

Incidence of neuromyelitis optica spectrum disorders in China: a large cohort study using claim data

Supplementary files

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Supplementary Table 1 The age and sex-specific incidence of NMOSD in China, 2016-2017

	N	Incidence (95% CI, per 100,000 person-years)	Female		Male		Female-to-male IRR [†] (95% CI)
			N	Incidence (95% CI, per 100,000 person-years)	N	Incidence (95% CI, per 100,000 person-years)	
Overall	1,313	0.41 (0.39, 0.43)	1,031	0.68 (0.63, 0.72)	282	0.15 (0.13, 0.17)	4.52 (4.39, 4.65)
Age							
18-34	260	0.21 (0.19, 0.24)	207	0.35 (0.31, 0.40)	53	0.08 (0.06, 0.10)	4.68 (4.38, 4.99)
35-44	288	0.39 (0.35, 0.44)	235	0.66 (0.58, 0.76)	53	0.13 (0.10, 0.17)	5.05 (4.75, 5.35)
45-54	373	0.56 (0.50, 0.62)	302	0.95 (0.85, 1.07)	71	0.18 (0.14, 0.23)	5.24 (4.98, 5.49)
55-64	234	0.67 (0.58, 0.76)	179	1.09 (0.93, 1.26)	55	0.26 (0.19, 0.33)	4.26 (3.96, 4.56)
65-74	114	0.61 (0.50, 0.73)	79	0.94 (0.74, 1.17)	35	0.28 (0.20, 0.39)	3.34 (2.94, 3.74)
75+	44	0.37 (0.26, 0.50)	29	0.52 (0.35, 0.75)	15	0.17 (0.10, 0.29)	3.02 (2.40, 3.64)
Han race	1,133	0.4 (0.38, 0.42)	889	0.66 (0.62, 0.70)	244	0.15 (0.13, 0.17)	4.51 (4.36, 4.65)

Age

18-34	206	0.20 (0.17, 0.23)	167	0.34 (0.29, 0.39)	39	0.07 (0.05, 0.09)	5.20 (4.85, 5.55)
35-44	246	0.39 (0.34, 0.44)	200	0.65 (0.56, 0.75)	46	0.13 (0.10, 0.17)	4.99 (4.67, 5.31)
45-54	330	0.55 (0.50, 0.62)	266	0.94 (0.83, 1.06)	64	0.18 (0.14, 0.24)	5.09 (4.81, 5.36)
55-64	206	0.64 (0.56, 0.74)	158	1.05 (0.89, 1.23)	48	0.25 (0.18, 0.33)	4.25 (3.92, 4.57)
65-74	103	0.60 (0.49, 0.73)	70	0.91 (0.71, 1.14)	33	0.29 (0.20, 0.41)	3.08 (2.66, 3.49)
75+	42	0.38 (0.27, 0.52)	28	0.54 (0.36, 0.79)	14	0.18 (0.10, 0.30)	3.05 (2.41, 3.69)

† IRR: incidence rate ratio.

Supplementary Table 2 Incidence of NMOSD in areas with different latitude

	N	Incidence (95% CI, per 100,000 person-years)	Female		Male		Female-to-male IRR [†] (95% CI)
			N	Incidence (95% CI, per 100,000 person-years)	N	Incidence (95% CI, per 100,000 person-years)	
Overall	1,313	0.41 (0.39, 0.43)	1,031	0.68 (0.63, 0.72)	282	0.15 (0.13, 0.17)	4.52 (4.39, 4.65)
Latitude							
20-	280	0.53 (0.46, 0.61)	225	0.93 (0.79, 1.08)	55	0.15 (0.11, 0.20)	6.31 (5.98, 6.64)
25-	107	0.41 (0.33, 0.50)	89	0.71 (0.57, 0.88)	18	0.11 (0.07, 0.18)	6.29 (5.77, 6.81)
30-	536	0.40 (0.36, 0.43)	402	0.62 (0.56, 0.69)	134	0.18 (0.15, 0.21)	3.51 (3.31, 3.71)
35-	213	0.54 (0.46, 0.62)	162	0.89 (0.75, 1.04)	51	0.20 (0.15, 0.26)	4.48 (4.16, 4.81)
40-	177	0.30 (0.26, 0.35)	153	0.54 (0.45, 0.64)	24	0.07 (0.05, 0.11)	7.32 (6.87, 7.77)
<i>P</i> -trend		0.874		0.825		0.953	
Han race	1,133	0.40 (0.38, 0.42)	889	0.66 (0.62, 0.70)	244	0.15 (0.13, 0.17)	4.51 (4.36, 4.65)

Latitude

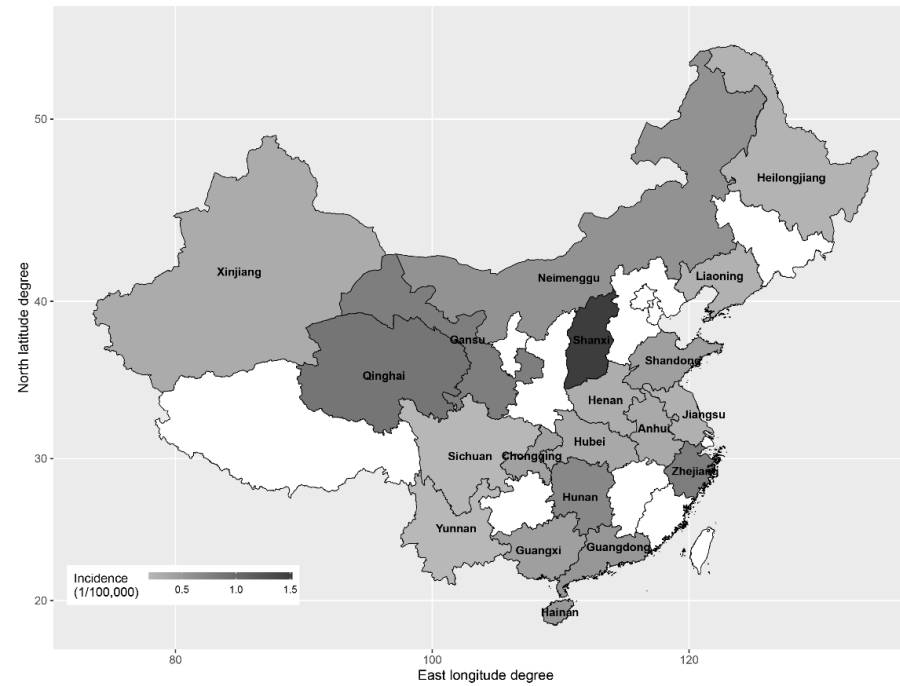
20-	207	0.51 (0.43, 0.60)	172	0.91 (0.76, 1.08)	35	0.12 (0.08, 0.17)	7.67 (7.26, 8.07)
25-	96	0.41 (0.33, 0.50)	79	0.70 (0.55, 0.87)	17	0.12 (0.07, 0.19)	5.86 (5.33, 6.40)
30-	486	0.39 (0.36, 0.43)	365	0.62 (0.55, 0.68)	121	0.17 (0.14, 0.21)	3.54 (3.34, 3.75)
35-	185	0.54 (0.46, 0.63)	137	0.88 (0.73, 1.05)	48	0.22 (0.16, 0.29)	4.04 (3.70, 4.37)
40-	159	0.31 (0.26, 0.36)	136	0.54 (0.45, 0.65)	23	0.08 (0.05, 0.12)	6.93 (6.47, 7.40)
<i>P</i> -trend		0.897		0.836		0.987	

† IRR: incidence rate ratio.

Supplementary Table 3 The comparison of basic characteristics between included and excluded provinces

Characteristic	Included provinces (n=20)	Excluded provinces (n=11)
Age, n (million, %)		
18-44	464.0 (57.4)	144.37 (59.2)
45-64	249.7 (30.9)	74.6 (30.6)
≥65	94.1 (11.6)	24.8 (10.2)
Sex, n (million, %)		
Male	407.6 (50.5)	123.8 (50.8)
Female	400.3 (49.5)	120.0 (49.2)
GDP, billion RMB Yuan		
Mean (SD)	2893.4 (1100.8)	1830.8 (1015.6)

Note: 2010 national census data and 2016 GDP data in China was used.

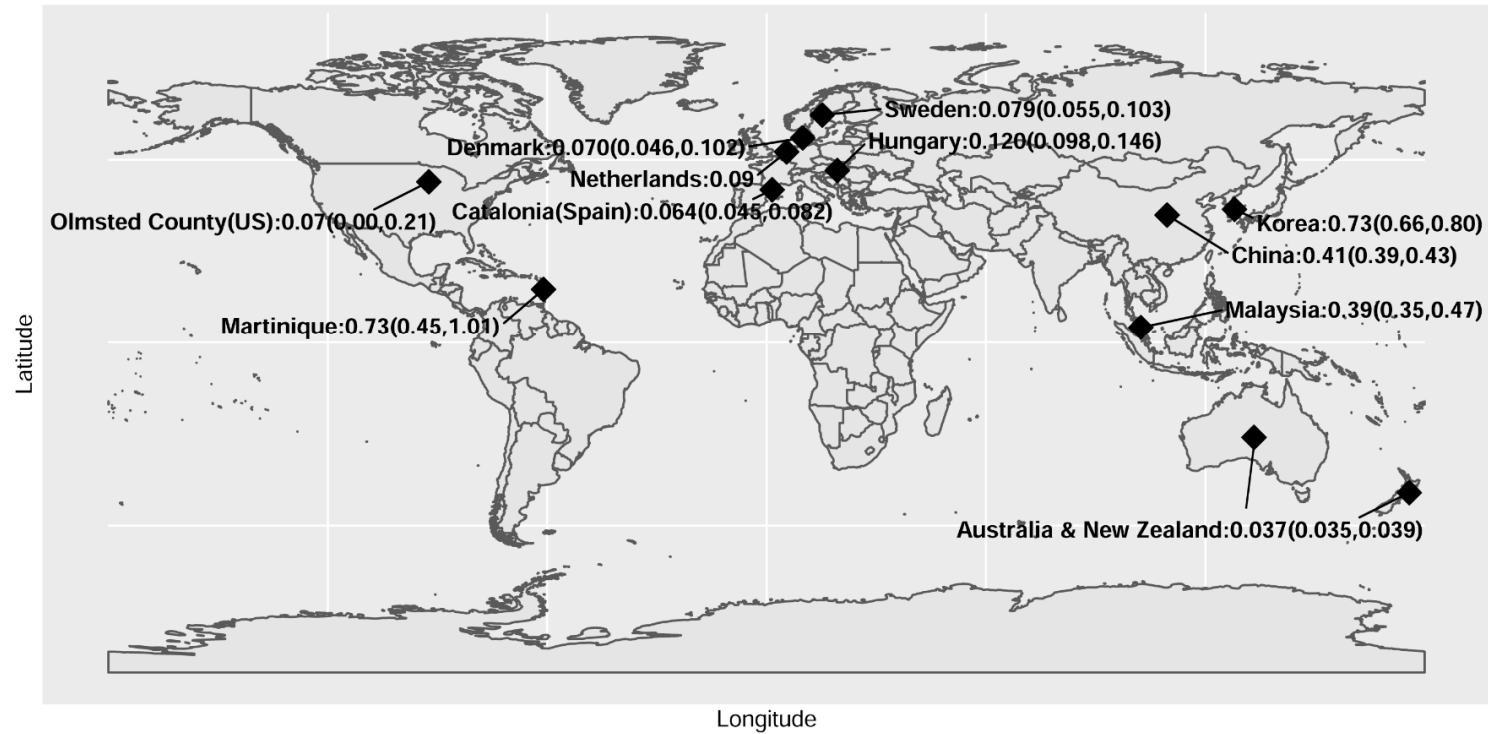


Supplementary Figure 1 Incidence rates of NMOSD in 20 provinces in China (only keeping Han people)

The geospatial vector data was downloaded from <http://www.diva-gis.org/gdata>. The shapefiles were read using the “mapproj” package first,

then the map was drawn using the “ggplot2” package in R (version 3.6.0).

NMOSD incidence rate
(1/100,000)



Supplementary Figure 2 Incidence rates of NMOSD in different countries