

Supplementary Table 1: Incidence, prevalence, age-standardized incidence, age-standardized prevalence, and changes of spinal injuries, 19 member countries of the G20 (the 20th member is the European Union) and the world, 1990 and 2019.

Country name	Incidence			Age-standardized incidence			Prevalence			Age-standardized prevalence		
	1990	2019	Change (%)	1990	2019	Change (%)	1990	2019	Change (%)	1990	2019	Change (%)
	(per 100,000)	(per 100,000)		(per 100,000)	(per 100,000)		(per 100,000)	(per 100,000)		(per 100,000)	(per 100,000)	
Argentina	7.32	7.50	2.43	7.44	7.31	−1.66	192.72	220.26	14.29	197.39	204.96	3.83
	(6.06, 8.74)	(6.11, 9.04)	(−3.46, 6.70)	(6.16, 8.86)	(5.96, 8.83)	(−7.25, 2.77)	(174.71, 225.58)	(204.71, 239.06)	(4.02, 20.24)	(179.09, 230.32)	(190.14, 222.78)	(−5.35, 9.43)
Australia	12.90	16.88	30.80	12.69	13.89	9.46	356.89	433.29	21.41	330.72	353.96	7.03
	(10.44, 15.63)	(13.34, 21.13)	(18.96, 44.08)	(10.23, 15.43)	(11.08, 17.12)	(4.07, 15.25)	(327.76, 398.78)	(399.95, 480.54)	(17.47, 25.39)	(303.62, 370.12)	(323.48, 396.76)	(3.91, 10.48)
Brazil	14.23	15.29	7.43	16.01	14.71	−8.10	288.11	363.16	26.05	338.01	329.84	−2.42
	(11.03,18.45)	(11.52, 20.17)	(5.80, 15.17)	(12.35, 20.86)	(11.05, 19.43)	(−11.53, −5.03)	(265.00, 315.90)	(334.85, 396.63)	(21.31, 30.75)	(311.94, 368.74)	(303.93, 360.43)	(−5.32, 0.49)
Canada	10.37	14.87	43.36	9.57	10.16	6.21	225.13	287.14	27.55	199.94	203.02	1.54
	(8.49, 12.67)	(11.69, 18.93)	(29.92, 56.99)	(7.85, 11.66)	(8.22, 12.51)	(0.62, 11.90)	(211.38, 242.30)	(269.26, 307.92)	(23.30, 32.18)	(187.86, 215.14)	(191.38, 217.53)	(−1.31, 4.24)
China	8.67	16.47	89.91	9.85	13.87	40.81	180.78	358.30	98.20	196.92	273.13	38.70
	(6.57, 11.16)	(12.08, 22.00)	(72.39, 107.66)	(7.41, 12.89)	(10.15, 18.66)	(32.92, 49.14)	(167.53, 180.78)	(333.96, 358.30)	(89.56, 106.82)	(183.36, 196.92)	(255.11, 273.13)	(34.71, 43.15)

							195.35)	386.62)		212.73)	294.39)	
							284.84	335.83		244.16	247.50	
France	13.78	16.37	18.82	11.59	10.84	−6.53			17.90			1.37
	(10.78, 17.72)	(12.32, 21.67)	(9.39, 27.37)	(9.24, 14.60)	(8.54, 13.75)	(−11.26, −2.22)	(267.18,	(311.01,		(228.88,	(228.93,	
							304.47)	362.62)	(13.85, 22.05)	261.73)	268.41)	(−2.46, 5.35)
							250.59	297.04		204.68	213.75	
Germany	10.83	13.45	24.15	9.15	9.03	−1.31			18.54			4.43
	(8.52, 13.74)	(10.13, 17.81)	(14.05, 33.33)	(7.36, 11.34)	(7.09, 11.34)	(−6.34, 3.32)	(234.46,	(272.33,		(190.82,	(196.48,	
							269.11)	322.70)	(13.75, 23.22)	220.47)	233.71)	(−0.22, 9.43)
							212.47	266.69		239.15	253.08	
Global	11.13	11.75	5.59	12.28	11.53	−6.11			25.52			5.82
	(8.81, 14.33)	(9.14, 14.95)	(−9.84, 17.45)	(9.74, 15.61)	(8.97, 14.67)	(−17.29, 1.51)	(193.94,	(244.60,		(220.10,	(231.49,	
							245.10)	305.15)	(20.45, 29.37)	272.16)	290.37)	(2.70, 9.57)
							132.55	188.44		166.01	196.80	
India	8.34	9.70	16.33	10.18	10.40	2.10			42.17			18.55
	(6.58, 10.65)	(7.46, 12.50)	(−2.52, 28.69)	(8.10, 12.89)	(8.02, 13.35)	(−11.34, 10.43)	(124.52,	(176.80,		(156.85,	(184.73,	
							141.31)	201.39)	(38.04, 46.24)	176.66)	210.66)	(15.63, 21.48)
							200.24	240.66		243.91	235.62	
Indonesia	9.84	9.73	−1.18	11.93	10.56	−11.49			20.19			−3.40
	(7.61, 12.82)	(7.46, 12.68)	(−5.62, 3.63)	(9.11, 15.58)	(8.04, 13.72)	(−13.67, −9.44)	(184.53,	(222.58,		(225.54,	(218.00,	
							224.18)	262.65)	(11.82, 26.97)	268.83)	256.54)	(−9.03, 1.74)
							268.95	277.22		218.30	192.55	
Italy	12.30	11.79	−4.08	10.16	7.77	−23.57			3.08			−11.80
	(9.35, 16.26)	(8.66, 16.12)	(−10.32, 2.48)	(7.95, 12.89)	(6.07, 9.80)	(−26.18, −20.88)	(252.05,	(258.51,		(204.31,	(179.34,	
							290.92)	299.92)	(0.42, 6.40)	235.19)	207.62)	(−14.27, −8.87)
Japan	15.66	20.44	30.53	14.21	13.11	−7.72	418.41	528.92	26.41	347.17	342.22	−1.42

	(12.32, 19.65)	(15.44, 27.77)	(17.05, 46.24)	(11.31, 17.75)	(10.30, 16.70)	(−11.84, −4.27)	(389.72, 452.24)	(486.91, 573.84)	(22.69, 30.35)	(323.62, 375.38)	(316.16, 371.41)	(−3.46, 0.90)
							282.28	323.90		364.97	318.64	
Mexico	14.31	14.00	−2.12	17.07	14.31	−16.15	(260.64, 309.58)	(299.73, 354.03)	14.74	(338.36, 398.85)	(294.89, 347.52)	−12.70
	(11.16, 18.46)	(10.70, 18.22)	(−7.00, 3.24)	(13.12, 22.14)	(10.90, 18.60)	(−17.61, −14.62)			(12.00, 17.39)			(−14.48, −11.10)
							205.09	315.44		212.66	229.49	
Republic of Korea	9.43	11.47	21.59	9.80	9.47	−3.36	(192.29, 217.94)	(297.21, 338.60)	53.81	(200.38, 225.49)	(215.61, 247.17)	7.91
	(7.86, 11.25)	(9.25, 14.13)	(9.60, 34.02)	(8.16, 11.69)	(7.70, 11.51)	(−10.64, 3.30)			(47.99, 60.38)			(4.26, 11.94)
							402.63	392.11		361.35	312.88	
Russian Federation	16.54	14.56	−11.97	15.88	13.30	−16.22	(374.78, 435.81)	(363.01, 428.07)	−2.61	(336.29, 390.39)	(288.85, 342.85)	−13.41
	(12.97, 21.08)	(11.40, 18.51)	(−16.76, −6.52)	(12.56, 20.11)	(10.53, 16.82)	(−19.65, −12.61)			(−5.91, 2.72)			(−16.48, −8.11)
							147.58	277.71		201.55	256.42	
Saudi Arabia	7.57	12.05	59.22	8.76	11.67	33.28	(138.32, 158.56)	(253.93, 304.50)	88.18	(189.28, 216.40)	(236.65, 279.49)	27.22
	(6.22, 9.20)	(9.68, 14.76)	(48.85, 70.37)	(7.15, 10.68)	(9.34, 14.41)	(26.14, 40.37)			(79.04, 97.74)			(21.84, 32.57)
							190.76	173.93		232.12	176.19	
South Africa	9.72	8.54	−12.10	10.87	8.82	−18.85	(175.61, 218.11)	(162.09, 187.96)	−8.82	(214.32, 261.06)	(164.57, 190.05)	−24.10
	(7.32, 13.09)	(6.50, 11.46)	(−18.31, −7.28)	(8.24, 14.69)	(6.74, 11.72)	(−23.80, −15.21)			(−16.95, −4.79)			(−29.46, −21.09)
								171.08			151.40	
Turkey	4.56	5.40	18.39	4.73	5.26	11.11	87.69	(149.30, 211.55)	95.09	102.39	(132.39, 187.78)	47.87
	(3.56, 6.20)	(4.45, 6.63)	(−6.00, 39.33)	(3.76, 6.31)	(4.34, 6.47)	(−8.95, 28.06)	(82.13, 93.93)		(75.92, 129.99)	(96.28, 108.84)		(32.94, 75.69)

United Kingdom	11.00	13.53	22.99	9.61	10.18	5.97	269.51	313.01	16.14	231.43	243.22	5.10
	(8.64, 13.99)	(10.16, 18.27)	(13.79, 31.23)	(7.71, 11.94)	(8.02, 13.02)	(0.45, 10.57)	(251.51,			(215.68,	(224.68,	
							290.21)			249.53)	265.09)	
United States of America	25.49	33.10	29.82	22.94	24.10	5.09	555.64	621.16	11.79	497.13	464.91	−6.48
	(19.80, 32.99)	(24.58, 45.49)	(18.97, 40.92)	(17.93, 29.40)	(18.43, 31.94)	(−0.67, 11.42)	(514.08,			(460.32,	(428.17,	
							604.13)			541.98)	504.52)	

Supplementary Table 2: Sex-specific number and rate of incidence, prevalence, and changes of spinal injuries, 1990 and 2019.

	1990 counts	2019 counts	Percentage change in counts, 1990–2019	1990 rates	2019 rates	Percentage change in rates, 1990–2019
	(millions)	(millions)	(%)	(per 100,000)	(per 100,000)	(%)
Incidence						
Male	0.06 (0.05, 0.08)	0.12 (0.09, 0.16)	111.15 (92.02, 130.75)	9.65 (7.40, 12.38)	17.16 (12.77, 22.56)	77.76 (61.65, 94.25)
Female	0.04 (0.03, 0.06)	0.11 (0.08, 0.15)	151.19 (128.31, 174.80)	7.62 (5.65, 10.11)	15.74 (11.19, 21.68)	106.53 (87.71, 125.93)
Both	0.10 (0.08, 0.13)	0.23 (0.17, 0.31)	128.21 (107.15, 149.53)	8.67 (6.57, 11.16)	16.47 (12.08, 22.00)	89.91 (72.39, 107.66)
Prevalence						
Male	1.25 (1.15, 1.36)	2.86 (2.66, 3.09)	129.62 (120.14, 140.43)	204.14 (188.80, 222.47)	394.61 (366.87, 426.12)	93.30 (85.33, 102.40)
Female	0.89 (0.83, 0.97)	2.24 (2.08, 2.43)	150.06 (138.02, 161.21)	155.92 (144.86, 168.82)	320.57 (297.78, 348.10)	105.60 (95.69, 114.76)
Both	2.14 (1.98, 2.31)	5.10 (4.75, 5.50)	138.16 (127.78, 148.52)	180.78 (167.53, 195.35)	358.30 (333.96, 386.62)	98.20 (89.56, 106.82)