

Analysis of Work Related Vehicle Fatalities for the Period 2003 - 2008



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Introduction

Between January 2003 and December 2008 there were 367 work-related fatal accidents, of which 170 (46%) were classified as work – related vehicle incidents. On average over the last six years, fatal work related vehicle incidents have accounted for 47% of fatalities, with 2008 seeing the highest percentage at 60%. Of the 170 work-related vehicle fatalities during this period, 145 (40%*) of the fatalities involved workplace transport (WT) whilst 25 (7% *) of the fatalities were work-related road (WRR) fatalities. Of the 25 work-related road fatalities, 16 fatalities were driving for work (DFW) incidents and 9 were working on / or near a road (WNR) incidents. Annual statistics are outlined in Figures 1 and 2 and Tables 1, 2 and 3.

* Percentage calculated based on total number of fatalities.

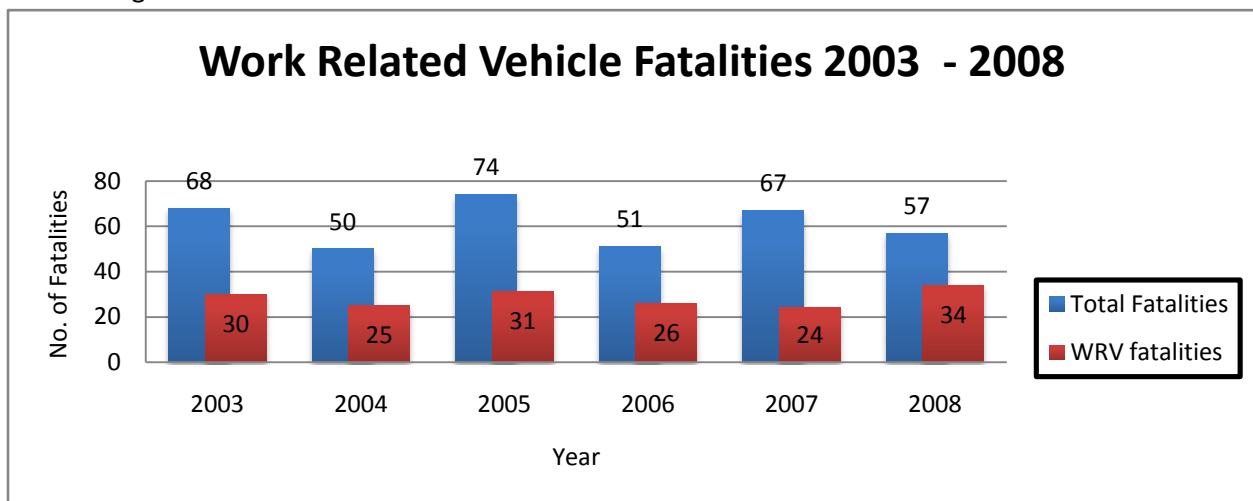


Figure 1: Total fatalities and Work Related Vehicle Fatalities for 2003 – 2008.

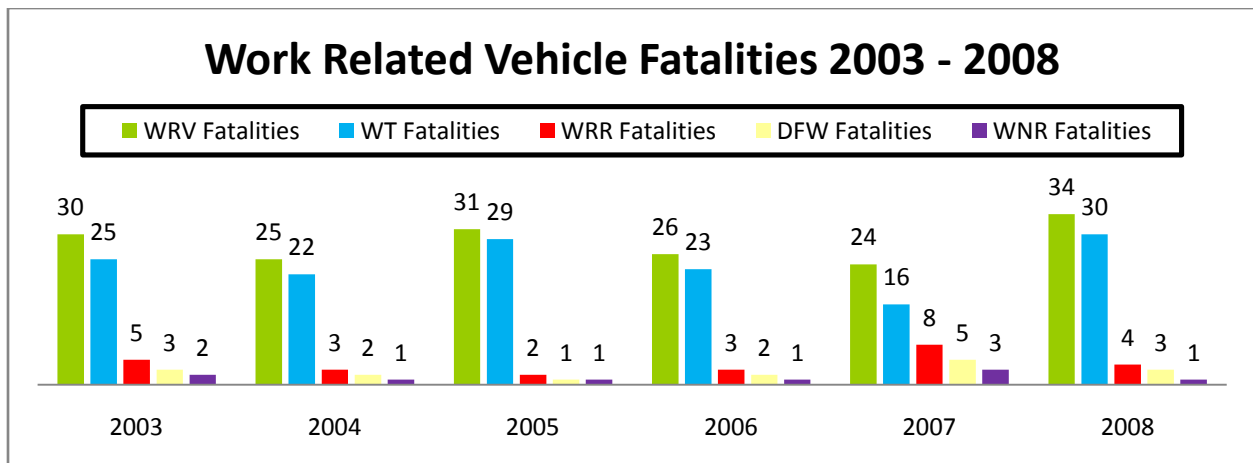


Figure 2: Breakdown of Work Related Vehicle Fatalities for 2003 – 2008.

Year	Total No. of Fatalities	No. of WRV Fatalities	% WRV Fatalities*	No. of WT Fatalities	% WT Fatalities*	No. of WRR Fatalities	% WRR Fatalities*
2003	68	30	44	25	37	5	7
2004	50	25	50	22	44	3	6
2005	74	31	42	29	39	2	3
2006	51	26	51	23	45	3	6
2007	67	24	36	16	24	8	12
2008	57	34	60	30	53	4	7
Total	367	170	46	145	40	25	7

Table 1: Work-Related Vehicle and Workplace Transport Fatalities for the period 2003 – 2008.

* Percentage calculated based on total fatalities for the year.

Year	Driving for Work (DFW) Fatalities	% DFW Fatalities*	Working on / or near a road (WNR) Fatalities	% WNR Fatalities*
2003	3	4	2	7
2004	2	4	1	4
2005	1	1	1	3
2006	2	4	1	4
2007	5	7	3	13
2008	3	5	1	3
Total	16	4	9	5

Table 2: Breakdown of Work-Related Road Fatalities per year for the period 2003 – 2008.

* Percentage calculated based on total fatalities for the year.

	% based on total Fatalities	% based on total WRV Fatalities
Actual WT incidents	40	85
Actual WRR incidents	7	15
Actual DFW incidents	4	9
Actual WNR incidents	2	5

Table 3: Percentage Breakdown of Workplace Transport Fatalities and Work Related Road Fatalities for the period 2003 – 2008.

Nace Sectors Involved in Work-Related Vehicle Fatalities

Of the 17 Nace Sectors, 11 sectors experienced a fatal accident involving a work related vehicle in the period 2003 - 2008 (see Tables 4 and 5). The Electricity, Gas, Steam & Air Conditioning Supply (Nace D), Administrative and Support Service Activities (Nace N), Human Health and Social Work Activities (Nace Q) and Arts, Entertainment and Recreation (Nace R) were the only industry sectors that did not experience a WRV fatality. Six Nace sectors experienced work-related road fatalities (Nace sectors C, E, F, O, H and S) (see Table 6).

Nace Code	Sector	Fatalities 1/1/03 - 11/12/08	WRV Fatalities	%
A	Agriculture, Forestry & Fishing	121	52	43
B	Mining & Quarrying	12	1	8
C	Manufacturing	29	11	38
D	Electricity, Gas, Steam & Air Conditioning Supply.	2	0	0
E	Water Supply, Sewerage, Waste Management and Remediation Activities	10	6	60
F	Construction	105	50	48
G	Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	22	15	68
H	Transportation and Storage	35	25	71
J	Information and Communication	1	0	0
K	Financial and Insurance Activities	1	0	0
M	Professional, Scientific and Technical Activities	2	2	100
N	Administrative and Support Service Activities	4	0	0
O	Public Administration and Defence; Compulsory Social Security	8	5	63
P	Education	1	1	100
Q	Human Health and Social Work Activities	2	0	0
R	Arts, Entertainment and Recreation	4	0	0
S	Other Service Activities	8	2	25
Totals		367	170	

Table 4: Work –Related Vehicle Fatalities per Nace sector for the period 2003 - 2008.

Year		A	B	C	D	E	F	G	H	J	K	M	N	O	P	Q	R	S	Total Fatalities
2003	Fatalities	20	1	6	2	2	20	4	9	0	0	0	0	1	0	0	2	1	68
	WRV Fatalities	11	0	2	0	1	9	2	4	0	0	0	0	0	0	0	0	1	30
	% WRV	55%	0%	33%	0%	50%	45%	50%	44%	0%	0%	0%	0%	0%	0%	0%	0%	100%	44%
2004	Fatalities	16	0	3	0	1	16	3	6	0	1	0	0	0	1	1	0	2	50
	WRV Fatalities	7	0	1	0	1	6	3	5	0	0	0	0	0	1	0	0	1	25
	% WRV	44%	0%	33%	0%	100%	38%	100%	83%	0%	0%	0%	0%	0%	100%	0%	0%	50%	50%
2005	Fatalities	20	6	6	0	2	23	8	5	0	0	0	1	2	0	0	0	1	74
	WRV Fatalities	8	0	3	0	0	10	3	5	0	0	0	0	2	0	0	0	0	31
	% WRV	40%	0%	50%	0%	0%	43%	38%	100%	0%	0%	0%	0%	100%	0%	0%	0%	0%	42%
2006	Fatalities	20	2	4	0	0	13	3	4	0	0	1	1	1	0	1	1	0	51
	WRV Fatalities	11	0	2	0	0	7	3	1	0	0	1	0	1	0	0	0	0	26
	% WRV	55%	0%	50%	0%	0%	54%	100%	25%	0%	0%	100%	0%	100%	0%	0%	0%	0%	51%
2007	Fatalities	23	2	3	0	3	18	1	8	1	0	0	2	4	0	0	0	2	67
	WRV Fatalities	3	0	0	0	2	9	1	7	0	0	0	0	2	0	0	0	0	24
	% WRV	13%	0%	0%	0%	67%	50%	100%	88%	0%	0%	0%	0%	50%	0%	0%	0%	0%	36%
2008	Fatalities	22	1	7	0	2	15	3	3	0	0	1	0	0	0	0	1	2	57
	WRV Fatalities	12	1	3	0	2	9	3	3	0	0	1	0	0	0	0	0	0	34
	% WRV	55%	0%	43%	0%	100%	60%	100%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	60%
Fatalities	Total Nace Sector	121	12	29	2	10	105	22	35	1	1	2	4	8	1	2	4	8	367
	Total WRV Nace Sector	52	1	11	0	6	50	15	25	0	0	2	0	5	1	0	0	2	170
	Total % WRV	43%	8%	38%	0%	60%	48%	68%	71%	0%	0%	100%	0%	63%	100%	0%	0%	25%	46%

Table 5: Detailed breakdown of Work-Related Vehicle Fatalities per Year, per Nace Sector, 2003 – 2008.

Nace Code	No. WRV Fatalities	% WRV Fatalities (as % of Total Fatalities)	No. WT Fatalities	WT Fatalities (as % of Total Fatalities)	No.WRR Fatalities	%WRR Fatalities (as % of total fatalities)	No.DFW Fatalities	%DFW Fatalities (as % total fatalities)	No.WNR Fatalities	%WNR Fatalities (as % of total fatalities)
A	52	14	52	14	0	0	0	0	0	0
B	1	0	1	0	0	0	0	0	0	0
C	11	3	9	2	2	0.54	2	0.54	0	0
D	0	0	0	0	0	0	0	0	0	0
E	6	2	5	1	1	0.27	0	0	1	0.27
F	50	14	42	11	8	2.18	5	1.36	3	0.82
G	15	4	15	4	0	0	0	0	0	0
H	25	7	16	4	9	2.45	9	2.45	0	0
J	0	0	0	0	0	0	0	0	0	0
K	0	0	0	0	0	0	0	0	0	0
M	2	1	2	1	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0
O	5	1	1	0	4	1.09	0	0	4	1.09
P	1	0	1	0	0	0	0	0	0	0
Q	0	0	0	0	0	0	0	0	0	0
R	0	0	0	0	0	0	0	0	0	0
S	2	1	1	0	1	0.27	0	0	1	0.27
Total	170	46	145	40	25	6.81	16	4.36	9	2.45

Table 6: Breakdown of Workplace Transport Fatalities and Work-Related Road Fatalities per NACE Sector for the period 2003 – 2008.

Causal Factors involved in Work-Related Vehicle Fatalities

The main cause of WRV fatalities during the period 2003 - 2008 was people being hit or run over by a vehicle, followed by vehicle overturns (see Figure 3 & Table 7). Of the 17 fatalities involving people falling or being thrown from a vehicle, 3 people were killed being thrown from the vehicle, 9 died due to falls and 5 died due to falling from the vehicle and then being run over (see Table 8). The six deaths due to unguarded parts all occurred in Agriculture with 4 of the deaths due to unguarded PTO shafts. Of the 7 deaths involving vehicle collapses, 5 of the deaths occurred whilst carrying out maintenance on the vehicle. Of the 17 deaths due to being hit by a vehicle part, 5 of the deaths involved being hit by the bucket of an excavator. Of the 6 electrocutions, 2 involved cement trucks and a further 2 involved truck mounted cranes.

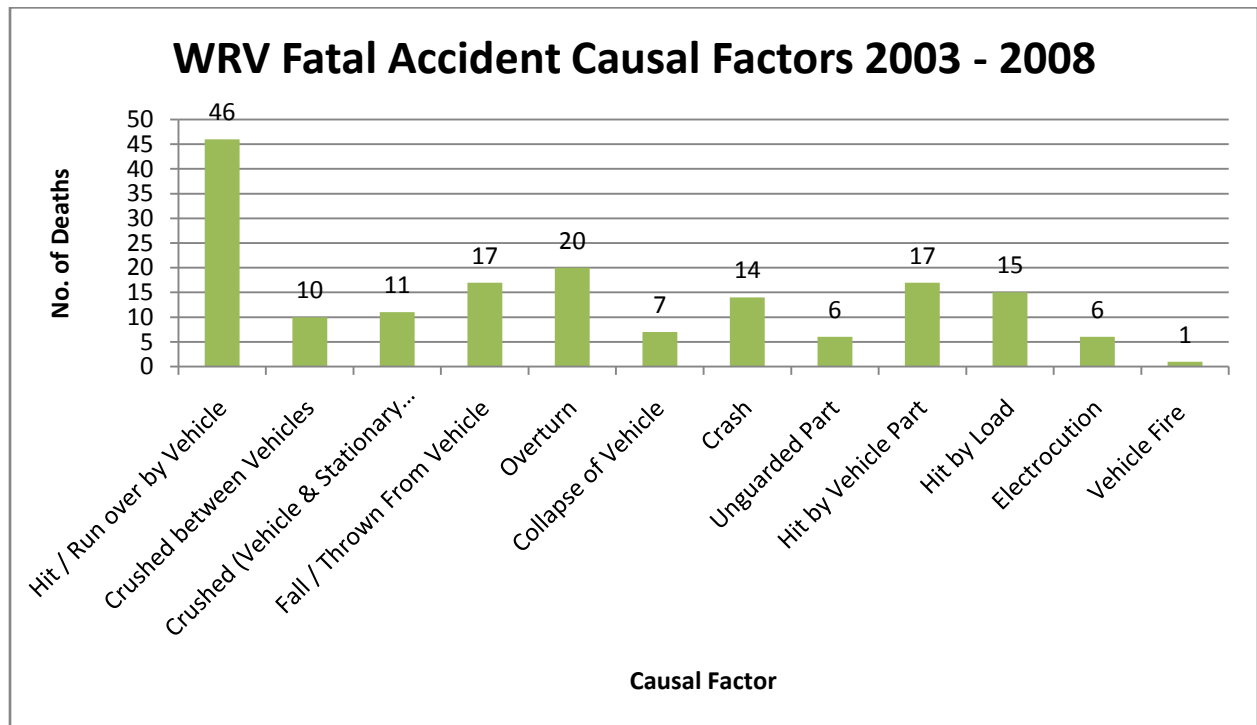


Figure 3: Causal factors for Work-Related Vehicle Fatalities 2003 – 2008.

NACE	Hit / Run over	Crushed between Vehicles	Crushed (Vehicle & Stationary Object)	Fall / Thrown From Vehicle	Overtum	Collapse of Vehicle	Collision	Unguarded Part	Hit by Part of Vehicle	Hit by Load	Electrocution	Vehicle Fire	Total
A	15	3	4	9	6	3	2	6	2	0	1	1	52
B	0	1	0	0	0	0	0	0	0	0	0	0	1
C	2	0	3	0	1	1	2	0	1	1	0	0	11
D	0	0	0	0	0	0	0	0	0	0	0	0	0
E	3	1	0	0	0	0	0	0	1	1	0	0	6
F	13	2	3	3	9	1	2	0	9	4	4	0	50
G	3	2	1	1	1	1	1	0	3	2	0	0	15
H	6	1	0	3	0	1	6	0	1	6	1	0	25
J	0	0	0	0	0	0	0	0	0	0	0	0	0
K	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	1	0	0	0	0	1	0	0	2
N	0	0	0	0	0	0	0	0	0	0	0	0	0
O	3	0	0	0	1	0	1	0	0	0	0	0	5
P	1	0	0	0	0	0	0	0	0	0	0	0	1
Q	0	0	0	0	0	0	0	0	0	0	0	0	0
R	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	1	1	0	0	0	0	0	0	0	2
	46	10	11	17	20	7	14	6	17	15	6	1	170

Table 7: Work-Related Vehicle Fatal Accident Causal Factors per Nace Sector, 2003 – 2008.

NACE Sector	Thrown	Falls	Fell & then run over	Total
A	2	2	5	9
B	0	0	0	0
C	0	0	0	0
D	0	0	0	0
E	0	0	0	0
F	1	2	0	3
G	0	1	0	1
H	0	3	0	3
J	0	0	0	0
K	0	0	0	0
M	0	0	0	0
N	0	0	0	0
O	0	0	0	0
P	0	0	0	0
Q	0	0	0	0
R	0	0	0	0
S	0	1	0	1
	3	9	5	17

Table 8: Breakdown of Causal Factor “Fall/Thrown” from vehicle per Nace Sector for Fatal Accidents 2003 – 2008.

Main Vehicle Types Involved in Work-Related Vehicle Fatalities

Tractors (43) predominated as the main type of vehicle involved in fatal accidents during the period 2003 – 2008, followed by trucks and lorries, trailers, excavators and dumpers (Figure 4). Of the 43 tractors involved in fatal accidents, 40 were in the Agricultural Sector. Of the 4 forklift trucks fatalities, 2 deaths were due to the forklift truck load falling on the victim, 1 death was due to the lift truck crushing the person against a stationary object and the fourth fatality was due to a non-integrated cage falling off the forks of the lift truck. Within the construction sector some of the main vehicles involved in fatal accidents were dumpers (10 fatalities), excavators (9), teleporters (4), cement trucks (3) and articulated dumpers (2). It should be noted that in some cases more than one vehicle may have been recorded as being involved in a fatal accident.

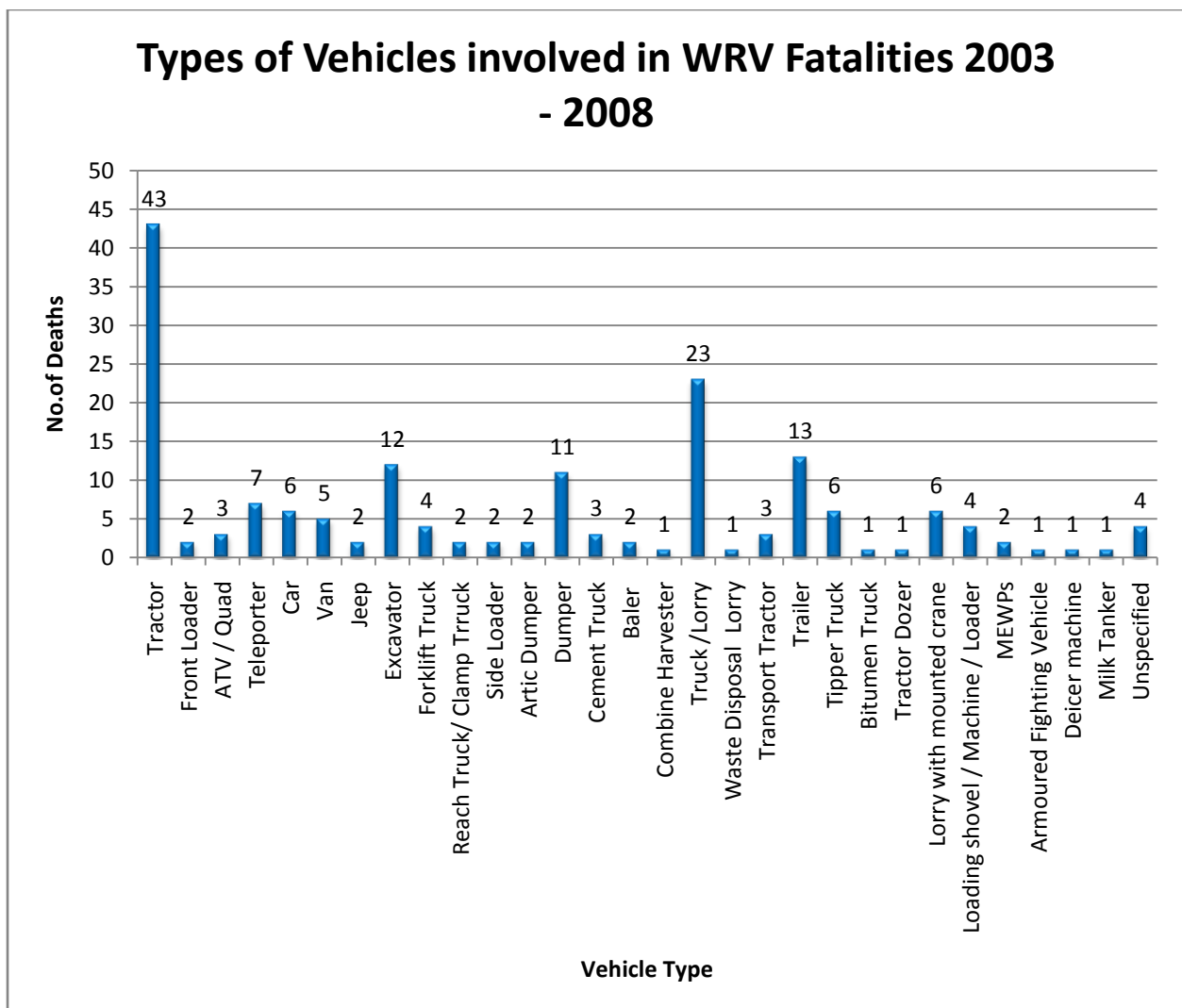


Figure 4: Vehicle Types Involved in Fatal Work – Related Vehicle Accidents 2003 – 2008.

Activities associated with Work-Related Vehicle Fatalities

Loading and unloading activities were involved in 28 (16%) of the 170 WRV fatalities (Figure 5). Reversing accounted for 19 fatalities (11%) which is significantly lower than in the United Kingdom where reversing accounts for 25% of WRV fatalities. Nine fatalities (5%) occurred whilst vehicle maintenance was being carried out. Coupling and uncoupling activities were involved in 3 (2%) fatalities. With regard to work –related road safety (WRRS), 16 (9%) fatalities involved driving for work (whereby the driver was killed or contributed to the death of another person), whilst 9 fatalities (5%) involved work activities on / or near a road where the person was killed by a vehicle.

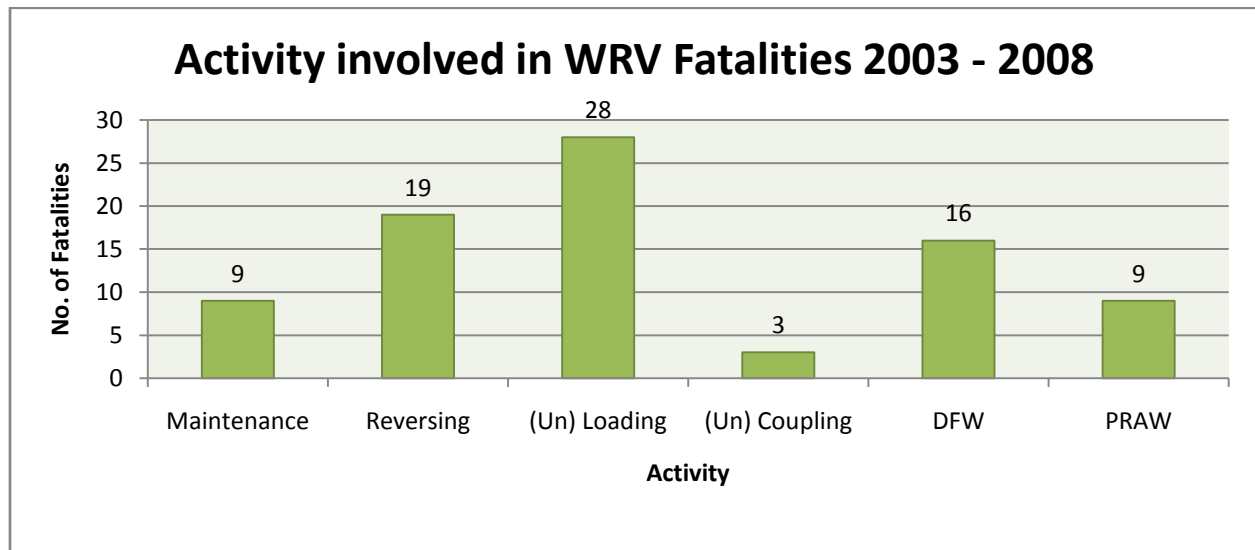


Figure 5: Main activity involved with Work Related Vehicle Fatalities 2003 – 2008.

Gender Analysis and Employment Status of Victims of Work-Related Vehicle Fatalities

Analysis of the WRV fatal accident statistics showed that more men than women were killed as a result of WRVs (see Table 9). Of the 13 females killed during the period 2003 – 2008, accident description analysis shows that 3 were family members and 8 were members of the public. Figure 6 shows victim employment status as recorded on SAFE, which records a large number of unknowns. More detailed original file analysis would be required to validate this specific information.

Year	Male	Female	%F	%M
2008	32	2	6	94
2007	20	4	17	83
2006	24	2	8	92
2005	29	2	6	94
2004	24	1	4	96
2003	28	2	7	93
Total	157	13	8	92

Table 9: Gender Breakdown of Work Related Vehicle Fatalities for period 2003 – 2005.

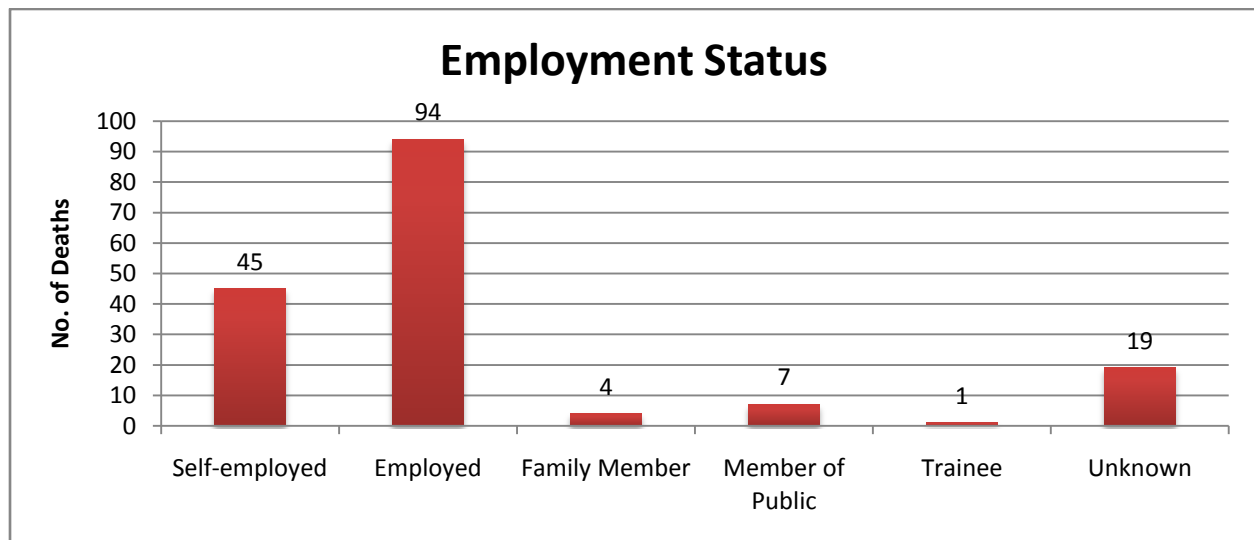


Figure 6: Employment Status of Work – Related Vehicle Fatalities 2003 – 2008.

Age Analysis of Victims of Work-Related Vehicle Fatalities

The 45 – 49 year old category experienced the highest number of WRV fatalities (Figure 7 and Table 10), followed closely by the 55 – 59 year old category. It should be noted that 11 children in the 0-15 year old age category and 14 people over the age of 70 were killed as a result of work related vehicles. These age categories would generally be considered as not being at work.

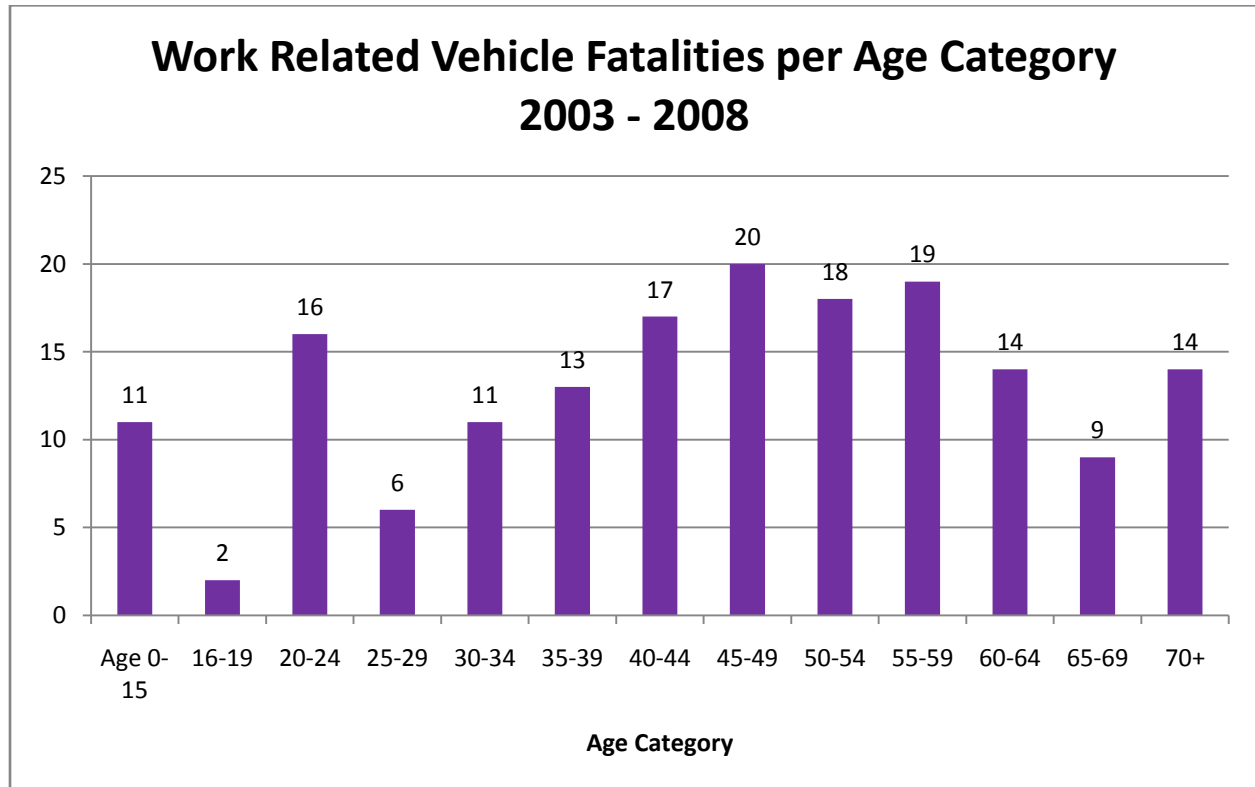


Figure 7: Age Distribution of Work Related Vehicle Fatalities 2003 – 2008.

Year	Age 0-15	16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+	Total	Average age
2008	2	0	1	3	1	2	7	3	3	1	7	2	2	34	47
2007	3	0	2	0	1	3	2	3	4	4	0	1	1	24	43
2006	2	0	2	0	1	4	2	3	2	2	2	1	5	26	48
2005	1	0	3	1	5	0	4	4	2	4	3	2	2	31	46
2004	2	2	3	0	1	1	1	4	3	5	1	0	2	25	43
2003	1	0	5	2	2	3	1	3	4	3	1	3	2	30	44
Total	11	2	16	6	11	13	17	20	18	19	14	9	14	170	45

Table 10: Work –Related Vehicle Fatal Accident Victim Age breakdown per year, 2003 – 2008.

Analysis of Work-Related Vehicle Fatalities per County

County Cork experienced the highest number of WRV fatalities with 16% of the WRV fatalities for the period 2003 - 2008 (see Figure 8). This was followed by Dublin with 9% of the WRV fatalities and then Limerick with 8%.

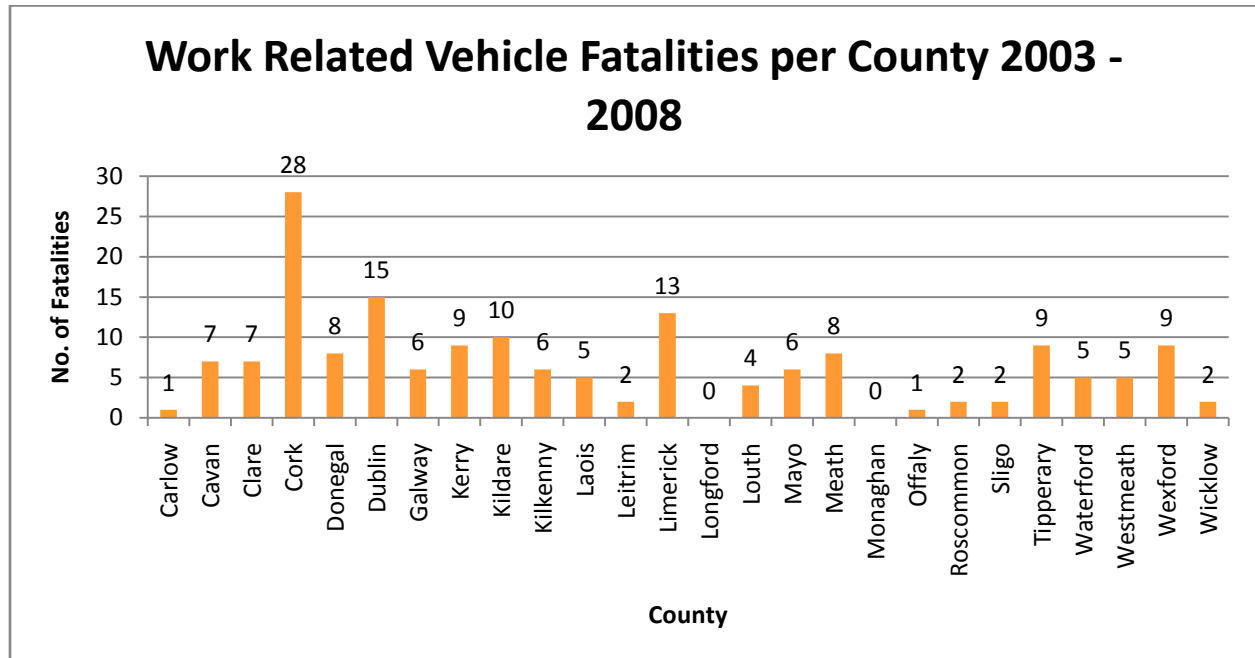


Figure 8: Work Related Vehicle Fatalities per County for the period 2003 – 2005.

NACE Sector Analysis

NACE A: Agriculture, Fisheries and Forestry

In the period 2003 – 2008, 121 fatalities were recorded in this NACE sector, 52 (43%) of which involved work-related vehicles. All the fatalities involving WRVs occurred in the Agriculture sector only and all were workplace transport incidents. The main cause of death (see Figure 9 & Table 11) was being hit or run over by a vehicle, followed by falling or being thrown from the vehicle (9 fatalities). Of the deaths in this specific category, 2 people died being thrown from the vehicle, 2 died due to a fall and 5 people fell from the vehicle and were then run over. The main vehicle involved in fatal accidents within this sector was the tractor (Figure 10). Unguarded PTO shafts accounted for 4 deaths. The 70+ age category experienced the highest number of WRV fatalities within this sector, followed by the 0-15 age category (Figure 11). County Cork experienced the highest number of WRV fatalities in this sector (Figure 12). Of the 52 WRV fatalities, 29 of the victims were in control of the vehicle at the time of the incident, 13 were not in control of the vehicle and 10 incidents require further research to establish whether they were in control / not in control at the time of the incident.

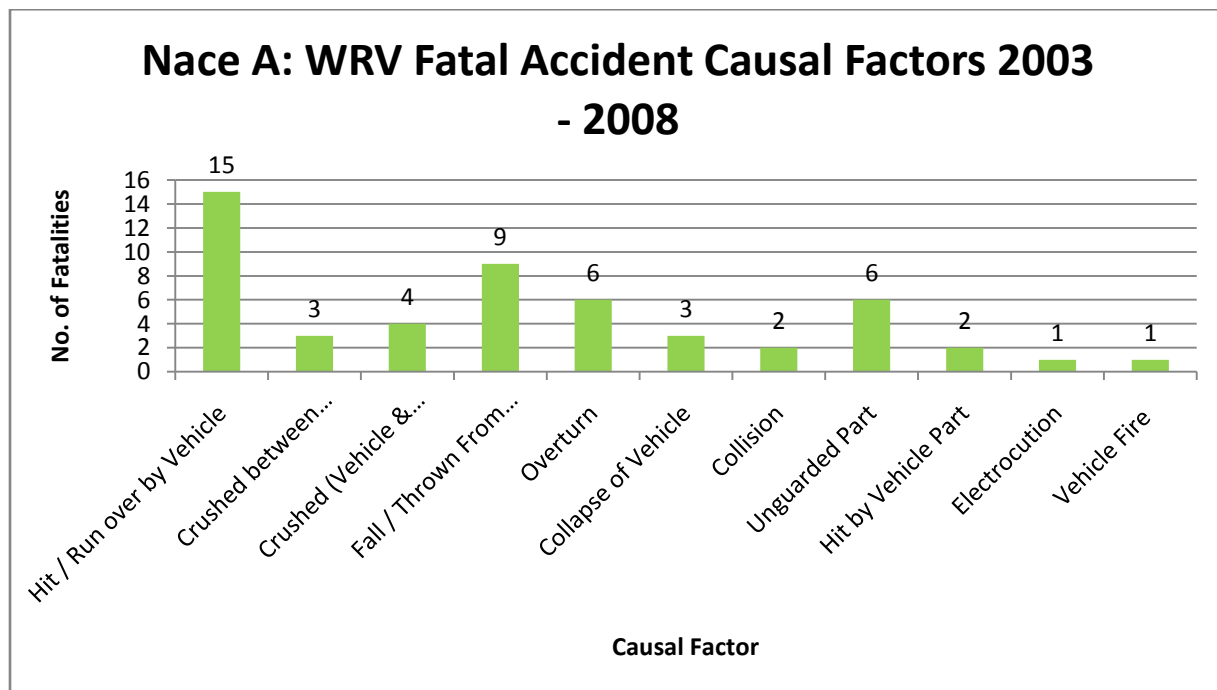


Figure 9: Work Related Vehicle Fatalities Causal Factors in the Agriculture, Forestry and Fishing Sector (Nace A) 2003 – 2008.

Year	Hit / Run over by Vehicle	Crushed between Vehicles	Crushed (Vehicle & Stationary Object)	Fall / Thrown From Vehicle	Overtum	Collapse of Vehicle	Collision	Unguarded Part	Hit by Vehicle Part	Hit by Load	Electrocution	Fire	Total
2003	2	0	1	1	2	2	0	2	0	0	0	1	11
2004	0	1	0	2	2	1	0	0	0	0	1	0	7
2005	5	1	0	2	0	0	0	0	0	0	0	0	8
2006	4	1	1	1	0	0	2	1	1	0	0	0	11
2007	1	0	0	1	1	0	0	0	0	0	0	0	3
2008	3	0	2	2	1	0	0	3	1	0	0	0	12
Total	15	3	4	9	6	3	2	6	2	0	1	1	52

Table 11: Fatal accident causal factor per Year 2003 – 2008, in the Agriculture, Forestry and Fishing Sector (Nace A).

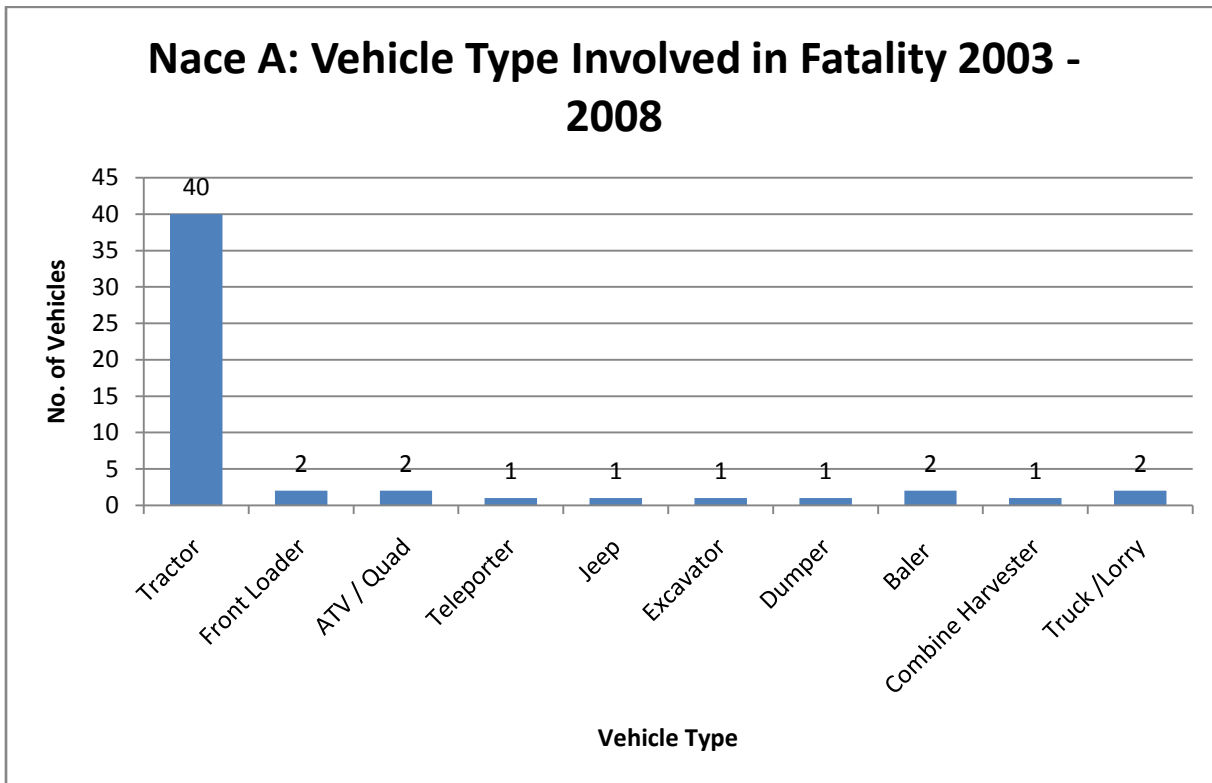


Figure 10: Vehicle Type involved in Work Related Vehicle Fatalities in the Agriculture, Forestry and Fishing Sector (Nace A) 2003 – 2008

Of the fatalities during this period 5 occurred during reversing activities, 3 during maintenance activities and 2 during loading and unloading activities.

49 of the fatalities were men whilst 3 were female. 29 of the 52 deaths were self-employed people, 8 were employees, 4 were family members, 1 was a member of the public and there were 10 unknowns.

NACE A: WRV Fatalities per Age Category 2003 - 2008

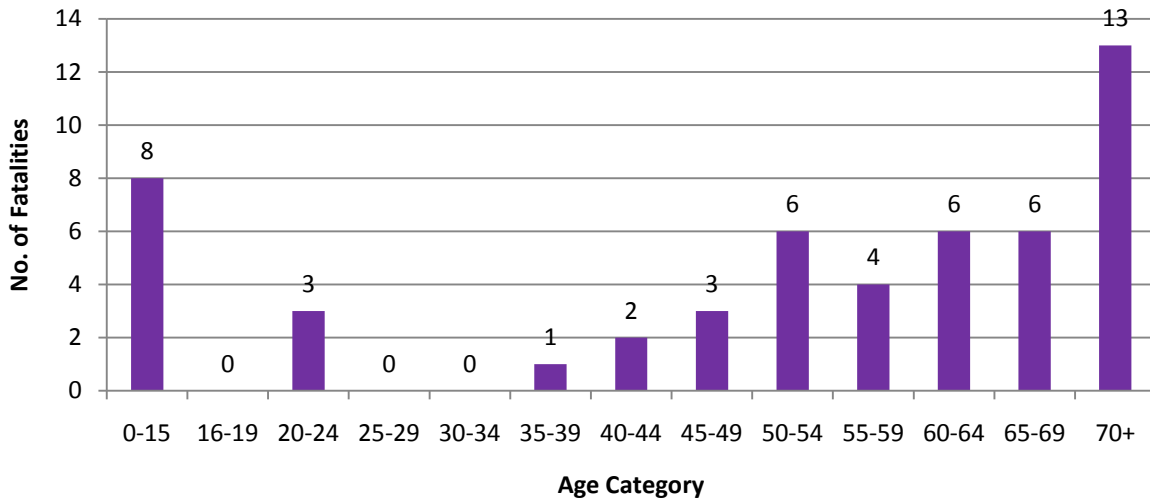


Figure 11: Age Distribution of Work Related Vehicle Fatalities in the Agriculture, Forestry and Fishing Sector (Nace A), 2003 – 2008.

Nace A: Work Related Vehicle Fatalities per County 2003 - 2008

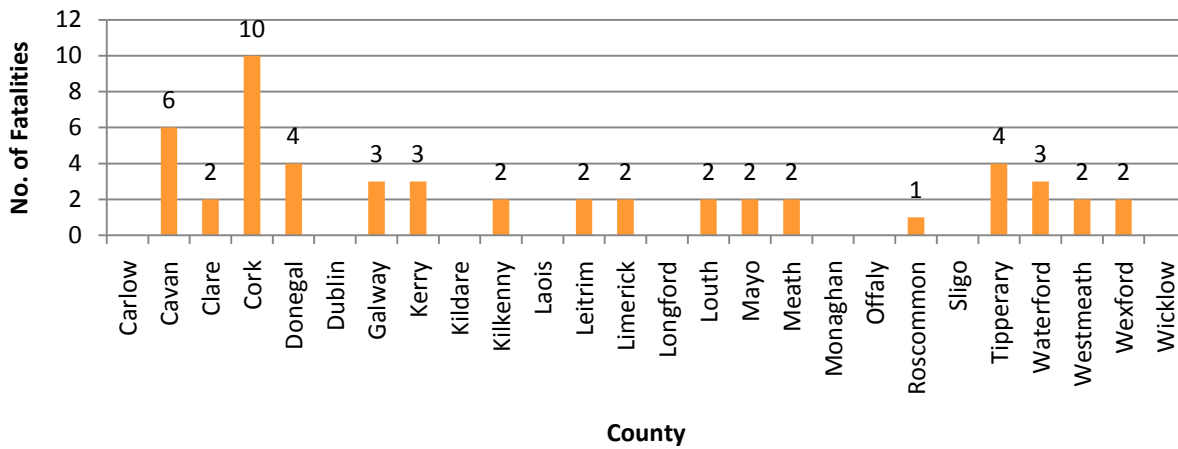


Figure 12: Work Related Vehicle Fatalities per County in the Agriculture, Forestry and Fishing Sector (Nace A) for the period 2003 – 2008.

Nace B: Mining and Quarrying

In the period 2003 – 2008, out of 12 fatalities, one (8%) fatality involved work-related vehicles. This fatality was a workplace transport fatality. The accident occurred in County Meath when the injured male employee, in the 40-44 age category was crushed between two vehicles (a truck and jeep). The victim was in control of one of the vehicles at the time of the incident.

Nace C: Manufacturing

Eleven (38%) of the twenty-nine fatalities in this sector, during the period 2003 – 2008, involved work related vehicles. Of these 11 fatalities, 9 were workplace transport incidents whilst 2 were driving for work incidents. The main cause of death was the person being crushed between a vehicle and stationary object (Figure 13 & Table 12). The main types of vehicles involved were lift trucks (4 in total: 2 forklifts and 2 side loaders) and trucks (3), (Figure 14). The 20 – 24 and the 55-59 age categories suffered the highest number of fatalities with 3 fatalities in each category (Figure 15). Counties Cork and Laois recorded the highest fatal accident numbers for this sector with 2 fatalities each (Figure 16). All victims were male, 4 were in control of the vehicle at the time of the incident, whilst 4 were not in control of the vehicle. Three incidents require further research in order to establish whether the person was in control / not in control of the vehicle at the time of the incident.

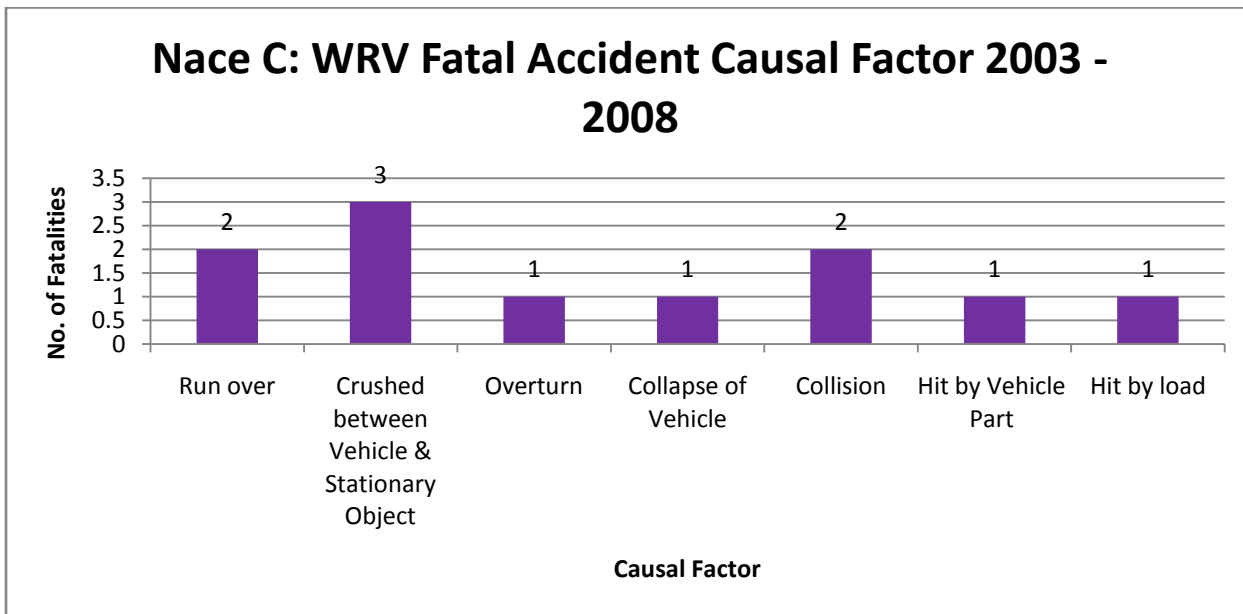


Figure 13: Work Related Vehicle Fatalities Causal Factors in the Manufacturing Sector (Nace C) 2003 – 2008.

Employees accounted for 10 of the deaths with the eleventh death being a self-employed person. Two of the fatalities occurred during maintenance activities and one involved loading and unloading activities. Two deaths were driving for work incidents.

Year	Hit / Run over by Vehicle	Crushed between Vehicles	Crushed (Vehicle & Stationary Object)	Fall / Thrown From Vehicle	Overtum	Collapse of Vehicle	Collision	Unguarded Part	Hit by Vehicle Part	Hit by Load	Electrocution	Fire	Total
2003	0	0	0	0	0	1	1	0	0	0	0	0	2
2004	1	0	0	0	0	0	0	0	0	0	0	0	1
2005	1	0	0	0	0	0	0	0	1	1	0	0	3
2006	0	0	1	0	0	0	1	0	0	0	0	0	2
2007	0	0	0	0	0	0	0	0	0	0	0	0	0
2008	0	0	2	0	1	0	0	0	0	0	0	0	3
Total	2	0	3	0	1	1	2	0	1	1	0	0	11

Table 12: Fatal accident causal factor per Year 2003 – 2008, in the Manufacturing Sector (Nace C).

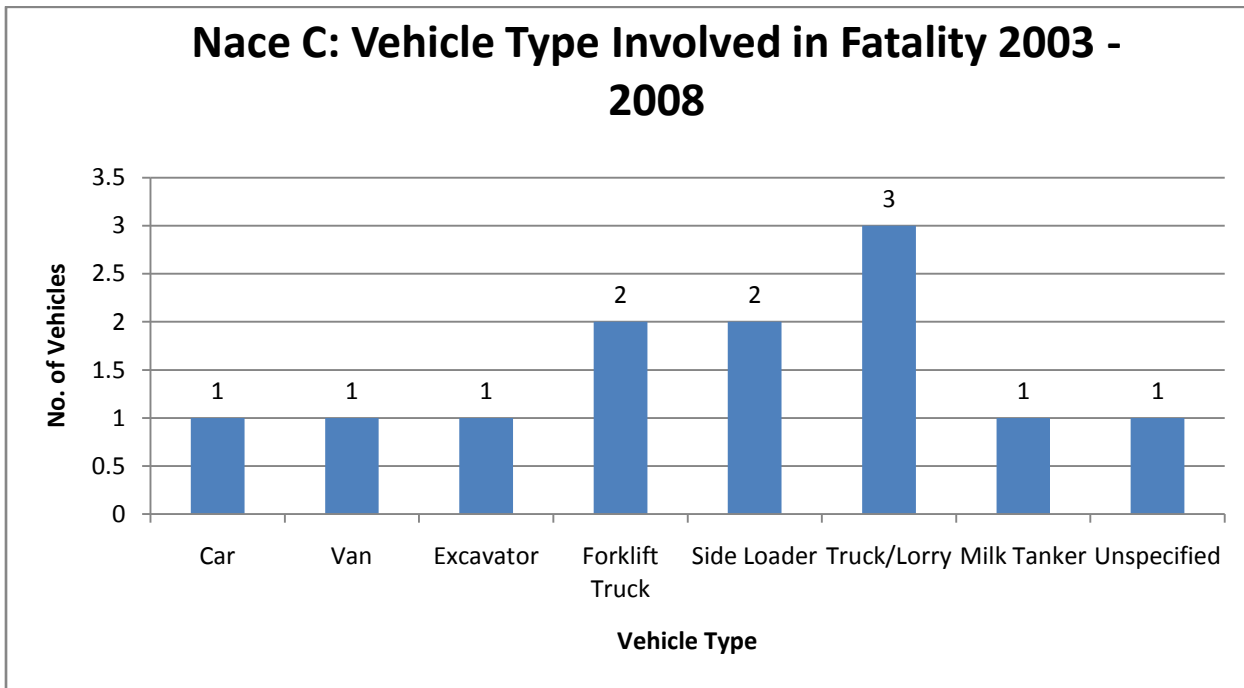


Figure 14: Vehicle Types involved in Work Related Vehicle Fatalities in the Manufacturing Sector (Nace C) 2003 – 2008.

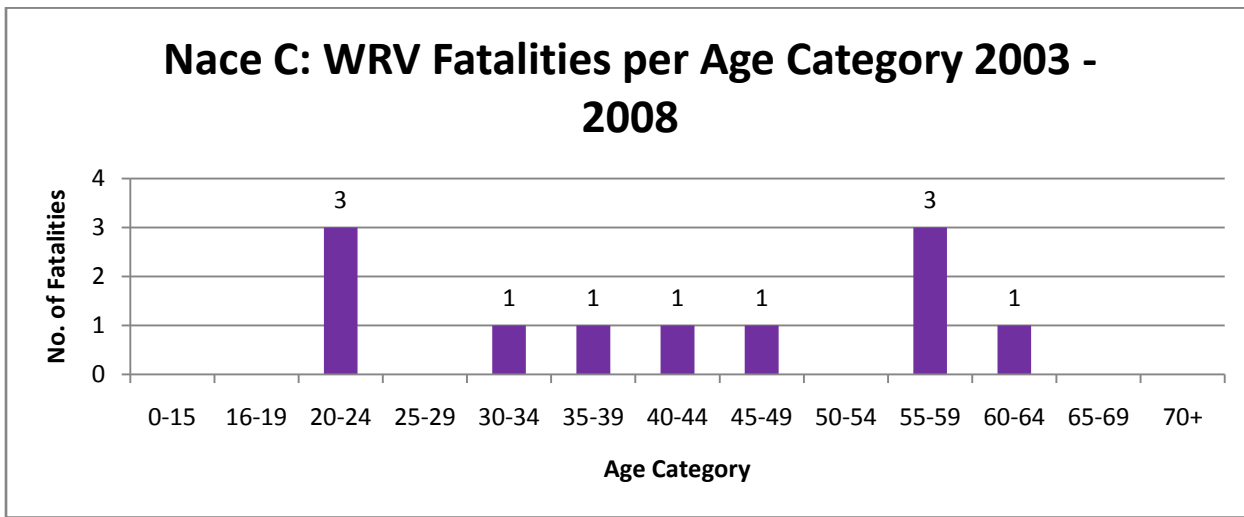


Figure 15: Age Distribution of Work Related Vehicle Fatalities in the Manufacturing Sector (Nace C), 2003 – 2008.

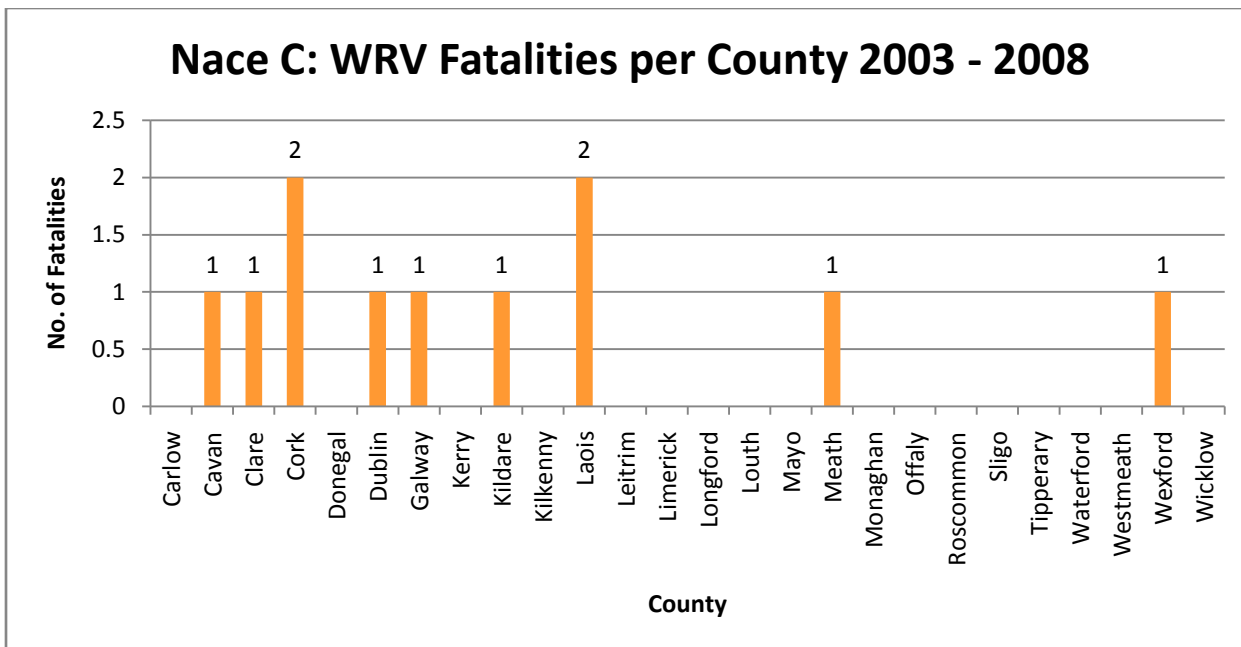


Figure 16: Work Related Vehicle Fatalities per County in the Manufacturing Sector (Nace C) for the period 2003 – 2008.

Nace D: Electricity, Gas, Steam and Air Conditioning Supply

Two fatalities occurred in this sector in the period 2003 – 2008, neither involved work related vehicles.

Nace E: Water Supply, Sewerage, Waste Management and Remediation Activities

Of the 10 fatalities in this sector in the period 2003 – 2008, 6 (60%) of the fatalities involved work related vehicles. Of the 6 fatalities, 5 were workplace transport incidents, whilst one was classified as working on/or near a public road. Employees accounted for 5 of the deaths with the sixth being a self-employed person. The main causal factor was being hit or run over by a vehicle (Figure 17 & Table 13) and the most common type of vehicles involved were loading shovels/machines and transport tractors and trailers (Figure 18). Loading and unloading, coupling and uncoupling and reversing activities were involved in one fatality each. One fatality was a work-related road safety incident where the person was using the road as a workplace. Two of the fatalities were in the age category 35 – 39 (Figure 19) and two fatalities were in County Dublin (Figure 20). All victims were male, 2 were in control of the vehicle at the time of the incident whilst 4 were not in control of the vehicle.

Nace E: WRV Fatal Accident Causal Factor 2003 - 2008

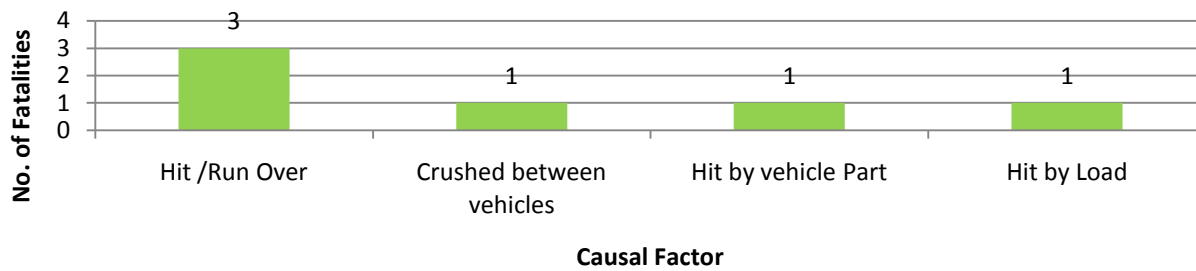


Figure 17: Work Related Vehicle Fatalities Causal Factors in the Water Supply, Sewerage, Waste Management and Remediation Activities Sector (Nace E) 2003 – 2008.

Year	Hit / Run over by Vehicle	Crushed between Vehicles	Crushed (Vehicle & Stationary Object)	Fall / Thrown From Vehicle	Overtum	Collapse of Vehicle	Collision	Unguarded Part	Hit by Vehicle Part	Hit by Load	Electrocution	Fire	Total
2003	0	0	0	0	0	0	0	0	0	1	0	0	1
2004	1	0	0	0	0	0	0	0	0	0	0	0	1
2005	0	0	0	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	1	0	0	0	0	0	0	1	0	0	0	2
2008	2	0	0	0	0	0	0	0	0	0	0	0	2
Total	3	1	0	0	0	0	0	0	1	1	0	0	6

Table 13: Fatal accident causal factor per Year 2003 – 2008, in the Water Supply, Sewerage, Waste Management and Remediation Activities Sector (Nace E).

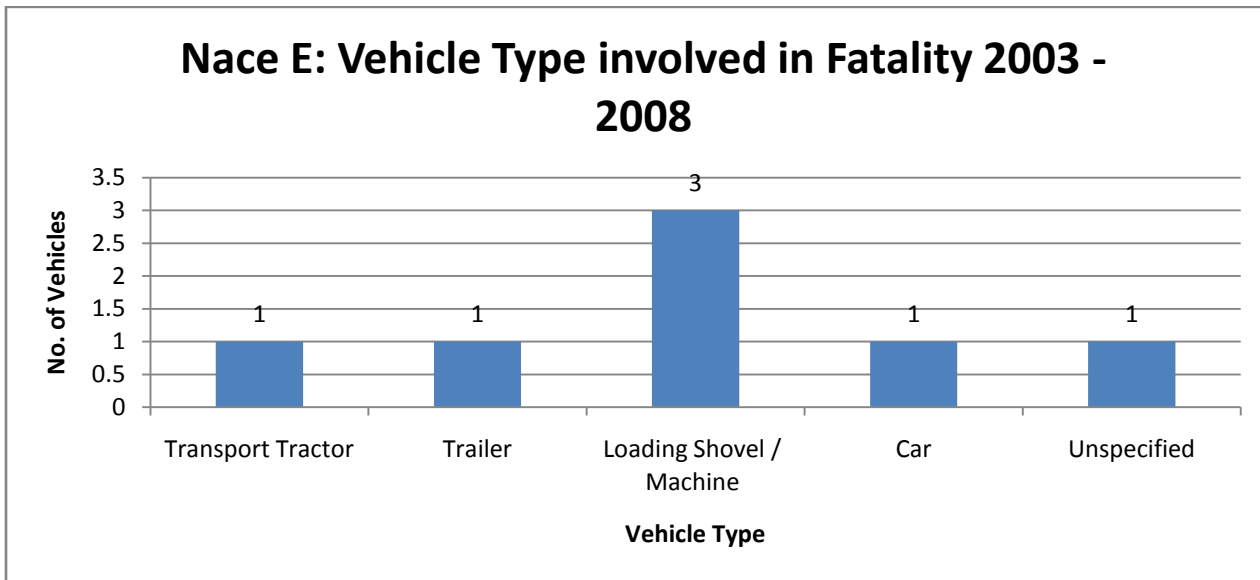


Figure 18: Vehicle Types involved in Work Related Vehicle Fatalities in the Water Supply, Sewerage, Waste Management and Remediation Activities Sector (Nace E) 2003 – 2008.

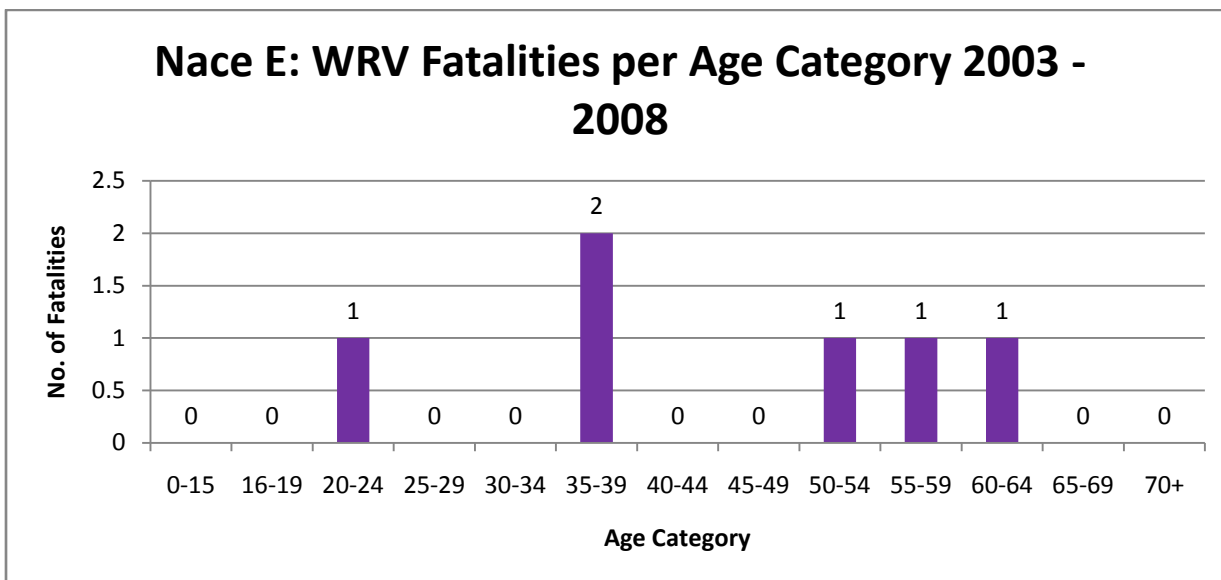


Figure 19: Age Distribution of Work Related Vehicle Fatalities in the Water Supply, Sewerage, Waste Management and Remediation Activities Sector (Nace E), 2003 – 2008.

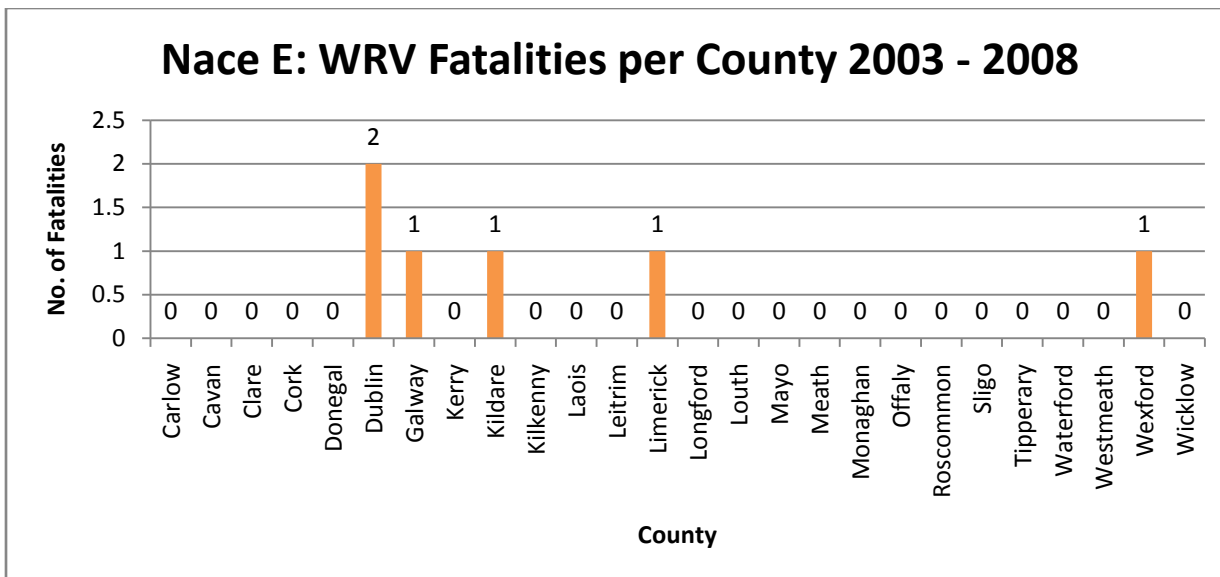


Figure 20: Work Related Vehicle Fatalities per County in the Water Supply, Sewerage, Waste Management and Remediation Activities Sector (Nace E) for the period 2003 – 2008.

Nace F: Construction

Of the 105 fatalities in this industry sector in the period 2003 – 2008, 50 (48%) of the fatalities involved work related vehicles. Of these 50 work related vehicle fatalities, 42 were classified as workplace transport incidents whilst 8 were classified as work-related road incidents, 5 being driving for work incidents and 3 fatalities classified as working on/ or near a road incidents. The main causal factor was being hit or run over by a vehicle, followed by vehicle overturns (Figure 21 & Table 14). Of the 3 fatalities in the fall / thrown from a vehicle category, one person was killed when they were thrown from the vehicle whilst two people died as a result of the fall. In the hit by vehicle part category, 5 of the 9 fatalities involved a person being hit by the bucket of an excavator. Excavators and dumpers were the main vehicle type involved in work related vehicle fatalities in this industry sector (Figure 22). The age distribution of the fatalities was quite constant across all age categories, the highest category being the 45 – 49 age category. The 60-64 and 70+ categories experienced no work related vehicle fatalities (Figure 23). Only 5 counties within this sector did not experience a work related vehicle fatality (Figure 24). Of the 50 WRV deaths, 37 were employees, 2 were members of the public, one was a trainee and 7 were classified as unknown. One fatality occurred during vehicle maintenance, 7 fatalities involved reversing vehicles and 12 fatalities involved loading and unloading activities. In relation to work related road safety, 5 deaths involved driving for work and 3 deaths involved people who were using the public road as a workplace. Of the 50 victims, 46 were male and 4 were female. Of the 50 fatalities, 20 people were in control of the vehicle at the time of the incident, 23 people were not in control of the vehicle and 7 incidents require further research to establish whether the victim was in control / not in control of the vehicle at the time of the incident.

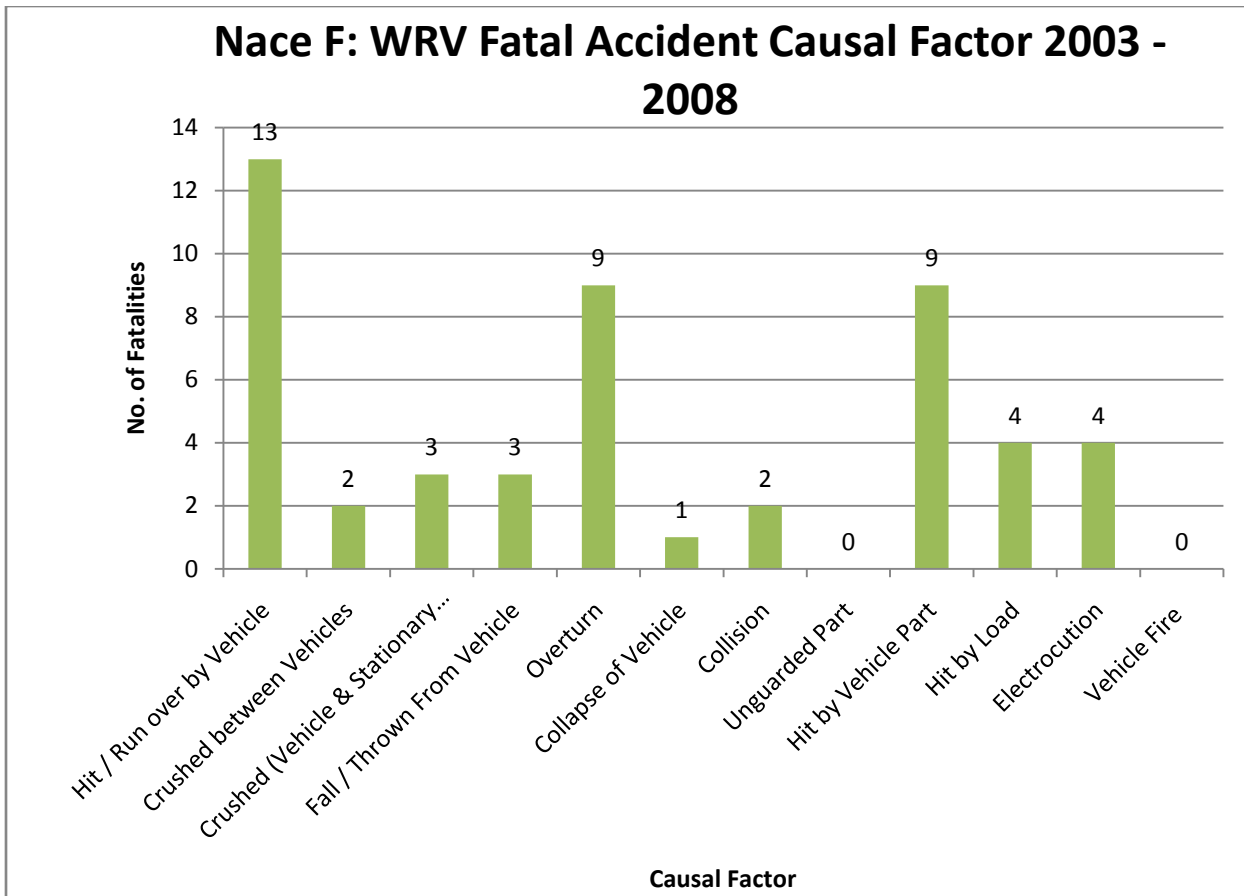


Figure 21: Work Related Vehicle Fatalities Causal Factors in the Construction Sector (Nace F) 2003 – 2008.

Year	Hit / Run over by Vehicle	Crushed between Vehicles	Crushed (Vehicle & Stationary Object)	Fall / Thrown From Vehicle	Overturn	Collapse of Vehicle	Collision	Unguarded Part	Hit by Vehicle Part	Hit by Load	Electrocution	Fire	Total
2003	4	0	0	0	1	0	1	0	1	1	1	0	9
2004	1	0	0	1	1	0	1	0	2	0	0	0	6
2005	2	1	2	0	1	0	0	0	1	1	2	0	10
2006	1	0	0	2	1	0	0	0	1	2	0	0	7
2007	3	0	1	0	2	1	0	0	2	0	0	0	9
2008	2	1	0	0	3	0	0	0	2	0	1	0	9
Total	13	2	3	3	9	1	2	0	9	4	4	0	50

Table 14: Fatal accident causal factor per Year 2003 – 2008, in the Construction Sector (Nace F).

Nace F: Vehicle Type involved in Fatality 2003 - 2008

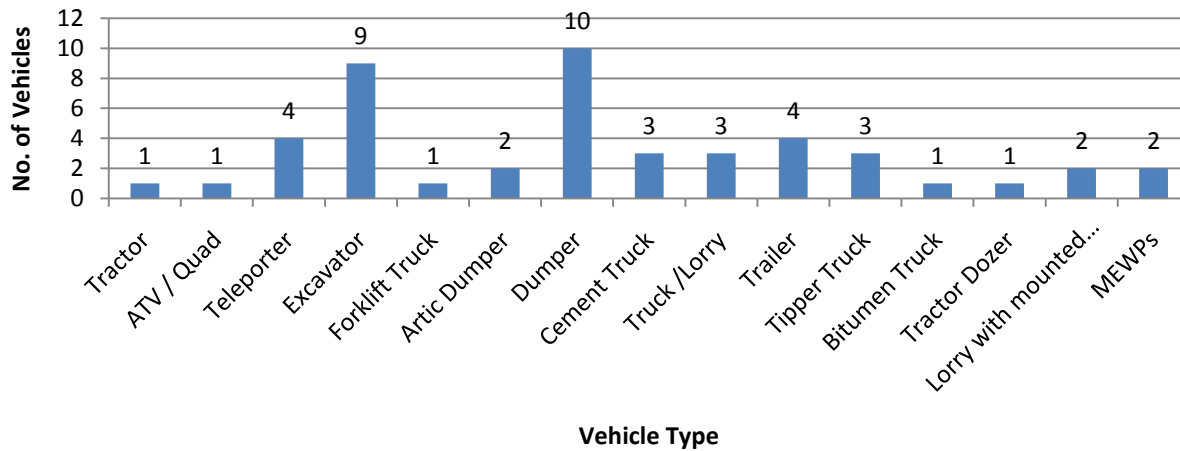


Figure 22:

Vehicle Types involved in Work Related Vehicle Fatalities in the Construction Sector (Nace F) 2003 – 2008.

Nace F: WRV Fatalities per Age Category 2003 - 2008

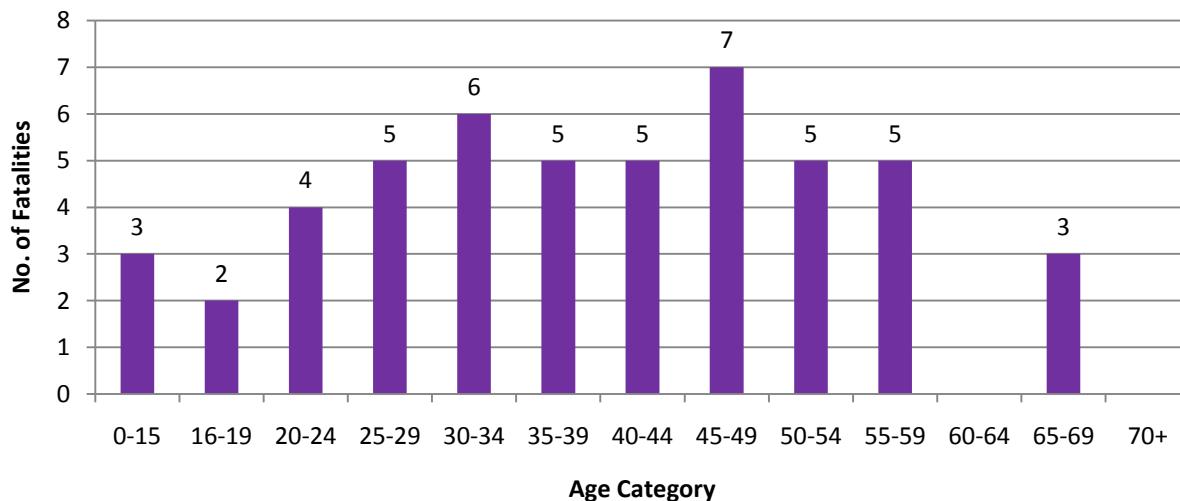


Figure 23: Age Distribution of Work Related Vehicle Fatalities in the Construction Sector (Nace F), 2003 – 2008.

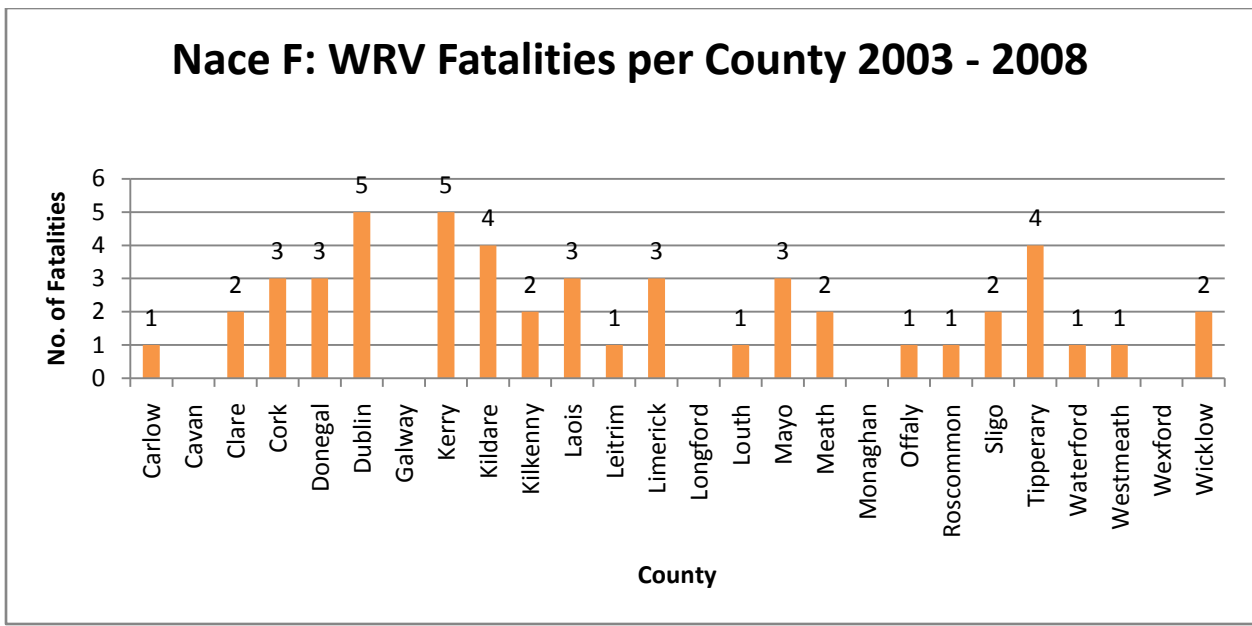


Figure 24: Work Related Vehicle Fatalities per County in the Construction Sector (Nace F) for the period 2003 – 2008.

Nace G: Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles

During the period 2003 - 2008, this sector experienced 22 fatal accidents, 15 (68%) of which involved work-related vehicles, all 15 were workplace transport incidents. The fatalities involved 14 males and one female. The main causal factors were being hit or run over by a vehicle and being hit by a vehicle part (Figure 25 and Table 15). One person was killed in a fall from a vehicle. Lorries and trucks were the main vehicle type involved in fatal accidents within this sector (Figure 26). The 40-44 and 45-49 age categories experienced the most work related vehicle incidents within this category, with 3 fatalities each (Figure 27). County Cork recorded 4 work related vehicle fatalities within this sector (Figure 28). Nine employees, 3 self employed people, one member of the public and 2 uncategorised people were fatally injured by WRVs within this sector. Three incidents each occurred during maintenance and loading and unloading activities whilst 2 occurred during reversing activities. Of the 15 fatalities, 8 victims were in control of the vehicle at the time of the incident, 5 people were not in control of the vehicle and 2 incidents require further research to establish whether the victim was in control / not in control of the vehicle at the time of the incident.

Nace G: WRV Fatal Accident Causal Factor 2003 - 2008

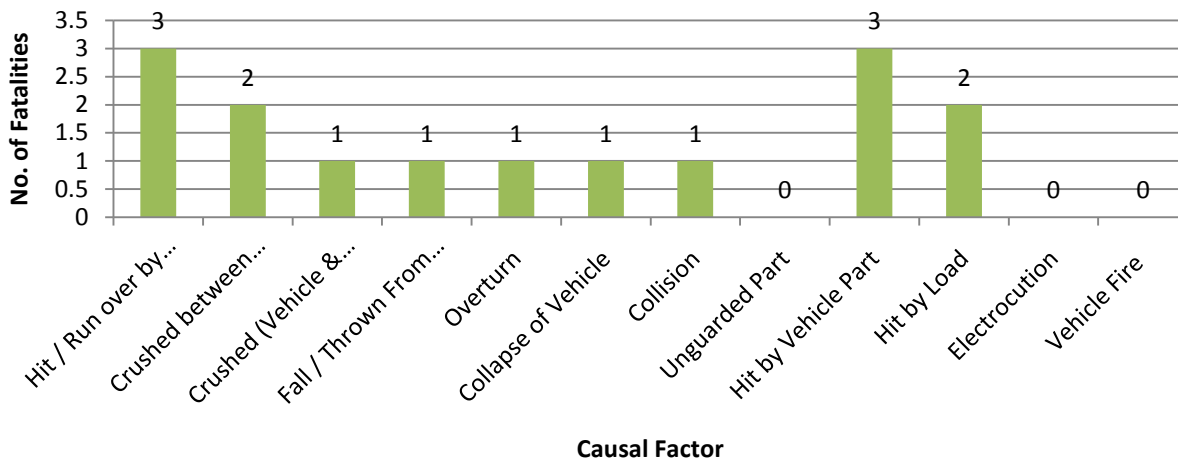


Figure 25: Work Related Vehicle Fatalities Causal Factors in the Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles Industrial Sector (Nace G) 2003 – 2008.

Year	Hit / Run over by Vehicle	Crushed between Vehicles	Crushed (Vehicle & Stationary Object)	Fall / Thrown From Vehicle	Overturn	Collapse of Vehicle	Collision	Unguarded Part	Hit by Vehicle Part	Hit by Load	Electrocution	Fire	Total
2003	1	1	0	0	0	0	0	0	0	0	0	0	2
2004	2	0	0	0	1	0	0	0	0	0	0	0	3
2005	0	1	0	0	0	0	1	0	0	1	0	0	3
2006	0	0	1	1	0	0	0	0	1	0	0	0	3
2007	0	0	0	0	0	0	0	0	1	0	0	0	1
2008	0	0	0	0	0	1	0	0	1	1	0	0	3
Total	3	2	1	1	1	1	1	0	3	2	0	0	15

Table 15: Fatal accident causal factor per Year 2003 – 2008, in Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles Industrial Sector.

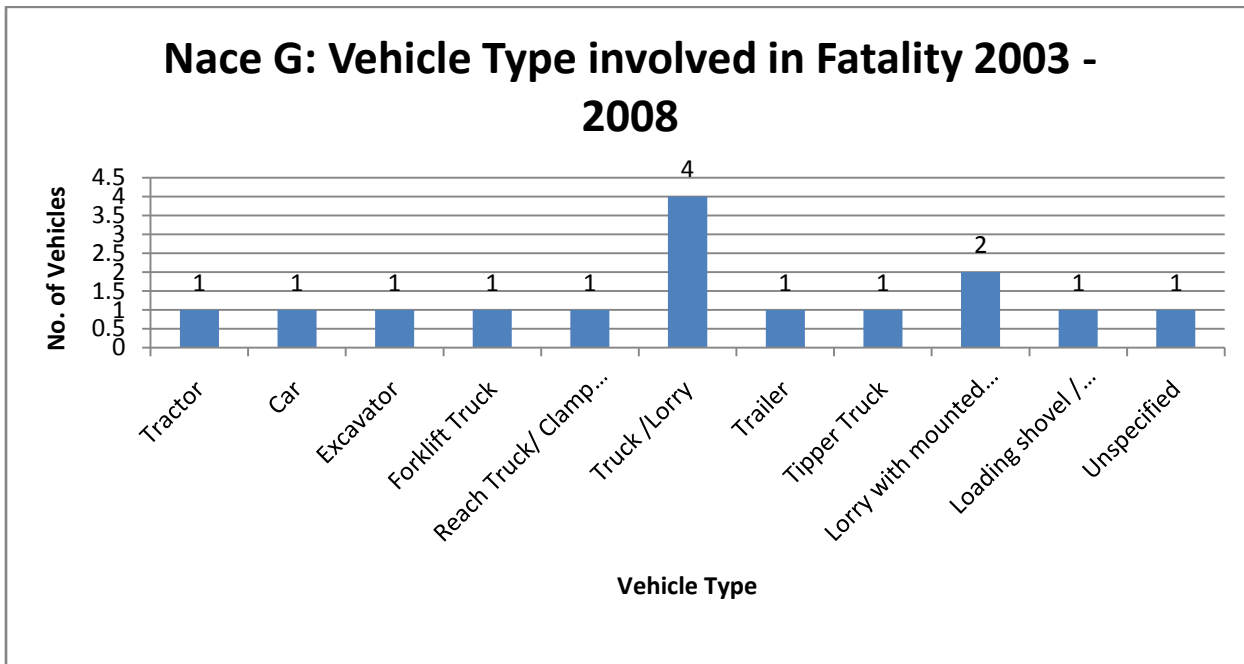


Figure 26: Vehicle Types involved in Work Related Vehicle Fatalities in the Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles Industrial Sector (Nace G), 2003 – 2008.

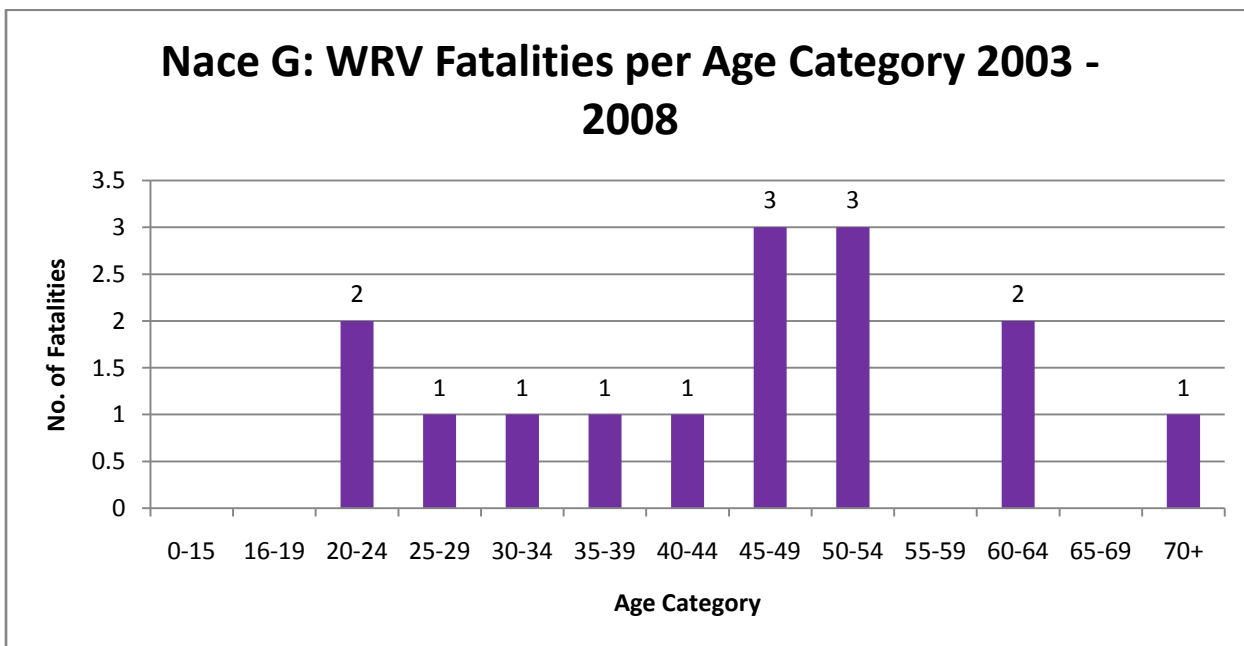


Figure 27: Age Distribution of Work Related Vehicle Fatalities in the Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles Industrial Sector (Nace G), 2003 – 2008.

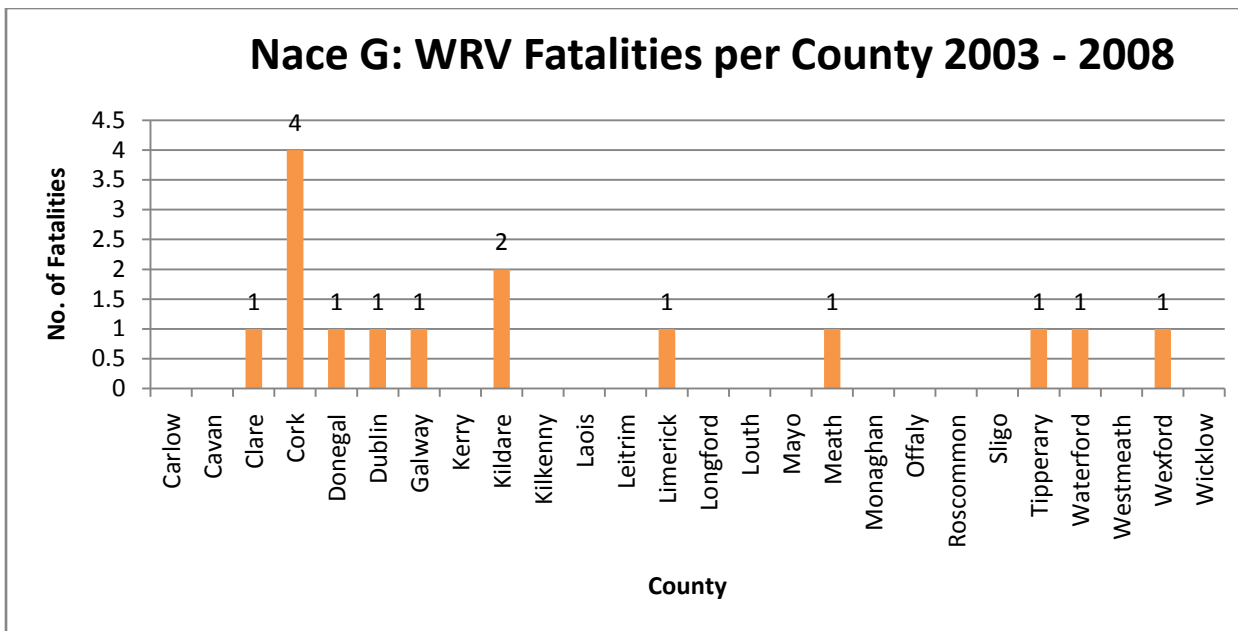


Figure 28: Work Related Vehicle Fatalities per County in the Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles Industrial Sector (Nace G) for the period 2003 – 2008.

Nace H: Transport

In the period 2003 – 2008, there were 35 fatalities in this sector, 25 (71%) of which involved work related vehicles. Of these 25 work-related vehicle incidents, 16 were workplace transport incidents and 9 were work-related road incidents, all of which were driving for work incidents. The fatalities involved 20 males and 5 females. The main causal factors were being hit or run over by a vehicle, being involved in a collision and being hit by a load (6 fatalities each), see Figure 29 & Table 16. Three people were killed in falls from vehicles. Trucks, lorries and trailers were the main type of vehicles involved in fatalities in this sector (Figure 30). The 40 – 44 age category experienced the highest number of fatalities with 6 fatalities (Figure 31) whilst County Dublin had the highest fatality per County (5 fatalities), Figure 32. Three fatalities involved a reversing vehicle, 8 fatalities occurred during loading and unloading activities and 2 fatalities involved coupling and uncoupling activities. Driving for work accounted for 8 fatalities within this sector. Self-employed people accounted for 5 fatalities, employees for 17 fatalities and members of the public for 3 fatalities. Twelve people were in control of the vehicle at the time of the incident, whilst 8 people were not in control, 5 incidents require further research to establish whether they were in control / not in control of the vehicle at the time of the incident.

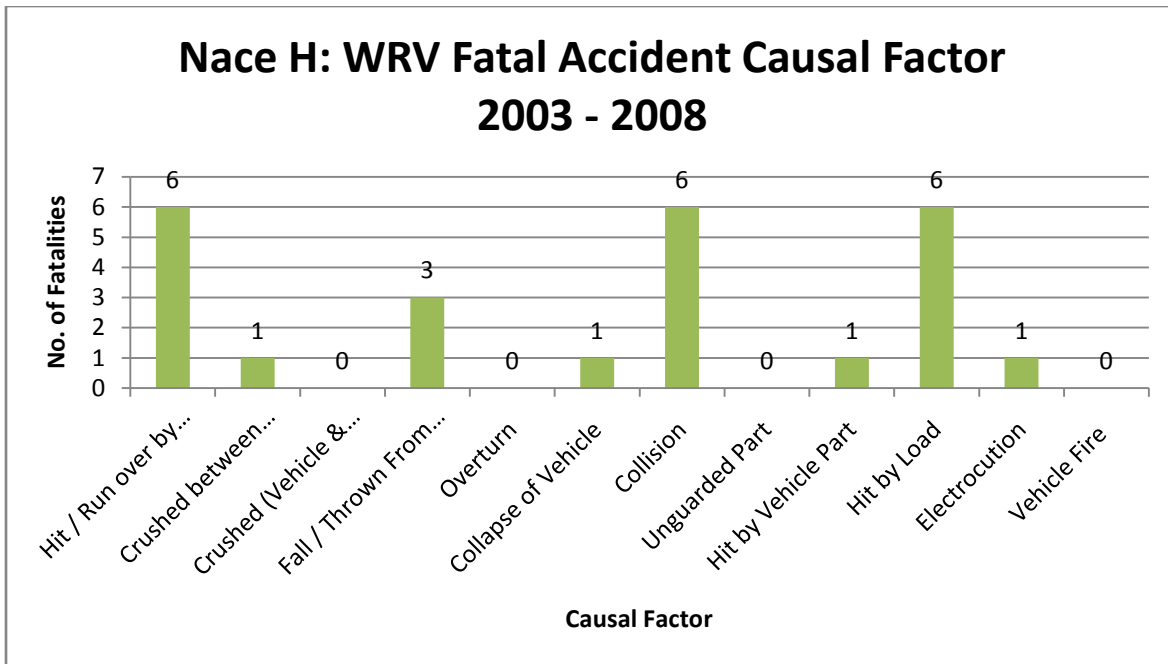


Figure 29: Work Related Vehicle Fatalities Causal Factors in the Transport Sector (Nace H) 2003 – 2008.

Year	Hit / Run over by Vehicle	Crushed between Vehicles	Stationary Object (Vehicle & Overrun)	Fall / Thrown From Vehicle	Overtum	Collapse of Vehicle	Collision	Unguarded Part	Hit by Vehicle Part	Hit by Load	Electrocution	Fire	Total
2003	1	1	0	2	0	0	0	0	0	0	0	0	4
2004	2	0	0	0	0	0	0	0	0	2	1	0	5
2005	1	0	0	0	0	0	1	0	1	2	0	0	5
2006	1	0	0	0	0	0	0	0	0	0	0	0	1
2007	1	0	0	1	0	0	3	0	0	2	0	0	7
2008	0	0	0	0	0	1	2	0	0	0	0	0	3
Total	6	1	0	3	0	1	6	0	1	6	1	0	25

Table 16: Fatal accident causal factor per Year 2003 – 2008, in the Transport Sector.

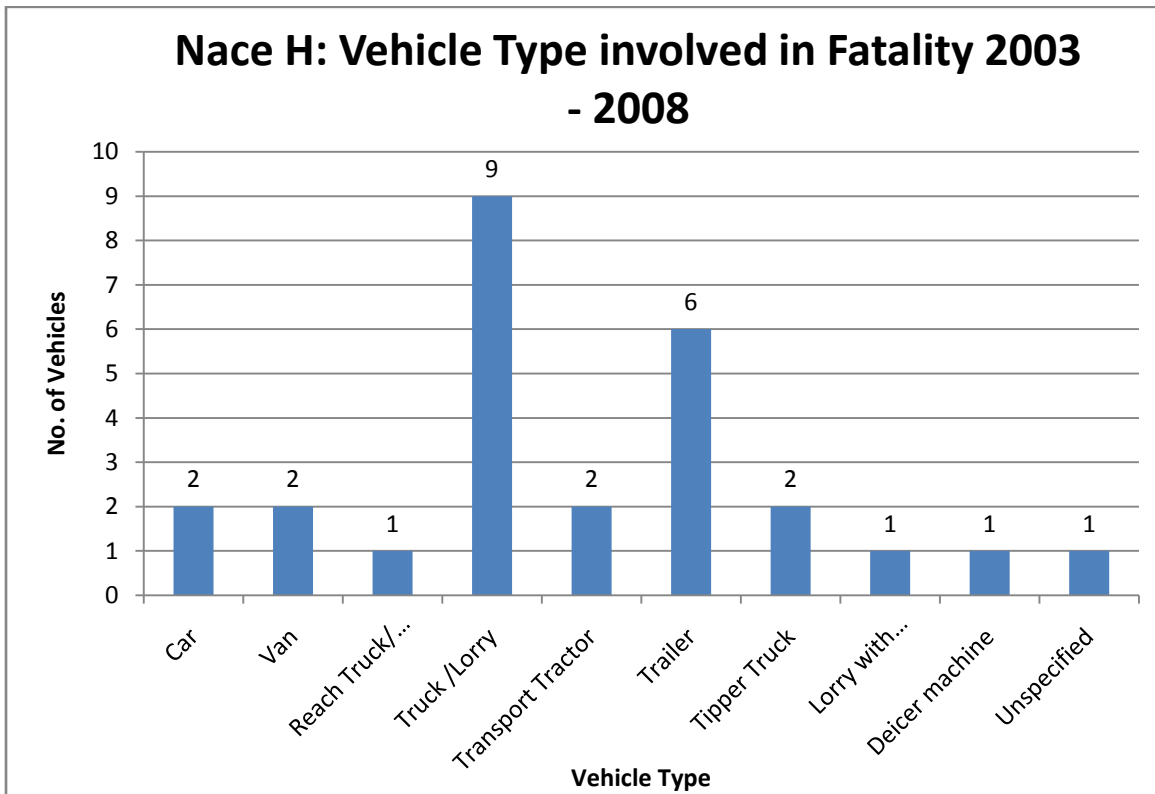


Figure 30: Vehicle Types involved in Work Related Vehicle Fatalities in the Transport Sector (Nace H), 2003 – 2008.

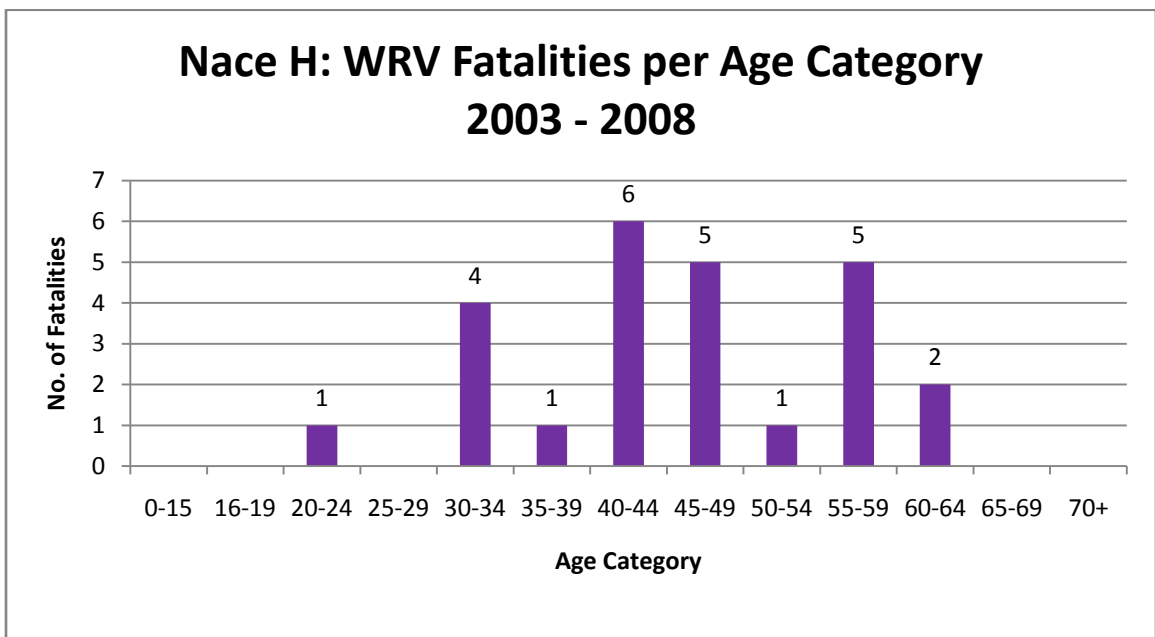


Figure 31: Age Distribution of Work Related Vehicle Fatalities in the Transport Sector (Nace H), 2003 – 2008.

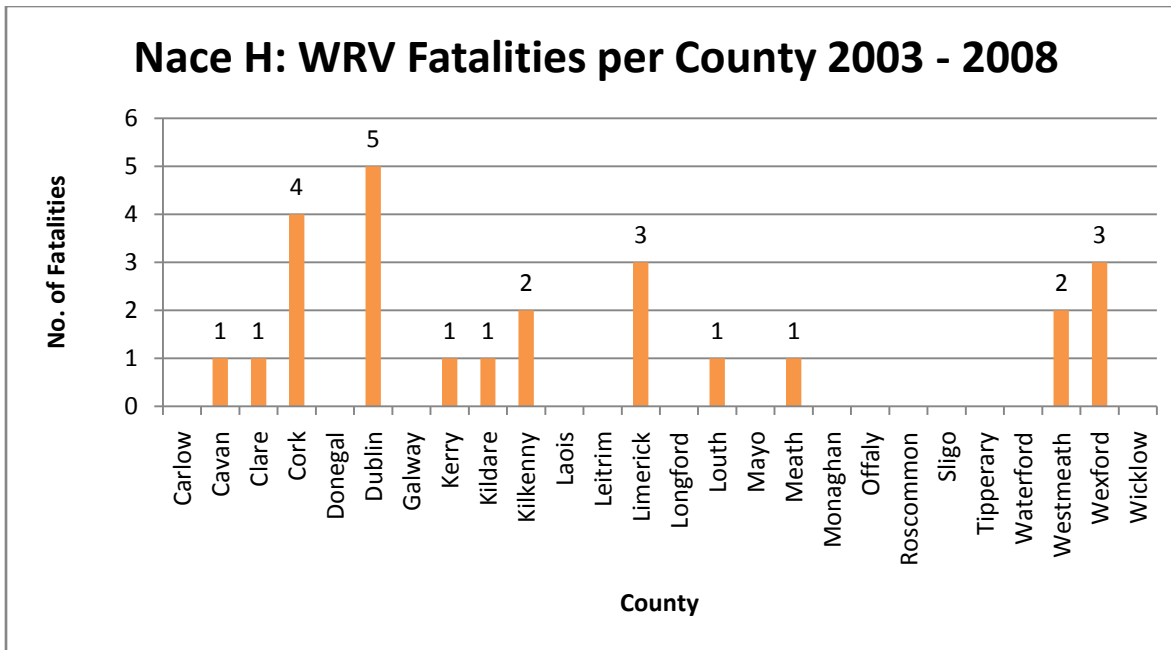


Figure 32: Work Related Vehicle Fatalities per County in the Transport Sector (Nace H) for the period 2003 – 2008.

Nace J: Information and Communication

There was one fatality in this industry sector in the period 2003 – 2008. This fatality did not involve a work related vehicle.

Nace K: Financial and Insurance Activities

There was one fatality in this industry sector in the period 2003 – 2008. This fatality did not involve a work related vehicle.

Nace M: Professional, Scientific and Technical Activities

The two fatalities that occurred in this sector during 2003 – 2008 were male and both involved work related vehicles and were both workplace transport incidents. Neither victim was in control of the vehicle at the time of the incident. The vehicles involved were a teleporter and a lorry with mounted crane. The causal factors were vehicle overturn and being hit by a load. Both fatalities involved self-employed people and one incident occurred during loading and unloading activities. One fatality occurred in Cork with the other in Dublin and the victims were in the 35 -39 and the 55 -59 age categories.

Nace N: Administrative and Support Services Activities

There were 4 fatalities within this sector in the period 2003 – 2008, none of which involved work-related vehicles.

Nace O: Public Administration and Defence, Compulsory Social Security

Of the 8 fatalities in this sector during 2003 – 2008, 5 (63%) involved work related vehicles and all were males. Of the 5 work-related vehicle incidents, 1 was a workplace transport incident whilst 4 were work-related road incidents and were classified as working on/or near a road incidents. Causal factors were being run over or hit by a vehicle (3 fatalities), one collision and one vehicle overturn (Figure 33 & Table 17). The main vehicle type involved were vans (Figure34). The 45 –

49 age category had the most fatalities (Figure 35) with County Limerick experiencing the most work related vehicle fatalities (Figure 36).The five people were all employees and four of the incidents involved employees who use the public road as a workplace. Only one of the five victims was in charge of the vehicle at the time of the incident.

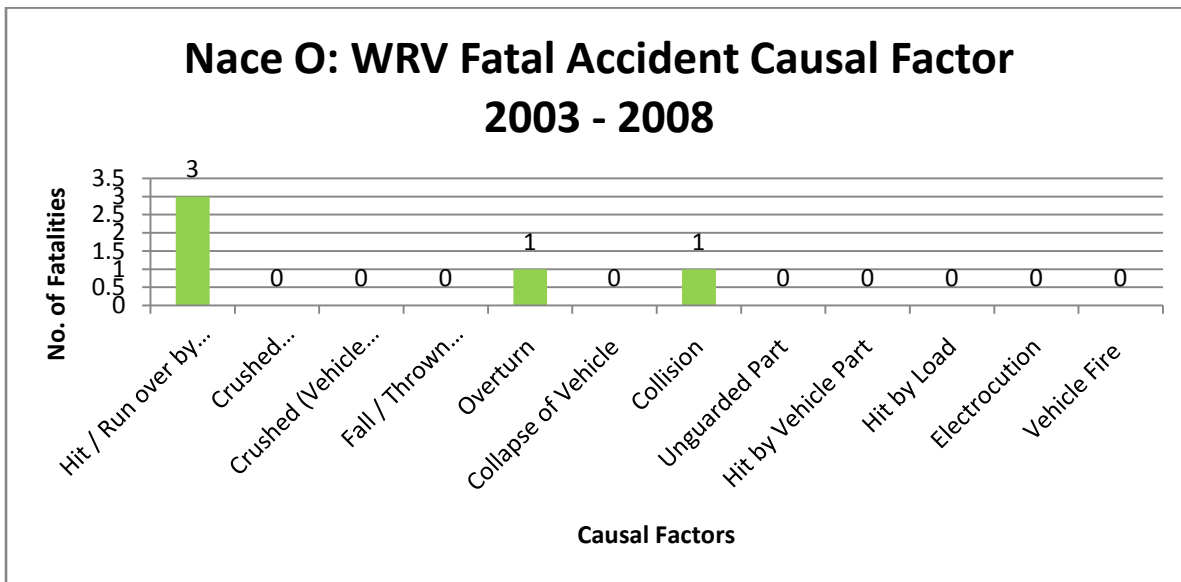


Figure 33: Work Related Vehicle Fatalities Causal Factors in the Public Administration and Defence, Compulsory Social Security Sector (Nace O), 2003 – 2008.

Year	Hit / Run over by Vehicle	Crushed between Vehicles	Crushed (Vehicle & Stationary Object)	Fall / Thrown From Vehicle	Overtum	Collapse of Vehicle	Collision	Unguarded Part	Hit by Vehicle Part	Hit by Load	Electrocution	Fire	Total
2003	0	0	0	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	1	0	1	0	0	0	0	0	2
2006	1	0	0	0	0	0	0	0	0	0	0	0	1
2007	2	0	0	0	0	0	0	0	0	0	0	0	2
2008	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	0	0	0	1	0	1	0	0	0	0	0	5

Table 17: Fatal accident causal factor per Year 2003 – 2008, in the Public Administration and Defence, Compulsory Social Security Sector (Nace O).

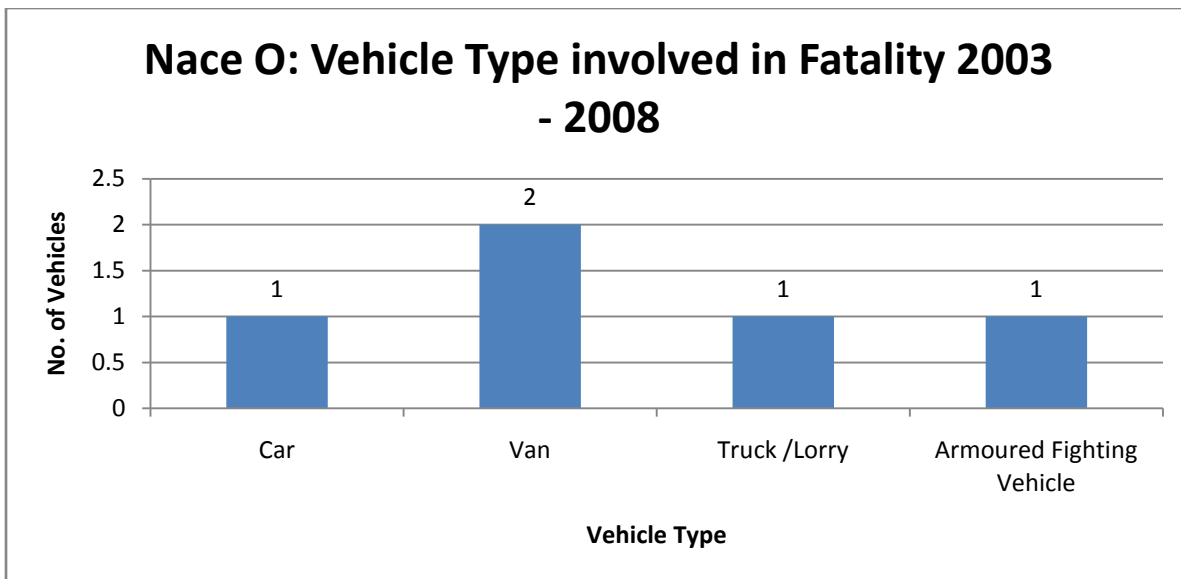


Figure 34: Vehicle Types involved in Work Related Vehicle Fatalities in the Public Administration and Defence, Compulsory Social Security Sector (Nace O), 2003 – 2008.

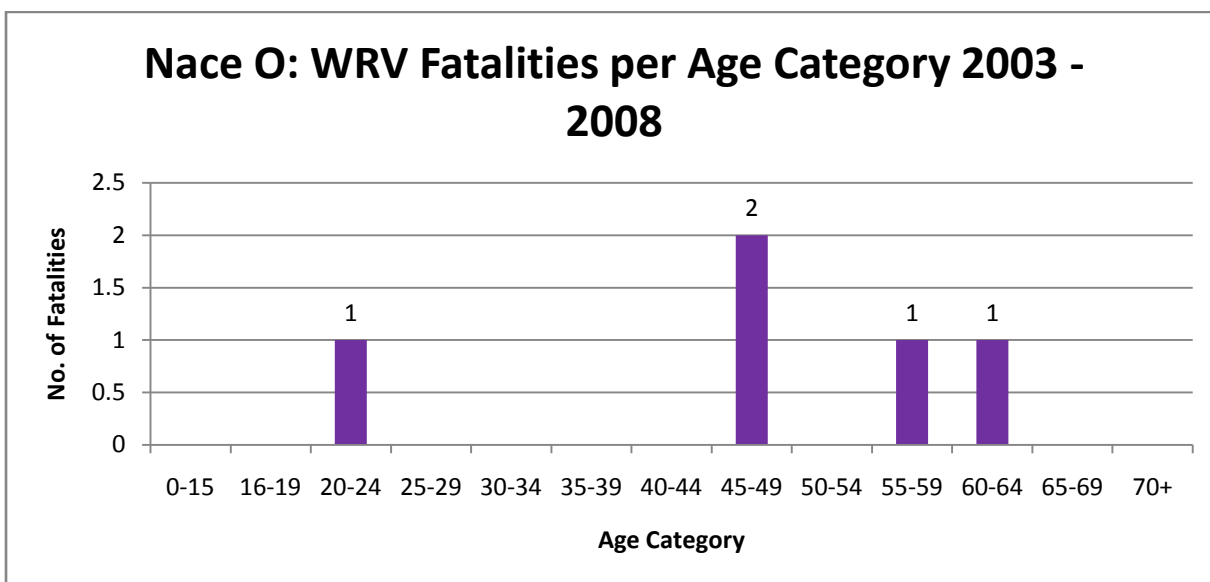


Figure 35: Age Distribution of Work Related Vehicle Fatalities in the Public Administration and Defence, Compulsory Social Security Sector (Nace O), 2003 – 2008.

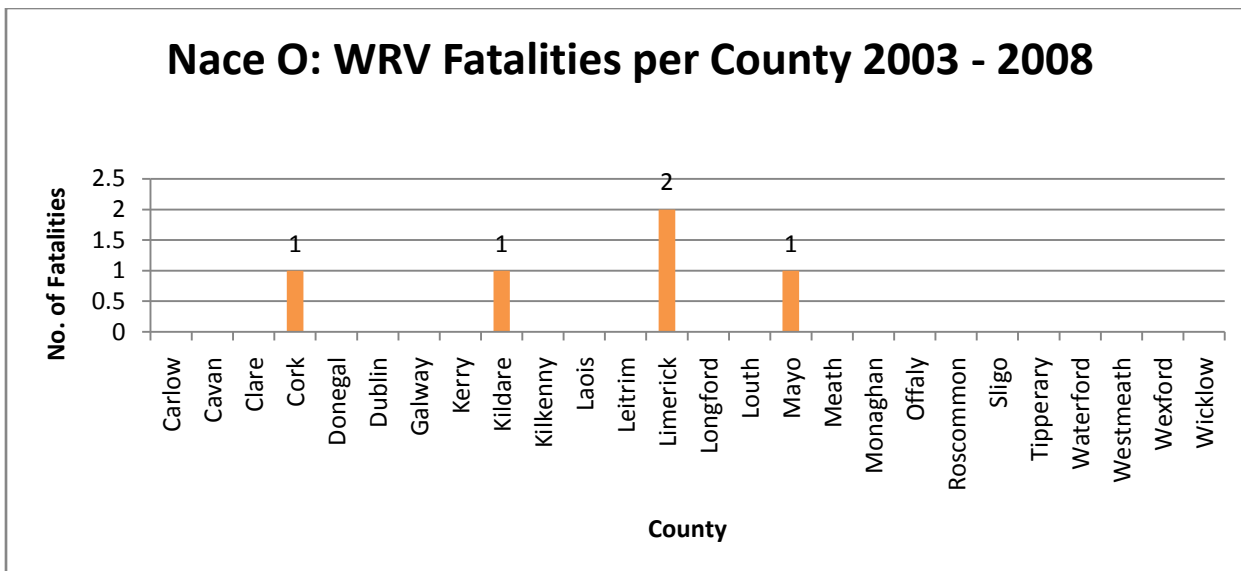


Figure 36: Work Related Vehicle Fatalities per County in the Public Administration and Defence, Compulsory Social Security Sector (Nace O) for the period 2003 – 2008.

Nace P: Education

There was one male fatality in this sector in the period 2003 – 2008. The fatality was a workplace transport fatality and involved the person who was in the age category 60 – 64, being hit by a reversing tractor and trailer. The accident occurred in County Cork. The victim was not in control of the vehicle at the time of the incident.

Nace Q: Human Health and Social Work Activities

There was one fatality in this sector in the period 2003 -2008. The fatality did not involve a work related vehicle.

Nace R: Arts, Entertainment and Recreation

There were four fatalities in this sector in the period 2003 -2008. None of the fatalities involved work related vehicles.

Nace S: Other Service Activities

There were 8 fatalities in this sector in the period 2003 -2008, 2 (25%) of which involved work related vehicles, one being classified as a workplace transport incident and one working on/or near a public road incident. The vehicles involved were a waste disposal lorry and a teleporter. The causal factors were a fall from a vehicle and a vehicle overturn. The victims were both male and in the 20 – 24 and the 50 – 54 age categories. The deaths involved a self-employed person and an employee and the accidents occurred in Counties Cork and Wexford. Neither victim was in control of the vehicle at the time of the incident.

Disclaimer

This analysis is based on the fatal accident statistics and summaries as recorded on the Authority’s System for Active Field Enforcement (SAFE) computer system as of February 2009. It should be noted that without more detailed inspection findings analysis that there will be a margin of error in some of the statistics due to the Author’s personal interpretation of recorded data and also due to subsequent entry or validation of the statistics after February 2009.