37	8	6	7	70
2021	11	26	14	5	4	60
Change last 12 months (%)	-8.3	-29.7	75.0	-16.7	-42.9	-14.3
Ave. trend change p.a.(%)						
- for last 10 calendar years	7.8	-5.5	0.2	-5.0	3.8	-2.2
- for last 3 calendar years	-32.3	-18.4	8.0	-29.3	-18.4	-19.2

a Includes road users not separately specified (eg. bus occupants or unknown road user)

Table 1.4 Deaths by crash type – heavy trucks

	Multiple Vehicle	*Single Vehicle*	*All*
Articulated truck involved			
2012	134	23	157
2013	107	8	115
2014	98	18	116
2015	95	18	113
2016	96	13	109
2017	93	13	106
2018	76	13	89
2019	80	19	99
2020	89	15	104
2021	84	22	106
Change last 12 months (%)	-5.6	46.7	1.9
Ave. trend change p.a.(%)			
- for last 10 calendar years	-4.3	2.0	-3.4
- for last 3 calendar years	2.5	7.6	3.5
Heavy rigid truck involved			
2012	89	4	93
2013	66	4	70
2014	82	5	87
2015	75	8	83
2016	75	7	82
2017	82	12	94
2018	68	11	79
2019	73	19	92
2020	61	9	70
2021	52	8	60
Change last 12 months (%)	-14.8	-11.1	-14.3
Ave. trend change p.a.(%)			
- for last 10 calendar years	-3.7	12.9	-2.2
- for last 3 calendar years	-15.6	-35.1	-19.2

Figure 1.2 Deaths in multiple vehicle crashes involving heavy trucks

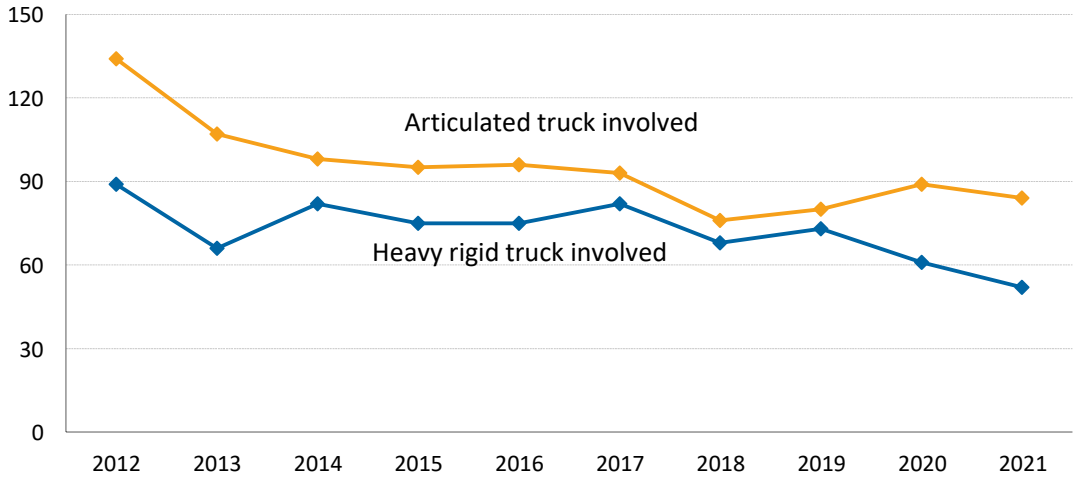


Table 1.5 Deaths by posted speed limit (%)

	≤40 km/h	50 km/h	60 to 70km/h	80 to 90 km/h	100 km/h	≥110 km/h
Articulated truck involved						
2012	1.3	1.9	10.2	16.6	45.2	24.8
2013	0.9	1.7	12.2	20.9	40.9	23.5
2014	0.0	0.9	14.7	9.5	50.9	22.4
2015	0.9	2.7	16.8	10.6	46.9	21.2
2016	0.9	3.7	6.4	17.4	43.1	27.5
2017	2.8	4.7	8.5	15.1	40.6	28.3
2018	0.0	2.2	12.4	11.2	46.1	27.0
2019	1.0	3.0	9.1	10.1	39.4	36.4
2020	0.0	1.9	12.5	13.5	53.8	18.3
2021	0.9	1.9	14.2	15.1	39.6	28.3
Change last 12 months (%)	-	-1.9	13.2	12.1	-26.4	54.9
Heavy rigid truck involved						
2012	3.2	11.8	20.4	12.9	33.3	15.1
2013	0.0	5.7	38.6	8.6	41.4	5.7
2014	1.1	4.6	31.0	12.6	32.2	18.4
2015	2.4	4.8	22.9	20.5	42.2	3.6
2016	1.2	4.9	25.6	24.4	34.1	9.8
2017	3.2	13.8	20.2	17.0	33.0	11.7
2018	1.3	6.3	27.8	15.2	36.7	12.7
2019	1.1	10.9	13.0	19.6	38.0	17.4
2020	1.4	12.9	20.0	25.7	30.0	8.6
2021	1.7	18.3	20.0	10.0	35.0	11.7
Change last 12 months (%)	16.7	42.6	0.0	-61.1	16.7	36.1

Note Percentages may not sum to 100 due to some crashes having an unknown posted speed limit and to rounding.

Figure 1.3 Deaths by posted speed limit (%) – 5 years combined to 2021

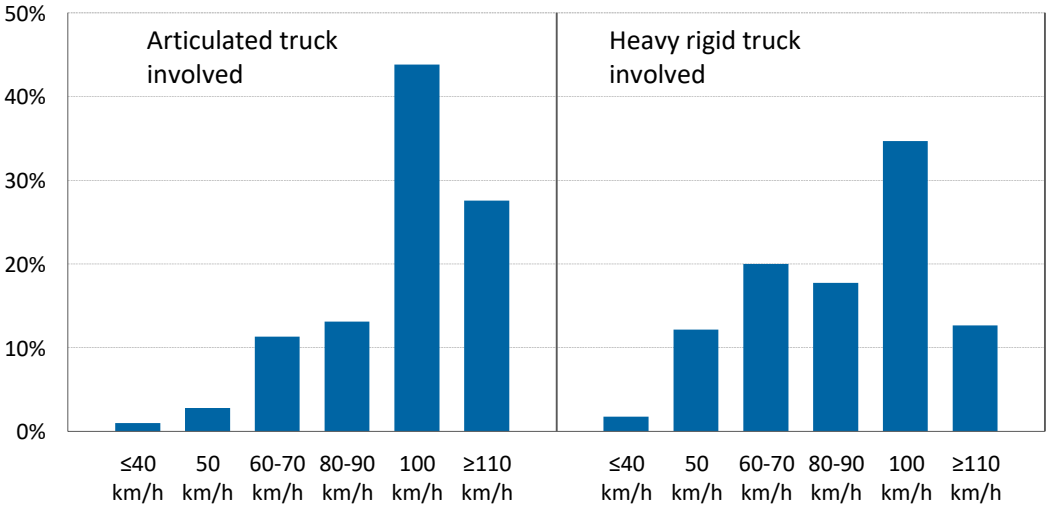


Table 1.6 Deaths by Remoteness Area (%)

	Major Cities	*Inner Regional*	*Outer Regional*	*Remote*	*Very Remote*
Articulated truck involved					
2012	16.6	40.1	31.8	7.0	4.5
2013	19.1	42.6	22.6	9.6	6.1
2014	15.5	44.8	31.0	4.3	4.3
2015	15.9	41.6	31.0	7.1	4.4
2016	20.2	30.3	38.5	5.5	5.5
2017	22.6	32.1	38.7	1.9	4.7
2018	14.6	36.0	40.4	5.6	3.4
2019	18.2	34.3	31.3	9.1	7.1
2020	16.3	35.6	36.5	4.8	6.7
2021	20.8	31.1	31.1	3.8	13.2
Change last 12 months (%)	27.0	-12.5	-14.8	-21.5	96.2
Heavy rigid truck involved					
2012	29.0	32.3	28.0	3.2	4.3
2013	54.3	21.4	21.4	1.4	1.4
2014	40.2	34.5	24.1	1.1	0.0
2015	38.6	28.9	25.3	6.0	1.2
2016	46.3	34.1	17.1	1.2	1.2
2017	42.6	29.8	19.1	7.4	1.1
2018	41.8	27.8	26.6	1.3	2.5
2019	39.1	33.7	19.6	4.3	3.3
2020	40.0	28.6	30.0	0.0	0.0
2021	41.7	35.0	16.7	3.3	0.0
Change last 12 months (%)	4.2	22.5	-44.4	-	0.0

Note Percentages may not sum to 100 due to some crashes having an unknown Remoteness Area and to rounding.
Source ABS 2021b

Figure 1.4 Deaths by Remoteness Area (%) – 5 years combined to 2021

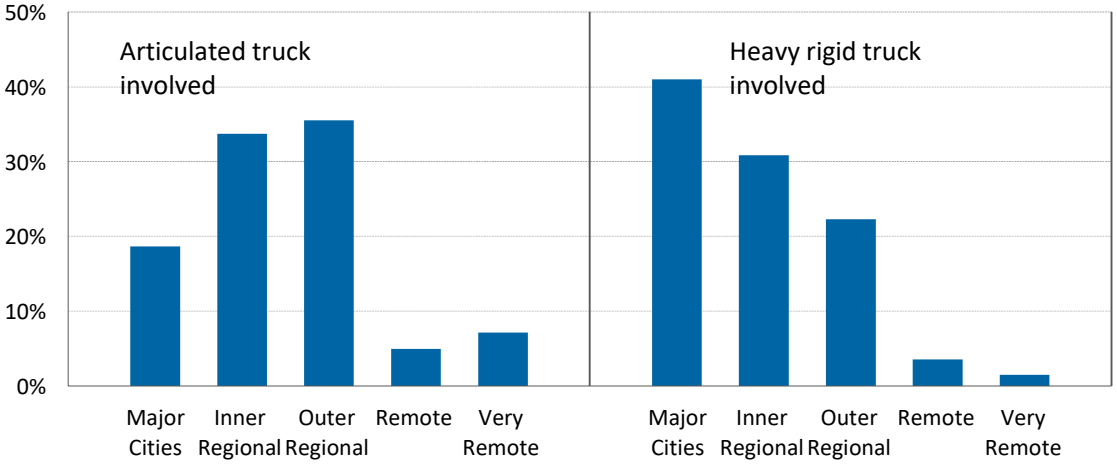


Table 1.7 Deaths by road type (%)

	National or State highway	Arterial	Sub-arterial	Collector	Local	Other[a]
Articulated truck involved						
2012	70.7	15.9	4.5	2.5	5.1	1.3
2013	63.5	20.9	5.2	2.6	7.0	0.9
2014	66.4	16.4	10.3	4.3	1.7	0.9
2015	64.6	18.6	9.7	2.7	4.4	0.0
2016	58.7	20.2	9.2	4.6	6.4	0.9
2017	62.3	18.9	4.7	2.8	11.3	0.0
2018	64.0	9.0	7.9	4.5	13.5	1.1
2019	72.7	10.1	9.1	2.0	6.1	0.0
2020	70.2	8.7	6.7	1.9	10.6	0.0
2021	62.3	9.4	14.2	2.8	6.6	2.8
Change last 12 months (%)	-11.3	9.0	110.2	47.2	-37.6	-
Heavy rigid truck involved						
2012	41.9	19.4	10.8	4.3	18.3	2.2
2013	54.3	18.6	12.9	4.3	8.6	1.4
2014	32.2	33.3	14.9	5.7	12.6	1.1
2015	38.6	24.1	13.3	9.6	13.3	0.0
2016	36.6	30.5	17.1	4.9	11.0	0.0
2017	34.0	27.7	16.0	3.2	17.0	2.1
2018	40.5	25.3	10.1	7.6	13.9	1.3
2019	47.8	15.2	14.1	0.0	21.7	1.1
2020	34.3	32.9	11.4	4.3	14.3	1.4
2021	48.3	15.0	13.3	5.0	15.0	0.0
Change last 12 months (%)	41.0	-54.3	16.7	16.7	5.0	-100.0

a Includes Access road, Path, Busway and Pedestrian thoroughfare.
Note Percentages may not sum to 100 due to some crashes having an unknown road type and to rounding.
Source Geoscape 2020

Figure 1.5 Deaths by road type (%) – 5 years combined to 2021

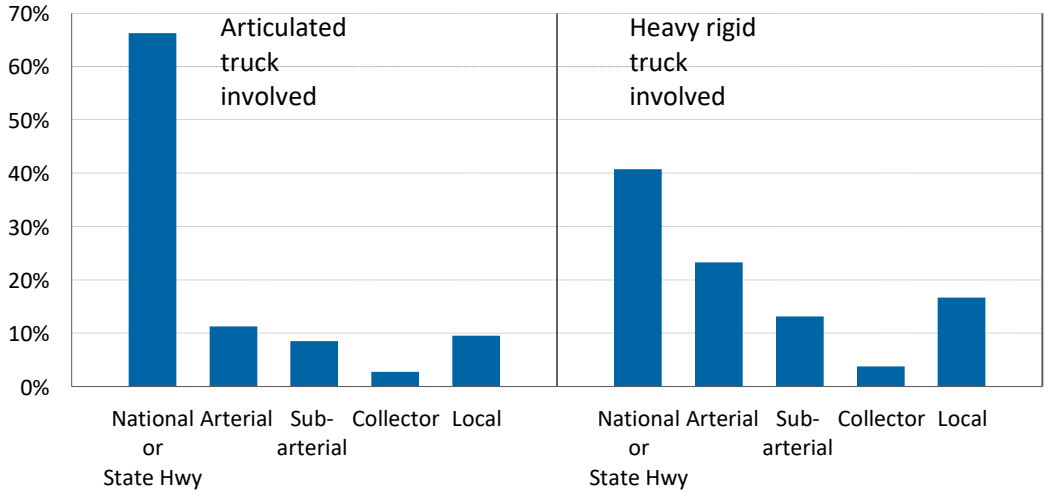


Table 1.8 Deaths and hospitalised injuries of heavy truck occupants

	Deaths	*Hospitalised Injuries (HI)*
2012	41	511
2013	25	484
2014	34	480
2015	37	510
2016	33	484
2017	31	528
2018	38	553
2019	52	524
2020	31	-
2021	44	-

Note There were breaks in the injury series in 2012 and 2017. These were due to changes in admissions criteria and the net result were reductions in annual counts of between 3%-5%.

Sources AIHW 2021

Figure 1.6 Deaths and hospitalised injuries of heavy truck occupants

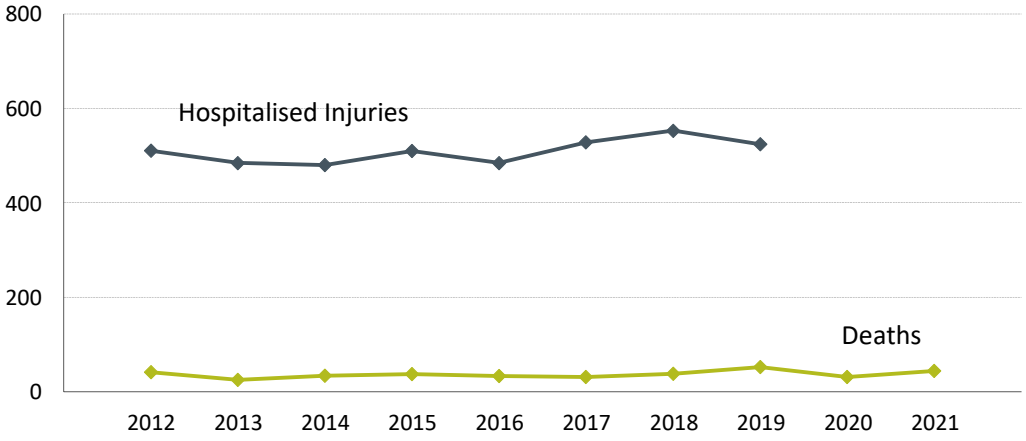


Figure 1.7 **Single vehicle crash 2017-2021 – Common crash types (sub-group) for deaths involving a heavy truck**

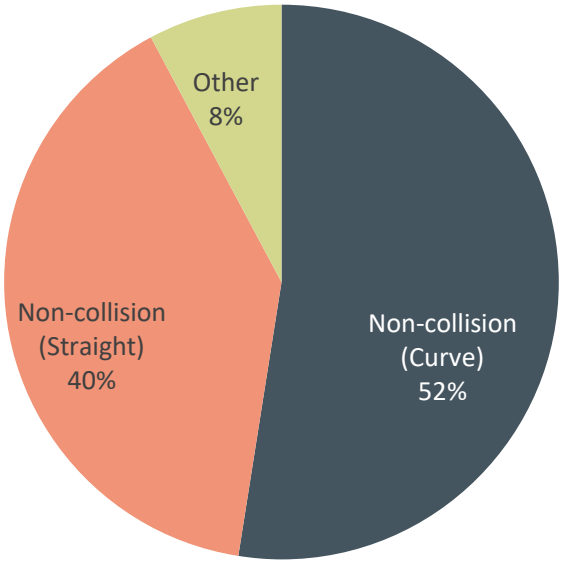
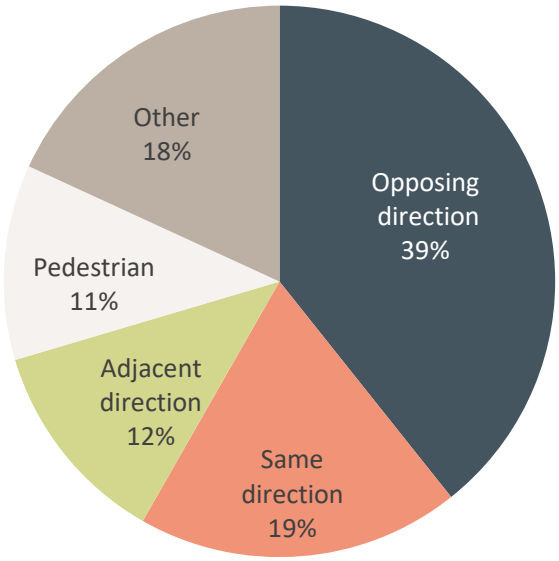


Figure 1.8 **Multiple vehicle crash 2017-2021 – Common crash types (sub-group) for deaths involving a heavy truck**



Note The data in Figure 1.7 and 1.8 are based on state and territory Road User Movement (RUM) and Definitions for Coding Accidents (DCA) codes. Data from each jurisdiction has been collated into a national system using the diagrams in (Austroads 2021). In these coding systems there are 10 main crash type groups; within each main group there are several sub-groups.
Total % includes other subgroups.

Source Austroads 2021

Table 1.9 Fatal crashes involving heavy trucks by state/territory

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Any heavy truck involved									
2012	60	43	59	15	24	4	3	0	208
2013	49	25	41	12	24	2	3	0	156
2014	48	48	33	20	19	5	0	2	175
2015	52	39	40	14	17	8	1	1	172
2016	51	36	37	14	17	5	4	1	165
2017	66	37	31	11	21	7	1	0	174
2018	46	23	44	9	15	4	0	0	141
2019	51	42	33	25	15	5	1	1	173
2020	51	28	40	9	15	5	1	0	149
2021	48	29	42	12	13	3	2	2	151
Change last 12 months (%)	-5.9	3.6	5.0	33.3	-13.3	-40.0	100.0	-	1.3
Ave. trend change p.a.(%)									
- for last 10 calendar years	-0.9	-3.0	-1.9	-2.7	-6.0	1.3	-	-	-2.3
- for last 3 calendar years	-3.0	-16.9	12.8	-30.7	-6.9	-22.5	41.4	-	-6.6
Articulated truck involved									
2012	39	29	35	9	13	3	2	0	130
2013	30	13	26	8	13	2	3	0	95
2014	28	25	25	10	9	2	0	2	101
2015	31	21	23	12	11	2	0	1	101
2016	22	20	23	10	11	4	4	1	95
2017	39	20	17	6	10	1	0	0	93
2018	23	13	25	5	10	2	0	0	78
2019	23	21	16	20	9	2	0	1	92
2020	25	17	29	5	7	2	1	0	86
2021	25	14	35	9	11	1	2	0	97
Change last 12 months (%)	0.0	-17.6	20.7	80.0	57.1	-50.0	100.0	0.0	12.8
Ave. trend change p.a.(%)									
- for last 10 calendar years	-3.9	-4.1	-0.9	-1.8	-3.7	-6.6	-	-	-2.7
- for last 3 calendar years	4.3	-18.4	47.9	-32.9	10.6	-29.3	-	-	2.7
Heavy rigid truck involved									
2012	22	14	26	6	12	2	1	0	83
2013	22	12	15	4	12	0	0	0	65
2014	21	23	8	10	10	3	0	0	75
2015	22	18	18	2	6	6	1	0	73
2016	30	17	14	4	7	2	0	0	74
2017	29	19	15	5	14	6	1	0	89
2018	25	10	21	5	6	2	0	0	69
2019	30	22	17	5	6	3	1	0	84
2020	27	11	11	4	9	3	0	0	65
2021	24	16	8	3	2	2	0	2	57
Change last 12 months (%)	-11.1	45.5	-27.3	-25.0	-77.8	-33.3	0.0	-	-12.3
Ave. trend change p.a.(%)									
- for last 10 calendar years	2.7	-0.8	-5.0	-4.0	-11.4	-	-	-	-1.7
- for last 3 calendar years	-10.6	-14.7	-31.4	-22.5	-42.3	-18.4	-	-	-17.6

Table 1.10 Annual fatal crashes per 10,000 heavy truck registrations

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Any heavy truck involved									
2012	5.8	4.2	6.6	4.7	3.8	3.9	5.7	0.0	5.1
2013	4.7	2.4	4.5	3.8	3.6	1.9	5.4	0.0	3.7
2014	4.5	4.6	3.5	6.4	2.8	4.9	0.0	10.8	4.1
2015	4.7	3.7	4.3	4.5	2.4	7.7	1.7	5.6	4.0
2016	4.5	3.4	4.0	4.5	2.4	4.7	6.7	5.6	3.8
2017	5.6	3.4	3.3	3.5	3.0	6.5	1.7	0.0	4.0
2018	3.8	2.1	4.6	2.8	2.2	3.6	0.0	0.0	3.1
2019	4.1	3.6	3.4	7.9	2.2	4.3	1.7	5.4	3.8
2020	4.1	2.4	4.0	2.9	2.1	4.2	1.7	0.0	3.2
2021	3.8	2.4	4.2	3.5	1.8	2.5	3.3	10.7	3.2
Change last 12 months (%)	-6.5	1.4	4.2	22.3	-16.6	-41.5	89.0	-	-0.9
Ave. trend change p.a.(%)									
- for last 10 calendar years	-3.3	-4.7	-2.9	-3.2	-6.9	-0.8	-	-	-3.8
- for last 3 calendar years	-4.0	-18.8	11.6	-33.5	-9.5	-24.6	37.9	-	-8.3
Articulated truck involved									
2012	20.5	11.5	17.9	11.2	9.8	18.5	18.2	0.0	14.8
2013	15.4	5.1	12.5	10.0	9.1	12.8	25.4	0.0	10.5
2014	14.1	9.6	11.6	12.0	6.0	12.6	0.0	136.1	10.8
2015	15.0	8.0	10.9	14.2	7.0	12.1	0.0	69.9	10.6
2016	10.3	7.5	11.1	11.9	7.0	23.2	31.8	62.5	9.9
2017	17.4	7.3	8.0	6.9	6.6	5.5	0.0	0.0	9.5
2018	10.1	4.6	11.3	5.7	6.5	10.5	0.0	0.0	7.7
2019	10.0	7.2	7.1	22.5	5.7	9.7	0.0	54.3	8.9
2020	10.6	5.7	12.6	5.7	4.3	9.3	8.5	0.0	8.2
2021	9.8	4.5	14.7	9.5	6.6	4.6	16.7	0.0	8.8
Change last 12 months (%)	-8.2	-21.0	16.8	67.2	52.5	-51.0	95.0	0.0	7.3
Ave. trend change p.a.(%)									
- for last 10 calendar years	-6.8	-6.4	-2.7	-3.4	-5.5	-10.3	-	-	-4.9
- for last 3 calendar years	-0.9	-21.1	44.0	-35.1	7.6	-31.4	-	-	-0.8
Heavy rigid truck involved									
2012	2.6	1.8	3.7	2.5	2.4	2.3	2.4	0.0	2.6
2013	2.6	1.5	2.1	1.7	2.3	0.0	0.0	0.0	2.0
2014	2.4	2.9	1.1	4.3	1.9	3.4	0.0	0.0	2.3
2015	2.5	2.3	2.5	0.9	1.1	6.8	2.2	0.0	2.2
2016	3.3	2.1	2.0	1.7	1.3	2.3	0.0	0.0	2.2
2017	3.1	2.3	2.1	2.2	2.6	6.7	2.2	0.0	2.6
2018	2.6	1.2	2.8	2.2	1.1	2.2	0.0	0.0	2.0
2019	3.0	2.6	2.3	2.2	1.1	3.2	2.2	0.0	2.4
2020	2.7	1.2	1.4	1.8	1.7	3.1	0.0	0.0	1.8
2021	2.4	1.8	1.1	1.2	0.4	2.0	0.0	12.1	1.6
Change last 12 months (%)	-10.0	43.5	-27.3	-31.6	-78.7	-35.1	0.0	-	-13.5
Ave. trend change p.a.(%)									
- for last 10 calendar years	0.4	-2.4	-5.9	-4.1	-12.0	-	-	-	-3.0
- for last 3 calendar years	-10.6	-16.3	-31.8	-25.8	-43.9	-20.5	-	-	-18.8

Source ABS 2021 and BITRE 2022

Table 1.11 Annual fatal crashes per billion heavy truck vehicle kilometres travelled (VKT)

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Any heavy truck involved									
2012	11.3	11.0	15.3	12.2	12.1	10.8	18.5	0.0	12.3
2013	9.1	6.3	10.3	9.7	11.5	5.4	18.1	0.0	9.0
2014	8.7	11.9	8.1	16.0	8.7	13.5	0.0	20.6	9.9
2015	9.2	9.5	9.7	11.2	7.7	21.1	5.8	10.0	9.6
2016	8.8	8.6	8.8	11.0	7.6	12.9	23.2	9.7	9.0
2017	11.2	8.6	7.3	8.5	9.4	17.8	5.7	0.0	9.3
2018	7.7	5.2	10.0	7.0	6.7	9.9	0.0	0.0	7.4
2019	8.4	9.3	7.5	19.5	6.7	12.2	5.8	9.3	9.0
2020	8.3	6.1	8.9	7.0	6.6	12.2	5.8	0.0	7.6
2021	7.7	6.2	9.2	9.2	5.6	7.2	11.4	18.2	7.6
Change last 12 months (%)	-7.3	2.0	3.4	31.4	-14.7	-40.9	97.0	-	-0.2
Ave. trend change p.a.(%)									
- for last 10 calendar years	-2.8	-5.0	-3.6	-3.3	-7.2	-0.3	-	-	-4.0
- for last 3 calendar years	-4.6	-18.4	11.0	-31.2	-8.2	-23.2	40.2	-	-8.0
Articulated truck involved									
2012	16.3	16.9	21.7	13.9	15.3	20.0	27.1	0.0	17.4
2013	12.3	7.5	15.4	12.2	14.4	13.5	39.5	0.0	12.4
2014	11.3	14.1	14.4	15.1	9.5	13.5	0.0	116.1	12.9
2015	12.0	11.7	13.3	18.2	11.6	13.0	0.0	55.7	12.7
2016	8.5	11.0	13.2	14.8	11.7	25.4	50.7	53.3	11.8
2017	14.8	10.9	9.6	8.8	10.6	6.2	0.0	0.0	11.4
2018	8.7	7.0	14.0	7.2	10.4	12.2	0.0	0.0	9.5
2019	8.7	11.1	8.8	29.0	9.2	12.0	0.0	49.6	11.1
2020	9.3	8.8	15.8	7.3	7.1	12.0	12.5	0.0	10.3
2021	9.2	7.2	18.9	12.9	11.0	5.9	24.8	0.0	11.5
Change last 12 months (%)	-1.0	-18.5	19.5	78.2	55.5	-50.5	98.0	0.0	11.7
Ave. trend change p.a.(%)									
- for last 10 calendar years	-5.2	-5.5	-2.2	-2.6	-5.1	-8.1	-	-	-4.0
- for last 3 calendar years	3.4	-19.2	46.1	-33.2	9.4	-29.6	-	-	1.7
Heavy rigid truck involved									
2012	7.5	6.4	11.6	10.3	10.5	9.1	11.3	0.0	8.8
2013	7.4	5.4	6.5	6.9	10.1	0.0	0.0	0.0	6.7
2014	7.0	10.1	3.4	17.0	8.1	13.5	0.0	0.0	7.6
2015	7.1	7.8	7.5	3.4	4.8	26.7	10.7	0.0	7.3
2016	9.4	7.1	5.7	6.7	5.4	8.7	0.0	0.0	7.2
2017	8.9	7.8	6.0	8.3	10.8	25.8	10.5	0.0	8.4
2018	7.4	3.9	8.1	8.3	4.7	8.4	0.0	0.0	6.4
2019	8.8	8.4	6.5	8.4	4.7	12.3	10.7	0.0	7.7
2020	7.8	4.1	4.1	6.8	7.0	12.3	0.0	0.0	5.8
2021	6.8	5.8	2.9	5.0	1.5	8.0	0.0	22.3	5.0
Change last 12 months (%)	-12.9	42.6	-28.7	-26.5	-78.2	-34.6	0.0	-	-14.0
Ave. trend change p.a.(%)									
- for last 10 calendar years	0.4	-3.4	-7.1	-4.3	-12.5	-	-	-	-3.7
- for last 3 calendar years	-12.6	-16.7	-32.7	-23.2	-43.2	-19.2	-	-	-19.3

Source BITRE 2021

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Section 2
BUS

Table 2.1 Deaths from crashes involving a bus[a] by state/territory

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Bus involved									
2012	6	3	7	1	5	0	0	0	22
2013	2	3	6	0	0	0	1	0	12
2014	6	4	1	1	6	0	0	1	19
2015	5	7	2	1	2	1	3	1	22
2016	10	2	3	3	2	0	2	0	22
2017	6	10	10	0	2	0	2	0	30
2018	7	5	5	0	1	0	0	1	19
2019	10	6	0	2	2	0	0	0	20
2020	4	1	3	2	1	0	0	0	11
2021	3	1	3	3	4	0	1	0	15
Change last 12 months (%)	-25.0	0.0	0.0	50.0	300.0	0.0	-	0.0	36.4
Ave. trend change p.a.(%)									
- for last 10 calendar years	1.0	-8.7	-	-	-	-	-	-	-2.4
- for last 3 calendar years	-45.2	-59.2	-	22.5	41.4	-	-	0.0	-13.4

a Crashes involving a bus may involve other vehicles and vehicle types.

Figure 2.1 Deaths in crashes involving a bus – with trend

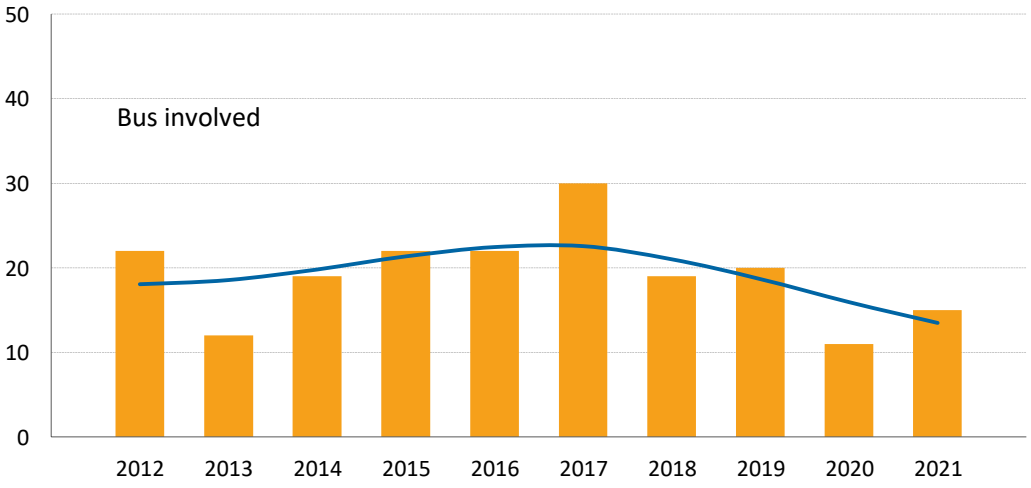


Table 2.2 Deaths from crashes involving a bus by road user

	Bus occupant	Light vehicle occupant	Pedestrian	Motor-cyclist	Pedal cyclist	Total[a]
2012	5	9	6	2	0	22
2013	0	6	1	2	3	12
2014	5	5	5	1	3	19
2015	4	13	2	3	0	22
2016	3	8	8	3	0	22
2017	12	5	11	1	1	30
2018	0	6	9	2	2	19
2019	2	6	8	3	1	20
2020	1	3	3	3	1	11
2021	2	6	4	1	2	15
Change last 12 months (%)	100.0	100.0	33.3	-66.7	100.0	36.4
Ave. trend change p.a.(%)						
- for last 10 calendar years	-	-6.1	7.0	-0.1	-	-2.4
- for last 3 calendar years	0.0	0.0	-29.3	-42.3	41.4	-13.4

a Total includes unknown.

Table 2.3 Deaths by crash type – bus

	Multiple Vehicle	Single Vehicle	Total
2012	20	2	22
2013	12	0	12
2014	15	4	19
2015	21	1	22
2016	20	2	22
2017	25	5	30
2018	19	0	19
2019	20	0	20
2020	10	1	11
2021	13	2	15
Change last 12 months (%)	30.0	100.0	36.4
Ave. trend change p.a.(%)			
- for last 10 calendar years	-2.3	-	-2.4
- for last 3 calendar years	-19.4	-	-13.4

Table 2.4 Deaths by posted speed limit (%) – bus involved

	≤40 km/h	50 km/h	60 to 70km/h	80 to 90 km/h	100 km/h	≥110 km/h
2012	4.5	9.1	63.6	0.0	4.5	18.2
2013	8.3	8.3	50.0	0.0	16.7	16.7
2014	0.0	10.5	31.6	10.5	15.8	26.3
2015	4.5	0.0	40.9	13.6	22.7	13.6
2016	4.5	22.7	50.0	4.5	9.1	9.1
2017	10.0	20.0	23.3	13.3	33.3	0.0
2018	10.5	21.1	15.8	15.8	21.1	5.3
2019	10.0	20.0	30.0	15.0	10.0	15.0
2020	27.3	9.1	27.3	9.1	18.2	9.1
2021	0.0	26.7	33.3	6.7	13.3	20.0
Change last 12 months (%)	-100.0	193.3	22.2	-26.7	-26.7	120.0

Note Percentages may not sum to 100 due to some crashes having an unknown posted speed limit and to rounding.

Table 2.5 Deaths by Remoteness Area (%) – bus involved

	Major Cities	Inner Regional	Outer Regional	Remote	Very Remote
2012	68.2	4.5	9.1	13.6	4.5
2013	50.0	25.0	16.7	0.0	8.3
2014	47.4	0.0	26.3	0.0	26.3
2015	45.5	18.2	36.4	0.0	0.0
2016	77.3	4.5	9.1	0.0	9.1
2017	60.0	16.7	16.7	3.3	3.3
2018	63.2	15.8	15.8	5.3	0.0
2019	65.0	15.0	20.0	0.0	0.0
2020	54.5	27.3	9.1	9.1	0.0
2021	33.3	40.0	13.3	6.7	6.7
Change last 12 months (%)	-38.9	46.7	46.7	-26.7	-

Note Percentages may not sum to 100 due to some crashes having an unknown Remoteness Area and to rounding.
Source ABS 2021b

Figure 2.2 Deaths by Remoteness Area (%) – 5 years combined to 2021 – bus involved

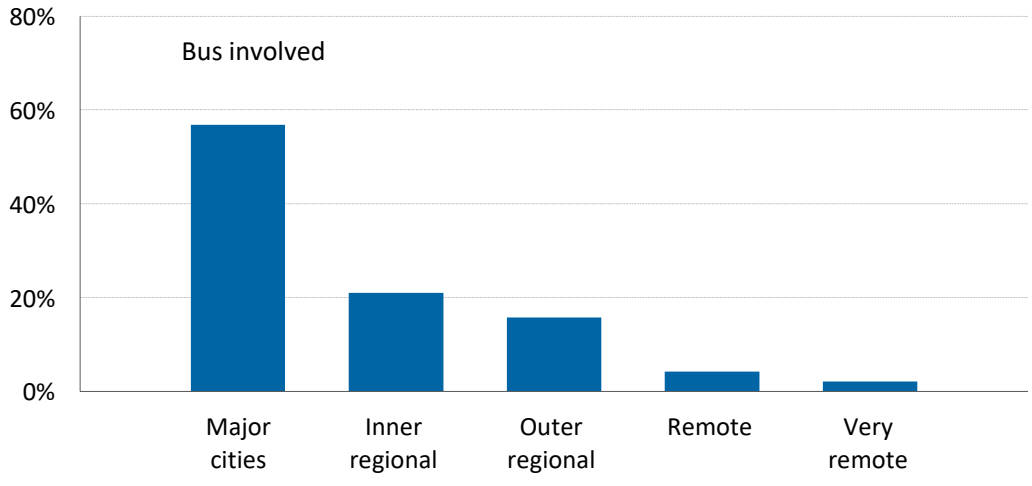


Table 2.6 Deaths and hospitalised injuries of bus occupants

	Deaths	*Hospitalised Injuries*
2012	5	217
2013	0	226
2014	5	289
2015	4	246
2016	3	283
2017	12	265
2018	0	247
2019	2	255
2020	1	-
2021	2	-

Note There were breaks in the injury series in 2012 and 2017. These were due to changes in admissions criteria and the net result were reductions in annual counts of between 3%-5%.

Sources AIHW 2021

Figure 2.3 Deaths and hospitalised injuries of bus occupants

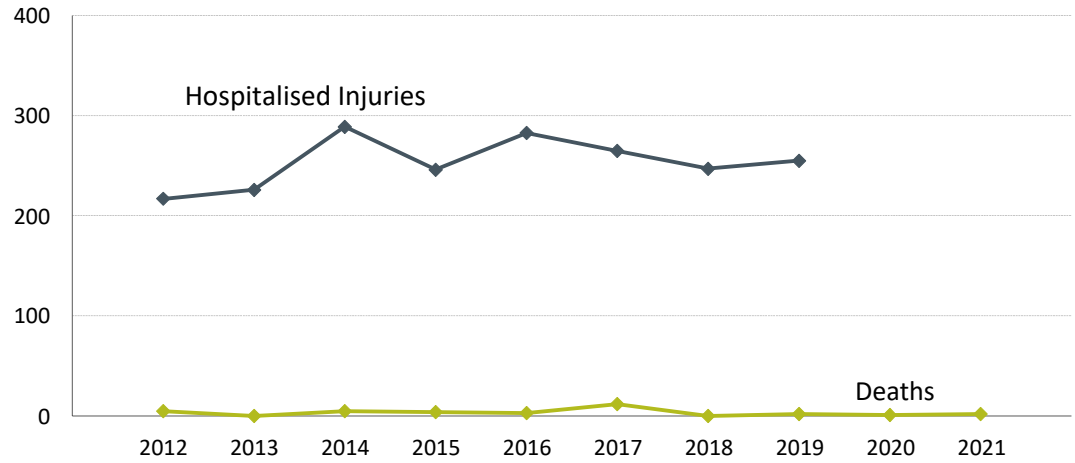


Table 2.7 Fatal crashes involving a bus by state/territory

	NSW	*Vic*	*Qld*	*SA*	*WA*	*Tas*	*NT*	*ACT*	*Australia*
2012	6	3	6	1	3	0	0	0	19
2013	2	3	5	0	0	0	1	0	11
2014	6	3	1	1	3	0	0	1	15
2015	5	6	2	1	2	1	1	1	19
2016	10	2	3	3	2	0	1	0	21
2017	6	7	8	0	2	0	2	0	25
2018	7	5	5	0	1	0	0	1	19
2019	9	6	0	2	1	0	0	0	18
2020	4	1	3	2	1	0	0	0	11
2021	3	1	3	3	4	0	1	0	15
Change last 12 months (%)	-25.0	0.0	0.0	50.0	300.0	0.0	-	0.0	36.4
Ave. trend change p.a.(%)									
- for last 10 calendar years	0.7	-7.8	-	-	-	-	-	-	-0.6
- for last 3 calendar years	-42.3	-59.2	-	22.5	100.0	0.0	-	-	-8.7

Figure 2.4 **Single vehicle crash 2017-2021 – Common crash types (sub-group) for deaths involving a bus**

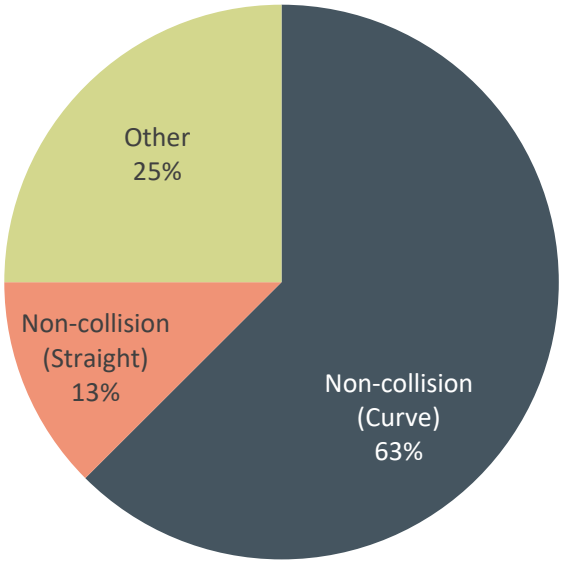
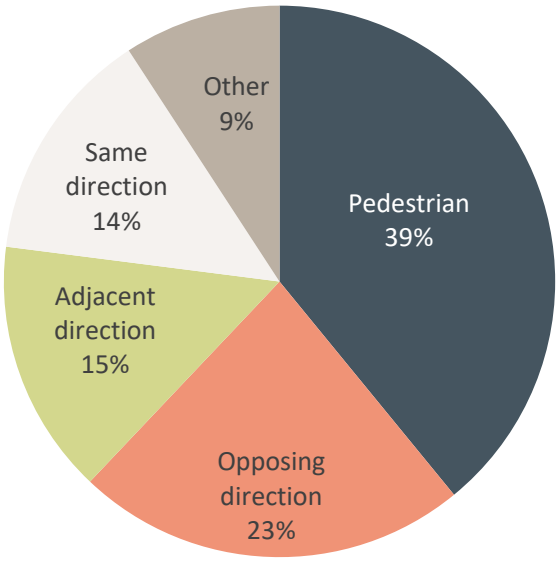


Figure 2.5 **Multiple vehicle crash 2017-2021 – Common crash types (sub-group) for deaths involving a bus**



Note The data in Figure 1.7 and 1.8 are based on state and territory Road User Movement (RUM) and Definitions for Coding Accidents (DCA) codes. Data from each jurisdiction has been collated into a national system using the diagrams in (Austroads 2021). In these coding systems there are 10 main crash type groups; within each main group there are sub-groups.
Total % includes other subgroups.

Source Austroads 2021

Table 2.8 Annual fatal crashes rates – bus involved

	Per 10,000 bus registrations	*Per billion bus VKT*
2012	2.1	8.1
2013	1.2	4.6
2014	1.6	6.2
2015	2.0	7.8
2016	2.2	8.5
2017	2.6	10.1
2018	1.9	7.6
2019	1.8	7.1
2020	1.1	4.8
2021	1.5	6.7
Change last 12 months (%)	41.2	39.2

Source BITRE 2021 and BITRE 2022

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Section 3
EXPOSURE

Table 3.1 Motor vehicles on register – by state/territory

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Articulated truck									
2012	19,009	25,265	19,595	8,016	13,217	1,625	1,099	169	87,995
2013	19,505	25,560	20,720	7,988	14,226	1,563	1,181	161	90,904
2014	19,906	26,107	21,496	8,326	15,054	1,584	1,233	147	93,853
2015	20,622	26,160	21,060	8,429	15,680	1,652	1,229	143	94,975
2016	21,450	26,779	20,784	8,423	15,609	1,721	1,259	160	96,185
2017	22,472	27,472	21,162	8,638	15,242	1,808	1,145	169	98,108
2018	22,795	28,456	22,061	8,797	15,368	1,900	1,149	168	100,694
2019	23,084	29,192	22,633	8,892	15,833	2,057	1,163	184	103,038
2020	23,475	30,010	23,106	8,837	16,206	2,140	1,171	192	105,137
2021	25,558	31,265	23,879	9,514	16,699	2,183	1,201	207	110,506
Change last 12 months (%)	8.9	4.2	3.3	7.7	3.0	2.0	2.6	7.8	5.1
Ave. trend change p.a.(%)									
- for last 10 calendar years	3.1	2.4	1.8	1.7	1.9	4.1	0.1	2.9	2.3
- for last 3 calendar years	5.2	3.5	2.7	3.4	2.7	3.0	1.6	6.1	3.6
Heavy rigid truck									
2012	85,087	78,324	70,124	23,566	50,483	8,578	4,207	1,746	322,115
2013	85,807	78,490	71,366	23,326	52,218	8,720	4,359	1,712	325,998
2014	86,973	78,376	72,362	23,134	53,739	8,698	4,478	1,704	329,464
2015	88,977	78,446	71,911	22,982	54,366	8,773	4,600	1,644	331,699
2016	91,242	79,506	71,776	22,886	54,219	8,838	4,724	1,621	334,812
2017	94,933	81,460	72,544	23,096	53,899	8,999	4,633	1,614	341,179
2018	97,953	83,233	73,896	22,918	53,367	9,271	4,718	1,610	346,966
2019	100,546	86,103	75,255	22,828	53,228	9,510	4,638	1,651	353,759
2020	101,814	88,175	76,083	22,713	54,112	9,761	4,593	1,583	358,834
2021	100,567	89,398	76,108	24,891	56,409	10,031	4,897	1,655	363,956
Change last 12 months (%)	-1.2	1.4	0.0	9.6	4.2	2.8	6.6	4.5	1.4
Ave. trend change p.a.(%)									
- for last 10 calendar years	2.3	1.6	0.9	0.1	0.7	1.7	1.2	-0.8	1.4
- for last 3 calendar years	0.0	1.9	0.6	4.4	2.9	2.7	2.8	0.1	1.4
Bus									
2012	23,762	19,354	20,220	5,462	14,371	2,701	3,660	1,069	90,599
2013	24,210	19,509	21,026	5,529	15,133	2,744	3,810	1,073	93,034
2014	24,617	19,623	21,337	5,622	15,322	2,667	3,882	1,061	94,131
2015	25,249	19,832	21,432	5,554	15,463	2,690	3,888	1,041	95,149
2016	25,939	20,302	21,455	5,691	15,362	2,818	3,964	1,051	96,582
2017	26,761	20,626	21,361	5,766	14,746	2,859	3,768	1,043	96,930
2018	27,166	21,063	21,831	5,947	14,661	2,906	3,911	1,080	98,565
2019	27,605	21,432	21,944	5,909	14,698	3,008	3,647	1,136	99,379
2020	27,838	21,853	21,989	6,077	14,945	3,112	3,532	1,127	100,473
2021	26,548	20,849	21,196	6,008	15,042	3,042	3,328	1,047	97,060
Change last 12 months (%)	-4.6	-4.6	-3.6	-1.1	0.6	-2.2	-5.8	-7.1	-3.4
Ave. trend change p.a.(%)									
- for last 10 calendar years	1.7	1.3	0.6	1.2	-0.1	1.7	-1.0	0.4	0.9
- for last 3 calendar years	-1.9	-1.4	-1.7	0.8	1.2	0.6	-4.5	-4.0	-1.2

Source ABS 2021 and BITRE 2022

Table 3.2 Vehicle kilometres travelled (millions) by state/territory

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Articulated truck									
2012	2,386	1,714	1,613	649	850	150	74	16	7,452
2013	2,432	1,731	1,692	656	901	148	76	17	7,652
2014	2,478	1,773	1,741	663	945	148	78	17	7,843
2015	2,575	1,790	1,725	658	945	154	80	18	7,945
2016	2,598	1,820	1,743	675	940	158	79	19	8,031
2017	2,630	1,842	1,763	685	945	160	79	19	8,123
2018	2,644	1,868	1,786	693	963	164	79	20	8,217
2019	2,658	1,900	1,810	689	981	167	79	20	8,304
2020	2,676	1,922	1,836	689	991	167	80	20	8,382
2021	2,703	1,941	1,855	696	1,002	169	81	20	8,466
Change last 12 months (%)	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.0
Ave. trend change p.a.(%)									
- for last 10 calendar years	1.4	1.4	1.3	0.8	1.5	1.7	0.7	2.7	1.3
- for last 3 calendar years	0.8	1.1	1.2	0.5	1.1	0.5	0.7	0.7	1.0
Heavy rigid truck									
2012	2,923	2,185	2,233	580	1,141	220	89	78	9,447
2013	2,964	2,226	2,298	581	1,189	222	90	78	9,647
2014	3,008	2,269	2,351	587	1,234	222	92	80	9,843
2015	3,094	2,310	2,388	587	1,254	225	94	82	10,033
2016	3,186	2,379	2,449	594	1,285	230	93	85	10,300
2017	3,265	2,446	2,511	603	1,294	233	95	86	10,535
2018	3,362	2,544	2,597	600	1,278	239	97	91	10,807
2019	3,393	2,609	2,614	593	1,273	243	93	87	10,907
2020	3,482	2,683	2,665	591	1,289	244	94	88	11,136
2021	3,551	2,737	2,719	603	1,315	249	95	90	11,359
Change last 12 months (%)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ave. trend change p.a.(%)									
- for last 10 calendar years	2.3	2.7	2.2	0.4	1.3	1.5	0.7	1.7	2.1
- for last 3 calendar years	2.3	2.4	2.0	0.8	1.6	1.1	1.0	1.3	2.0
Bus									
2012	613	482	578	159	347	50	89	35	2,353
2013	618	472	600	160	364	49	92	36	2,392
2014	625	474	610	160	381	50	94	37	2,431
2015	632	476	605	163	381	51	95	36	2,440
2016	640	482	612	163	382	51	97	36	2,462
2017	654	487	604	163	379	52	97	36	2,473
2018	674	494	605	163	384	53	96	37	2,506
2019	691	502	611	164	385	54	96	37	2,540
2020	640	478	536	146	343	47	74	35	2,299
2021	624	463	531	141	339	47	73	33	2,252
Change last 12 months (%)	-2.5	-3.2	-0.9	-3.3	-1.0	0.0	-1.5	-5.3	-2.1
Ave. trend change p.a.(%)									
- for last 10 calendar years	0.7	0.1	-0.9	-1.0	-0.3	-0.2	-2.0	-0.4	-0.2
- for last 3 calendar years	-5.0	-4.0	-6.8	-7.2	-6.2	-6.4	-12.8	-5.7	-5.9

Source BITRE 2021

Glossary

The following definitions are general explanations only. The precise definitions vary across the organisations that provide the source data. These differences may result in minor inconsistencies between jurisdictions for some fileds.

Road deaths from recent months are preliminary and subject to revision.

Articulated truck	A motor vehicle primarily for load carrying, consisting of a prime mover that has no significant load carrying area but with a turntable device which can be linked to one or more trailers.
Bus	A motor vehicle constructed for the carriage of passengers which has at least 10 seats, including the driver's seat.
Crash	Any apparently unpremeditated event reported to police, or other relevant authority, and resulting in death, injury or property damage attributable to the movement of a road vehicle on a public road.
Fatal crash	A crash for which there is at least one death.
Gross Vehicle Mass (GVM)	Tare weight (i.e. unladen weight) of the motor vehicle plus its maximum carrying capacity excluding trailers.
Heavy rigid truck	A motor vehicle of GVM greater than 4.5 tonnes constructed with a load carrying area. Includes a rigid truck with a tow bar, draw bar or other non-articulated coupling on the rear of the vehicle.
Heavy truck	A heavy rigid truck or an articulated truck
Hospitalised injury	A person admitted to hospital from a crash occurring in 'traffic', which is defined here as excluding off-road and unknown locations.
Light vehicle	A light vehicle is a four-wheeled vehicle under 4.5 tonnes, most commonly passenger cars, but including vans and light commercial vehicles as well.
Occupant	A driver or passenger of a four-wheeled motor vehicle.
Road death or fatality	A person who dies within 30 days of a crash as a result of injuries received in that crash.
Trend per cent changes	The 'average trend changes p.a.(%)' are calculated by fitting an exponential trend line to the last ten data points. The Excel function LOGEST performs the fit. The resulting trend line represents a constant annual percent change over the period. Note: The occurrence of a zero in the original series precludes trend estimation by this method.
Trend lines	Trend lines are estimated by Whittaker-Henderson methodology. The R package 'pracma' is used to perform the smoothing.

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