

Appendix 1: Mechanism of injury by age group in relation to socioeconomic disadvantage of area of residence

	<18 years	18–25 years	25–35 years	35–45 years	45–55 years	55–65 years	65+ years
Assault (n=1137)	n=66	n=272	n=351	n=243	n=137	n=47	n=21
Quintile 1 (Most disadvantaged)	27 (2.4)	98 (8.6)	164 (14.4)	129 (11.3)	64 (5.6)	23 (2.0)	10 (0.9)
Quintile 2	10 (0.9)	25 (2.2)	40 (3.5)	34 (3.0)	21 (1.8)	6 (0.5)	1 (0.1)
Quintile 3	16 (1.4)	69 (6.1)	81 (7.1)	40 (3.5)	21 (1.8)	12 (1.1)	6 (0.5)
Quintile 4	9 (0.8)	55 (4.8)	46 (4.0)	28 (2.5)	26 (2.3)	5 (0.4)	3 (0.3)
Quintile 5 (Least disadvantaged)	4 (0.4)	25 (2.2)	20 (1.8)	12 (1.1)	5 (0.4)	1 (0.1)	1 (0.1)
RTA (n=276)	n=38	n=55	n=49	n=46	n=40	n=24	n=24
Quintile 1 (Most disadvantaged)	15 (5.4)	15 (5.4)	19 (6.9)	15 (5.4)	14 (5.1)	10 (3.6)	5 (1.8)
Quintile 2	8 (2.9)	10 (3.6)	6 (2.2)	7 (2.5)	6 (2.2)	3 (1.1)	4 (1.4)
Quintile 3	7 (2.5)	16 (5.8)	13 (4.7)	12 (4.3)	9 (3.3)	5 (1.8)	3 (1.1)
Quintile 4	6 (2.2)	12 (4.3)	7 (2.5)	6 (2.2)	8 (2.9)	5 (1.8)	3 (1.1)
Quintile 5 (Least disadvantaged)	2 (0.7)	2 (0.7)	4 (1.4)	6 (2.2)	3 (1.1)	1 (0.4)	5 (1.8)
Sport (n=450)	n=147	n=111	n=113	n=42	n=25	n=9	n=3
Quintile 1 (Most disadvantaged)	40 (8.9)	27 (6.0)	47 (10.4)	15 (3.3)	7 (1.6)	0	1 (0.2)
Quintile 2	18 (4.0)	20 (4.4)	15 (3.3)	6 (1.3)	3 (0.7)	1 (0.2)	0
Quintile 3	31 (6.9)	26 (5.8)	26 (5.8)	12 (2.7)	4 (0.9)	4 (0.9)	0
Quintile 4	38 (8.4)	20 (4.4)	16 (3.6)	7 (1.6)	5 (1.1)	1 (0.2)	1 (0.2)
Quintile 5 (Least disadvantaged)	20 (4.4)	18 (4.0)	9 (2.0)	2 (0.4)	6 (1.3)	3 (0.7)	1 (0.2)
Fall (n=571)	n=53	n=41	n=43	n=32	n=54	n=58	n=290
Quintile 1 (Most disadvantaged)	23 (4.0)	11 (1.9)	15 (2.6)	10 (1.8)	19 (3.3)	13 (2.3)	69 (12.1)
Quintile 2	11 (1.9)	7 (1.2)	6 (1.1)	2 (0.4)	9 (1.6)	11 (1.9)	31 (5.4)
Quintile 3	11 (1.9)	10 (1.8)	9 (1.6)	10 (1.8)	11 (1.9)	18 (3.2)	77 (13.5)
Quintile 4	6 (1.1)	10 (1.8)	6 (1.1)	7 (1.2)	4 (0.7)	11 (1.9)	67 (11.7)
Quintile 5 (Least disadvantaged)	2 (0.4)	3 (0.5)	7 (1.2)	3 (0.5)	11 (1.9)	5 (0.9)	46 (8.1)
Work (n=46)	n=2	n=2	n=7	n=10	n=9	n=11	n=5
Quintile 1 (Most disadvantaged)	2 (4.3)	1 (2.2)	1 (2.2)	4 (8.7)	2 (4.3)	1 (2.2)	1 (2.2)
Quintile 2	0	1 (2.2)	1 (2.2)	2 (4.3)	2 (4.3)	0	2 (4.3)
Quintile 3	0	0	1 (2.2)	3 (6.5)	3 (6.5)	6 (13.0)	1 (2.2)
Quintile 4	0	0	2 (4.3)	0	1 (2.2)	4 (8.7)	1 (2.2)
Quintile 5 (Least disadvantaged)	0	0	2 (4.3)	1 (2.2)	1 (2.2)	0	0
Animal (n=50)	n=8	n=8	n=8	n=10	n=5	n=5	n=6
Quintile 1 (Most disadvantaged)	1 (2.0)	1 (2.0)	5 (10.0)	3 (6.0)	2 (4.0)	2 (4.0)	2 (4.0)
Quintile 2	1 (2.0)	3 (6.0)	1 (2.0)	5 (10.0)	0	1 (2.0)	1 (2.0)
Quintile 3	3 (6.0)	1 (2.0)	0	2 (4.0)	1 (2.0)	1 (2.0)	1 (2.0)
Quintile 4	2 (4.0)	3 (6.0)	2 (4.0)	0	1 (2.0)	1 (2.0)	1 (2.0)
Quintile 5 (Least disadvantaged)	1 (2.0)	0	0	0	1 (2.0)	0	1 (2.0)

	<18 years	18–25 years	25–35 years	35–45 years	45–55 years	55–65 years	65+ years
Other (n=9)	n=5	n=1	n=0	n=1	n=1	n=0	n=1
Quintile 1 (Most disadvantaged)	3 (33.3)	0	0	0	0	0	1 (11.1)
Quintile 2	0	1 (11.1)	0	1 (11.1)	0	0	0
Quintile 3	0	0	0	0	1 (11.1)	0	0
Quintile 4	0	0	0	0	0	0	0
Quintile 5 (Least disadvantaged)	2 (22.2)	0	0	0	0	0	0

Appendix 2: Primary facial fractures by age group in relation to socioeconomic disadvantage of area of residence

	<18 years	18–25 years	25–35 years	35–45 years	45–55 years	55–65 years	65+ years
Nasal (n=233)	n=39	n=32	n=49	n=28	n=36	n=10	n=39
Quintile 1 (Most disadvantaged)	18 (7.7)	13 (5.6)	20 (8.6)	9 (3.9)	19 (8.2)	4 (1.7)	15 (6.4)
Quintile 2	6 (2.6)	2 (0.9)	9 (3.9)	5 (2.1)	3 (1.3)	3 (1.3)	8 (3.4)
Quintile 3	5 (2.1)	7 (3.0)	12 (5.2)	3 (1.3)	3 (1.3)	1 (0.4)	5 (2.1)
Quintile 4	10 (4.3)	9 (3.9)	5 (2.1)	8 (3.4)	8 (3.4)	1 (0.4)	7 (3.0)
Quintile 5 (Least disadvantaged)	0	1 (0.4)	3 (1.3)	3 (1.3)	3 (1.3)	1 (0.4)	4 (1.7)
Mandible (n=671)	n=114	n=186	n=165	n=103	n=45	n=19	n=39
Quintile 1 (Most disadvantaged)	36 (5.4)	70 (10.4)	78 (11.6)	53 (7.9)	15 (2.2)	8 (1.2)	11 (1.6)
Quintile 2	18 (2.7)	22 (3.3)	18 (2.7)	12 (1.8)	9 (1.3)	1 (0.1)	3 (0.4)
Quintile 3	28 (4.2)	36 (5.4)	35 (5.2)	23 (3.4)	7 (1.0)	6 (0.9)	9 (1.3)
Quintile 4	19 (2.8)	35 (5.2)	25 (3.7)	11 (1.6)	9 (1.3)	3 (0.4)	13 (1.9)
Quintile 5 (Least disadvantaged)	13 (1.9)	23 (3.4)	9 (1.3)	4 (0.6)	5 (0.7)	1 (0.1)	3 (0.4)
Orbit (n=611)	n=56	n=99	n=152	n=105	n=62	n=54	n=83
Quintile 1 (Most disadvantaged)	19 (3.1)	24 (3.9)	68 (11.1)	51 (8.3)	20 (3.3)	21 (3.4)	21 (3.4)
Quintile 2	4 (0.7)	11 (1.8)	24 (3.9)	13 (2.1)	9 (1.5)	6 (1.0)	6 (1.0)
Quintile 3	13 (2.1)	33 (5.4)	33 (5.4)	25 (4.1)	13 (2.1)	13 (2.1)	22 (3.6)
Quintile 4	14 (2.3)	24 (3.9)	17 (2.8)	11 (1.8)	14 (2.3)	8 (1.3)	19 (3.1)
Quintile 5 (Least disadvantaged)	6 (1.0)	7 (1.1)	10 (1.6)	5 (0.8)	6 (1.0)	6 (1.0)	15 (2.5)
Orbitozygomatic (n=702)	n=62	n=110	n=133	n=104	n=87	n=52	n=154
Quintile 1 (Most disadvantaged)	22 (3.1)	30 (4.3)	52 (7.4)	45 (6.4)	37 (5.3)	12 (1.7)	39 (5.6)
Quintile 2	10 (1.4)	18 (2.6)	14 (2.0)	16 (2.3)	13 (1.9)	9 (1.3)	20 (2.8)
Quintile 3	15 (2.1)	29 (4.1)	32 (4.6)	20 (2.8)	17 (2.4)	18 (2.6)	29 (5.6)
Quintile 4	9 (1.3)	23 (3.3)	23 (3.3)	15 (2.1)	10 (1.4)	11 (1.6)	28 (4.0)
Quintile 5 (Least disadvantaged)	6 (0.9)	10 (1.4)	12 (1.7)	8 (1.1)	10 (1.4)	2 (0.3)	28 (4.0)
Zygomatic arch (n=113)	n=7	n=21	n=30	n=21	n=17	n=7	n=10
Quintile 1 (Most disadvantaged)	3 (2.7)	6 (5.3)	16 (14.2)	10 (8.8)	11 (9.7)	1 (0.9)	0
Quintile 2	0	5 (4.4)	2 (1.8)	3 (2.7)	2 (1.8)	1 (0.9)	0
Quintile 3	0	6 (5.3)	8 (7.1)	3 (2.7)	2 (1.8)	4 (3.5)	6 (5.3)
Quintile 4	1 (0.9)	3 (2.7)	4 (3.5)	2 (1.8)	1 (0.9)	1 (0.9)	3 (2.7)
Quintile 5 (Least disadvantaged)	3 (2.7)	1 (0.9)	0	3 (2.7)	1 (0.9)	0	1 (0.9)
Dentoalveolar (n=34)	n=7	n=4	n=10	n=5	n=2	n=1	n=5
Quintile 1 (Most disadvantaged)	2 (5.9)	2 (5.9)	1 (2.9)	1 (2.9)	1 (2.9)	0	0
Quintile 2	2 (5.9)	0	1 (2.9)	2 (5.9)	0	0	1 (2.9)
Quintile 3	0	1 (2.9)	6 (17.6)	2 (5.9)	1 (2.9)	0	1 (2.9)
Quintile 4	3 (8.8)	1 (2.9)	1 (2.9)	0	0	1 (2.9)	3 (8.8)
Quintile 5 (Least disadvantaged)	0	0	1 (2.9)	0	0	0	0

	<18 years	18–25 years	25–35 years	35–45 years	45–55 years	55–65 years	65+ years
Panfacial (n=16)	n=3	n=2	n=2	n=2	n=3	n=2	n=2
Quintile 1 (Most disadvantaged)	1 (6.3)	0	2 (12.5)	0	1 (6.3)	1 (6.3)	0
Quintile 2	2 (12.5)	0	0	1 (6.3)	0	0	0
Quintile 3	0	2 (12.5)	0	1 (6.3)	2 (12.5)	1 (6.3)	1 (6.3)
Quintile 4	0	0	0	0	0	0	1 (6.3)
Quintile 5 (Least disadvantaged)	0	0	0	0	0	0	0
NOE (n=46)	n=8	n=12	n=6	n=6	n=8	n=2	n=4
Quintile 1 (Most disadvantaged)	2 (4.3)	1 (2.2)	3 (6.5)	2 (4.3)	2 (4.3)	0	1 (2.2)
Quintile 2	3 (6.5)	3 (6.5)	0	3 (6.5)	2 (4.3)	0	1 (2.2)
Quintile 3	2 (4.3)	3 (6.5)	0	0	4 (8.7)	2 (4.3)	2 (4.3)
Quintile 4	1 (2.2)	2 (4.3)	2 (4.3)	0	0	0	0
Quintile 5 (Least disadvantaged)	0	3 (6.5)	1 (2.2)	1 (2.2)	0	0	0
Frontal sinus (n=91)	n=15	n=21	n=20	n=9	n=10	n=7	n=9
Quintile 1 (Most disadvantaged)	5 (5.5)	5 (5.5)	10 (11.0)	5 (5.5)	2 (2.2)	2 (2.2)	1 (1.1)
Quintile 2	2 (2.2)	6 (6.6)	0	2 (2.2)	3 (3.3)	2 (2.2)	0
Quintile 3	3 (3.3)	4 (4.4)	2 (2.2)	2 (2.2)	0	1 (1.1)	3 (3.3)
Quintile 4	4 (4.4)	3 (3.3)	2 (2.2)	0	3 (3.3)	2 (2.2)	2 (2.2)
Quintile 5 (Least disadvantaged)	1 (1.1)	3 (3.3)	6 (6.6)	0	2 (2.2)	0	3 (3.3)
Middle cranial base (n=19)	n=6	n=3	n=3	n=1	n=1	n=0	n=5
Quintile 1 (Most disadvantaged)	2 (10.5)	2 (10.5)	1 (5.3)	0	0	0	1 (5.3)
Quintile 2	0	0	1 (5.3)	0	0	0	0
Quintile 3	2 (10.5)	1 (5.3)	1 (5.3)	0	1 (5.3)	0	4 (21.1)
Quintile 4	0	0	0	1 (5.3)	0	0	0
Quintile 5 (Least disadvantaged)	2 (10.5)	0	0	0	0	0	0
Posterior cranial base (n=3)	n=2	n=0	n=1	n=0	n=0	n=0	n=0
Quintile 1 (Most disadvantaged)	1 (33.3)	0	0	0	0	0	0
Quintile 2	1 (33.3)	0	0	0	0	0	0
Quintile 3	0	0	1 (33.3)	0	0	0	0
Quintile 4	0	0	0	0	0	0	0
Quintile 5 (Least disadvantaged)	0	0	0	0	0	0	0

Appendix 3: Odds ratios for primary facial fractures by age group in relation to socioeconomic advantage and disadvantage of area of residence

Odds ratio (95%CI]	<18 years	18–25 years	25–35 years	35–45 years	45–55 years	55–65 years	65+ years
Nasal (n=233)	n=39	n=32	n=49	n=28	n=36	n=10	n=39
Quintile 1 (Most disadvantaged)	Reference						
Quintile 2	0.738 (0.273–1.993)	0.331 (0.073–1.511)	1.732 (0.751–3.999)	1.784 (0.573–5.560)	0.370 (0.103–1.324)	1.776 (0.362–8.711)	1.273 (0.490–3.3090)
Quintile 3	0.410 (0.145–1.61)	0.656 (0.253–1.697)	1.175 (0.555–2.485)	0.732 (0.193–2.782)	0.299 (0.084–1.062)	0.250 (0.027–2.325)	0.284 (0.098–0.817)*
Quintile 4	1.013 (0.435–2.359)	1.065 (0.437–2.593)	0.780 (0.283–2.152)	3.711 (1.348–10.219)	1.013 (0.407–2.518)	0.433 (0.046–4.080)	0.500 (0.193–1.301)
Quintile 5 (Least disadvantaged)	0	0.229 (0.029–1.799)	0.888 (0.252–3.132)	2.651 (0.665–10.570)	0.586 (0.160–2.145)	1.250 (0.125–12.533)	0.395 (0.124–1.259)
Mandible (n=671)	n=114	n=186	n=165	n=103	n=45	n=19	n=39
Quintile 1 (Most disadvantaged)	Reference						
Quintile 2	1.250 (0.617–2.534)	0.580 (0.318–1.057)	0.783 (0.430–1.427)	0.619 (0.303–1.263)	1.744 (0.696–4.371)	0.244 (0.029–2.083)	0.591 (0.155–2.248)
Quintile 3	1.458 (0.780–2.726)	0.496 (0.300–0.820)*	0.817 (0.510–1.308)	0.953 (0.532–1.707)	1.009 (0.384–2.655)	0.769 (0.245–2.415)	0.769 (0.302–1.956)
Quintile 4	0.942 (0.481–1.845)	0.638 (0.380–1.074)	1.027 (0.596–1.770)	0.690 (0.327–1.455)	1.550 (0.623–3.857)	0.641 (0.155–2.648)	1.463 (0.614–3.489)
Quintile 5 (Least disadvantaged)	1.505 (0.665–3.405)	1.091 (0.570–2.089)	0.605 (0.276–1.325)	0.464 (0.151–1.424)	1.409 (0.462–4.291)	0.569 (0.062–5.142)	0.417 (0.111–1.568)
Orbit (n=611)	n=56	n=99	n=152	n=105	n=62	n=54	n=83
Quintile 1 (Most disadvantaged)	Reference						
Quintile 2	0.440 (0.141–1.372)	1.056 (0.484–2.302)	1.435 (0.813–2.534)	0.724 (0.360–1.457)	1.237 (0.511–2.997)	0.500 (0.167–1.496)	0.589 (0.217–1.597)
Quintile 3	1.144 (0.524–2.498)	1.993 (1.104–3.599)	0.916 (0.565–1.484)	1.135 (0.638–2.017)	1.546 (0.697–3.430)	0.525 (0.223–1.236)	1.018 (0.513–2.018)
Quintile 4	1.442 (0.665–3.130)	1.697 (0.901–3.196)	0.738 (0.403–1.351)	0.729 (0.345–1.539)	1.9897 (0.896–4.406)	0.561 (0.206–1.528)	1.079 (0.513–2.203)
Quintile 5 (Least disadvantaged)	1.162 (0.420–3.219)	0.918 (0.396)	0.841 (0.392–1.803)	0.645 (0.229–1.820)	1.257 (0.449–3.518)	2.000 (0.500–7.997)	1.245 (0.576–2.692)
Orbitozygomatic (n=702)	n=62	n=110	n=133	n=104	n=87	n=52	n=154
Quintile 1 (Most disadvantaged)	Reference						
Quintile 2	1.065 (0.460–2.462)	1.506 (0.769–2.948)	0.974 (0.503–1.887)	1.136 (0.582–2.219)	0.891 (0.413–1.921)	2.135 (0.732–6.227)	1.250 (0.634–2.870)
Quintile 3	1.145 (0.547–2.398)	1.278 (0.718–2.277)	1.250 (0.756–2.065)	0.987 (0.526–1.816)	0.989 (0.482–2.005)	1.982 (0.822–4.779)	0.943 (0.524–1.699)
Quintile 4	0.700 (0.300–1.634)	1.225 (0.663–2.261)	1.572 (0.886–2.789)	1.323 (0.658–2.659)	0.548 (0.245–1.229)	2.120 (0.775–5.800)	0.748 (0.400–1.399)
Quintile 5 (Least disadvantaged)	0.971 (0.355–2.655)	1.079 (0.483–2.408)	1.531 (0.733–3.195)	1.456 (0.584–3.630)	1.120 (0.470–2.712)	0.771 (0.144–4.139)	1.381 (0.701–2.721)

Odds ratio (95%CI]	<18 years	18–25 years	25–35 years	35–45 years	45–55 years	55–65 years	65+ years
Zygomatic arch (n=113)	n=7	n=21	n=30	n=21	n=17	n=7	n=10
Quintile 1 (Most disadvantaged)	Reference						
Quintile 2	0	1.976 (0.581–6.715)	0.438 (0.098–1.955)	0.922 (0.245–3.474)	0.452 (0.096–2.134)	2.286 (0.136–38.303)	#
Quintile 3	0	1.267 (0.398–4.032)	0.963 (0.401–2.314)	0.655 (0.175–2.449)	0.367 (0.078–1.723)	4.571 (0.492–42.518)	#
Quintile 4	0.600 (0.061–5.896)	0.758 (0.185–3.102)	0.783 (0.254–2.415)	0.722 (0.153–3.410)	0.200 (0.025–1.601)	1.846 (0.111–30.744)	#
Quintile 5 (Least disadvantaged)	3.857 (0.738–20.152)	0.512 (0.061–4.441)	0	2.371 (0.602–9.311)	0.339 (0.042–2.749)	0	#
Dentoalveolar (n=34)	n=7	n=4	n=10	n=5	n=2	n=1	n=5
Quintile 1 (Most disadvantaged)	Reference						
Quintile 2	2.370 (0.324–17.355)	0	3.676 (0.227–59.543)	6.362 (0.566–71.529)	0	#	#
Quintile 3	0	0.624 (0.056–6.963)	12.097 (1.441–101–581)	4.545 (0.406–50.882)	2.184 (0.134–35.636)	#	#
Quintile 4	2.819 (0.485–17.352)	0.763 (0.068–8.523)	3.205 (0.198–51.842)	0	0	#	#
Quintile 5 (Least disadvantaged)	0	0	6.098 (0.372–99.415)	0	0	#	#
Panfacial (n=16)	n=3	n=2	n=2	n=2	n=3	n=2	n=2
Quintile 1 (Most disadvantaged)	Reference						
Quintile 2	4.783 (0.423–54.054)	#	#	#	#	#	#
Quintile 3	0	#	#	#	4.458 (0.395–50.363)	1.067 (0.065–17.567)	#
Quintile 4	0	#	#	#	#	#	#
Quintile 5 (Least disadvantaged)	0	#	#	#	#	#	#
NOE (n=46)	n=8	n=12	n=6	n=6	n=8	n=2	n=4
Quintile 1 (Most disadvantaged)	Reference						
Quintile 2	3.633 (0.598–22.483)	7.125 (0.727–69.794)	0	4.833 (0.787–29.684)	2.718 (0.370–19.964)	#	2.316 (0.141–37.998)
Quintile 3	1.652 (0.227–12.005)	3.832 (0.394–37.308)	0	0	4.609 (0.815–26.056)	#	1.956 (0.174–21.956)
Quintile 4	0.908 (0.081–10.226)	3.102 (0.278–34.671)	2.147 (0.352–13.086)	0	0	#	#
Quintile 5 (Least disadvantaged)	0	10.133 (1.029–99.815)	2.016 (0.205–19.854)	3.782 (0.330–43.477)	0	#	#
Frontal sinus (n=91)	n=15	n=21	n=20	n=9	n=10	n=7	n=9
Quintile 1 (Most disadvantaged)	Reference						
Quintile 2	0.922 (0.172–4.926)	2.911 (0.856–9.898)	0	1.244 (0.235–6.591)	4.184 (0.673–26.010)	2.350 (0.309–17.868)	0
Quintile 3	0.978 (0.226–4.231)	1.003 (0.264–3.820)	0.377 (0.081–1.745)	0.888 (0.169–4.680)	0	0.522 (0.045–5.962)	2.966 (0.303–29.066)
Quintile 4	1.488 (0.384–5.760)	0.915 (0.214–3.919)	0.626 (0.134–2.919)	0	3.786 (0.611–23.471)	1.880 (0.250–14.160)	2.378 (0.211–26.754)
Quintile 5 (Least disadvantaged)	0.707 (0.079–6.282)	1.973 (0.454–8.580)	4.017 (1.376–11.722)*	0	4.240 (0.569–31.567)	0	5.176 (0.525–51.082)

Odds ratio (95%CI]	<18 years	18–25 years	25–35 years	35–45 years	45–55 years	55–65 years	65+ years
Middle cranial base (n=19)	n=6	n=3	n=3	n=1	n=1	n=0	n=5
Quintile 1 (Most disadvantaged)	Reference						
Quintile 2	0	0	3.676 (0.227–59.543)	#	#	#	#
Quintile 3	1.652 (0.227–12.005)	0.624 (0.056–6.963)	1.938 (0.120–31.237)	#	#	#	4.000 (0.438–36.504)
Quintile 4	0	0	0	#	#	#	#
Quintile 5 (Least disadvantaged)	3.759 (0.508–27.836)	0	0	#	#	#	#
Posterior cranial base (n=3)	n=2	n=0	n=1	n=0	n=0	n=0	n=0
Quintile 1 (Most disadvantaged)	Reference						
Quintile 2	2.340 (0.143–38.210)	#	#	#	#	#	#
Quintile 3	0	#	#	#	#	#	#
Quintile 4	0	#	#	#	#	#	#
Quintile 5 (Least disadvantaged)	0	#	#	#	#	#	#