

Supplementary file 2. Characteristics of included studies

Number of participants during COVID	Number of participants before COVID	Overall result	Mean age of injured patients during lockdown	Mean age of injured patients before lockdown	Number of accident/injury post lockdown	Number of accident/injury during lockdown	Number of accident/injury before lockdown	Lockdown period in 2020	Study design	Country	Author (year)
2924	2296	Compared to pre-lockdown 30 day incidence of RTAs decreased by 53.2% during lockdown	34.6	34.8	914	475	1222	March 24 th -May 31 st	Cross-sectional	India	Abhalish, P (2020) ²
236	421	Compared to pre-lockdown RTAs increased by 8.3%(p=0.030) during lockdown	-	-	-	51	56	March 23 th - May 3 rd	Cross-sectional	UK	Ajayi, B (2020) ³
		Compared to the pre-lockdown period 45% reduction in the number of road traffic accident related orthopedic trauma in the lockdown period.				71	471	March 22 th -May 17 th	Cross-sectional	India	Bhat, AK (2021) ¹⁴
18	22	Compared to 2019 RTAs decreased by 20% in 2020 during pandemic	-	-	-	6	12	March 24 th -May 10 th	Case-control	UK	Campell, E (2020) ⁴
139	727	Compared to 2019, the prevalence of the trauma mechanisms for traffic accident decreased by 85.7 in 2020	39.55	37.96		16	97	April 12 th - May 12 th	Cross-sectional	Turkey	Carkci, E (2021) ⁴⁰
1202	1143	Compared to 2019 motorcycle accidents decreased by 3.4%, motor vehicle accidents 1.8%, auto versus pedestrian accidents by 5.3% and bicycle accidents by 2.1%	-	-	-	437	317	March 20 th - June 30 th	Case-control	California	Chiba, H (2020) ²³

217	180	An increase in surgical indications for road accidents was found between the L1 and the L2 lockdown period, without it being significant	43	34.8	-	23	20	March 17 st - May 11 th	Cross-sectional	France	Crenn, V (2020) ³⁶
36238	588690	Compared to pre-lockdown RTAs decreased by 10% during lockdown	-	-	-	518	24534	March 23 th -April 26 th	Cross-sectional	New Zealand	Dicker, B (2020) ⁴¹
106	142	Compared to 2019 RTAs decreased by 7.5%(odds ratio=0.43/ p-value=0.067) during lockdown	-	-	-	7	20	April 1 st - April 30 th	Case-control	UK	Donovan, R.I. (2020) ¹⁹
-	-	Compared to pre-lockdown all types of crash decreased by 78% during lockdown	-	-	-	4509	21026	March 23 th -April 23 th	Cross-sectional	USA	Doucette, M (2020) ⁶
136	174	Compared to 2019 there was approximately 60% reduction in RTAs during lockdown	-	-	-	4	10	March 27 th - April 27 th	Cross-sectional	Ireland	Fahy, S (2020) ⁷
129	155	Compared to 2019 RTAs increased by2.8% in percentage but decreased by 9 in number during pandemic	31.41	35.15	-	66	75	March 25 th - May 31 st	Cross-sectional	India	Goyal, N (2020) ⁸
261	198	Compared to pre-lockdown RTAs decreased by1.2% in adults and by7.1% in children compared to 2019 RTAs decreased by 9.6% in adults and by 3.8% in children	-	-	13	7	35	March 24 th – April 7 th	Cross-sectional	UK	Hampton, M (2020) ⁹
651158	809095	Compared to 2019 RTAs decreased by 28.6% during pandemic	-	-	-	52874	74101	285 days	Not mentioned	USA	Harmon, K.J. (2021) ²⁴

403	667	absolute decrease in the number of Road Traffic Accidents (-75.1%) the proportion of RTAs was lower during lockdown [adjusted OR: 0.44 (95% CI: 0.31–0.62); p-value: <0.001]		-	-	131	433	April 1 st - April 30 th	Cross-sectional	India	Hazra, D (2021) ¹⁰
437	527	No reduction in road traffic collision (33 vs 34) were observed between 2019 and 2020. In 2019 in 19.5 % (n = 8) of road traffic collision referrals, the initial GCS was 8 or less. This rose to 21.2% (n = 7) in 2020.	43	42	-	34	33	March 1 st - May 31 th	Cross-sectional	Ireland, Dublin	Horan, J (2021) ²⁸
-	-	The overall volume of road traffic injuries (RTI) has statistical difference between the 2020 and 2019 (p < 0.001), with fewer RTIs in 2020 compared with 2019. Electric bicycle related RTIs increased during the pandemic (2641, 36.24% vs 2380, 26.84%, p < 0.001) Higher incidence of RTIs with disorder of consciousness (DOC) during the pandemic (7.22% vs 6.13%, p = 0.006)	48	47	-	7288	8869	January - May	Case-control	China, Suzhou	Huang, W (2021) ³²
97	126	There was a 40–52% decrease (P = 0.025) decrease in the mean monthly average admissions due to road traffic collisions during March/April 2020 compared with previous years 2016–2019.		-	-	33	58	March 1 st - April 30 th	Cross-sectional	Australia, Westmead	Jacob, S (2020) ³⁸

42	57	Comparing pre-lockdown and lockdown, there was an overall decrease of 53% in admissions to the major trauma service due to road traffic accidents.		-	-	15	31	March 23 rd - May 29 th	Cross-sectional	Ireland, Belfast	Jefferies, O (2021) ²⁹
Trauma admissions per day in 2020: from 2/1 to 2/14: 3.33 from 2/15 to 2/29: 4.20 from 3/1 to 3/15: 2.13 from 3/16 to 3/31: 1.94 from 4/1 to 4/14: 1.79	Trauma admissions per day in 2019: from 2/1 to 2/14: 2.93 from 2/15 to 2/29: 3.00 from 3/1 to 3/15: 3.07 from 3/16 to 3/31: 2.00 from 4/1 to 4/14: 2.71	There was a significant decrease in trauma admissions due to motor vehicle collisions (80.5% decrease, p value <0.001)		-	-	Motor Vehicle Collision (MVC) admissions per day: from 2/1 to 2/14: 0.93 from 2/15 to 2/29: 1.47 from 3/1 to 3/15: 0.47 from 3/16 to 3/31: 0.56 from 4/1 to 4/14: 0.29	-	February 1 st - April 29 th	Cross-sectional	U.S.A, New Hampshire	Kamine, T.H. (2020) ²⁵
174	440	The road traffic injury (RTI) victims' number were decreased significantly during lockdown (p value= 0.003)		-	-	65	228	March 25 th - May 31 st	Cross-sectional	India, New Delhi	Kaushik, G (2021) ¹⁵
1961	4006	There was a statistically significant decrease between the year 2019 vs. 2020, there was no statistically significant decrease between the year 2018 vs. 2019, and between the year 2018 and 2020. (p value = 0.063)	-	-	-	331	559	May - September	Cross-sectional	South Korea, Seoul	Lee, M.H (2021) ¹¹
334	422	-	44.52	45.0	-	99	137	March 17 th - April 30 th	Cross-sectional	Las Vegas	Lubbe, R (2020) ²⁶

1315	1791	Significant decreases were seen in the proportion of road traffic collisions	63	60	–	68	204	March 23 th - May 28 th	Cross-sectional	Scotland	McDonnell EP (2020) ⁴³
1314	4448	During this period and more specifically during lockdown, the study demonstrated a 50% reduction in road traffic accidents	43.2	41.5	–	133	348	March 17 th - May 10 th	Cohort	France	Moyer, J (2021) ³⁷
		Patients injured in road traffic collisions decreased by 74% during the hard lockdown period and maintained a reduction of 32% during the immediate post-lockdown period	–	–	74	56	218	April - May	Cross-sectional	Cape Town, South Africa	Navsaria, P (2021) ³⁰
42	124	The COVID pandemic has limited road traffic activity, and strict implementation of lockdown has restricted the infection and has reduced the neurotrauma emergencies.	40	36.41		18	89	March 25 th - May 31 st	Cross-sectional	India	Nayak, N (2021) ¹⁷
43	50	Throughout the COVID-19 lockdown there were significant reductions in both workplace and traffic accidents	45.19	42.88	–	6	13	March 15 th - April 30 th	Cross-sectional	Austria	Nia, A (2021) ³⁹
512	6054	The number of road traffic fatalities during the COVID-19 pandemic in Japan has decreased slightly, but not significantly, in several weeks compared with the average year.	57.5	54.6	–	18	175	March 14 th - April 2 nd	Cross-sectional	Spain	Nuñez, J (2020) ³³
–	–	There was a significant reduction in road traffic accidents resulting in minor or no injuries after the mandated social lockdown			daily number: 18.1 ± 6.4	daily number: 14.4 ± 4.6	daily number: 17.9 ± 6.1	March 23 th - May 3 rd	Cross-sectional	USA, Missouri	Qureshi, A (2020) ²⁷
44753	69067	Injuries due to road traffic accidents achieved statistical significance (p <0.05).				3664	5804	Not mentioned	Cross-sectional	Brazil	Rajput, K (2021) ²⁰
121	367	Road traffic collisions (RTC) reduced by 42.6% and 46.6%. RTC involving a car significantly reduced during lockdown, conversely, bike-related RTC significantly increased.	median age: 36	–	104	58	108	March 23 th - May 10 th	Cohort	North West of England	Ribeiro-Junior, MAF (2021) ⁴⁴

56	173	The proportion of traffic-related accidents was 55% during the lockdown period and 51% during previous years. There were no detectable differences in injury patterns.	47	53	-	31	88	March 16 th - May 31 st	Cohort	Finland	Riuttanen, A (2021) ⁴⁵
697	1245	The overall volume of injured patients significantly decreased during the lockdown period of the COVID-19 outbreak, with the greatest decrease registered for road traffic collisions (RTCs).	-	-	-	154	307	March 15 th - April 30 th	Cross-sectional	Israel	Rozenfeld, M (2021) ⁴⁶
		Reduction of accidents has been higher than the decrease of mobility during the same reference period (62.9%). This suggests a multiplicative positive effect of traffic reduction on roads safety.	-		290	40	152	March 15 th - April 26 th	Cross-sectional	Spain, Tarragona	Saladié, Ò (2020) ⁴⁴
2176	3420	The proportion of road traffic accidents during the lockdown was significantly reduced in over 65-year olds	53	53.4		96	185	March 23 th - June 14 th	Cross-sectional	UK	Sephton, BM (2021) ²¹
978	2045	The number of traffic accidents decreased from 1211 (59.2%) to 522 (53.4%) and pedestrian-vehicle collisions fell from 249 (12.2%) to 92 (9.4%).	-	-	-	614	1460	Not mentioned	Cross-sectional	Catalonia	Solà-Muñoz, S (2021) ³⁵
194	409	Road traffic injuries (RTI) were the most common injury mechanism pre-COVID-19 (47.8%) and intra-COVID-19 (53.6%) (p=0.27).	-	-	-	104	194	March 22 nd - May 3 rd	Cross-sectional	Kigali, Rwanda	Uwamahoro, Ch (2021) ⁴⁷
-	-	There were about 1226 fewer collisions, 72 fewer deaths, 40 fewer serious injuries and 1426 fewer minor injuries compared with what would have been expected in the absence of the pandemic.	-	-	-	833	1646	March - April	Cross-sectional	Greece	Vandoros, S (2020) ⁴⁸

3239	4300	A 40% decline in the number of RTCs, from 1 704 in February - June 2019 to 1 026 in the corresponding period for 2020, was noted and found to be statistically significant (p=0.03).	-	-		1026	1704	Not mentioned	Cross-sectional	Gauteng, South Africa	Venter, A (2021) ²¹
117	393	Road traffic collisions increased over periods one–three (18.8% vs. 23% vs. 30.1%, p = 0.038)	Median: 65.8	Median after lockdown: 63.35	106	22	-	March 23 th - May 9 th	Cross-sectional	England	Waseem, S (2021) ²²
154	304	The study showed that during the period of lockdown in SA there was a significant decrease in motor vehicle accidents and pedestrian vehicle accidents	-	-	-	33	89	March 23 th - May 31 st	Cross-sectional	South Africa	Zsilavec, A (2020) ²²