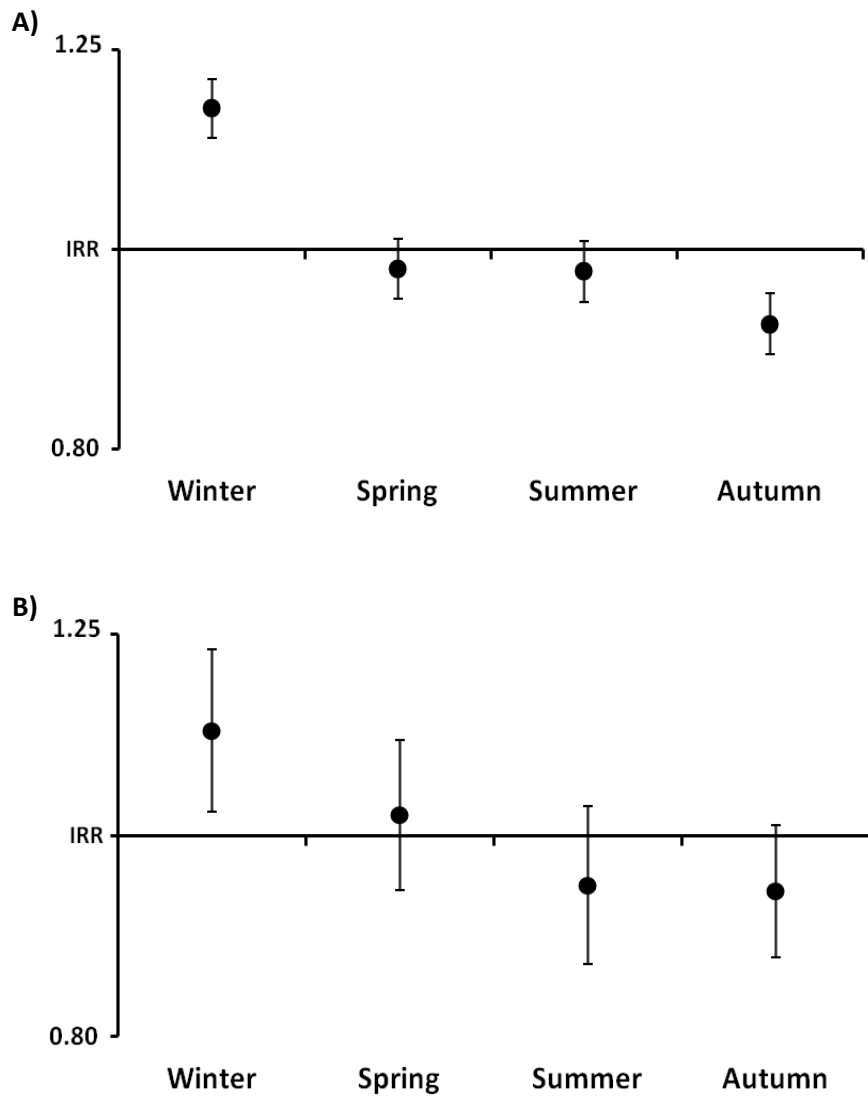


**Seasonal variation in Guillain-Barré syndrome: a systematic review, meta-analysis and
Oxfordshire cohort study**

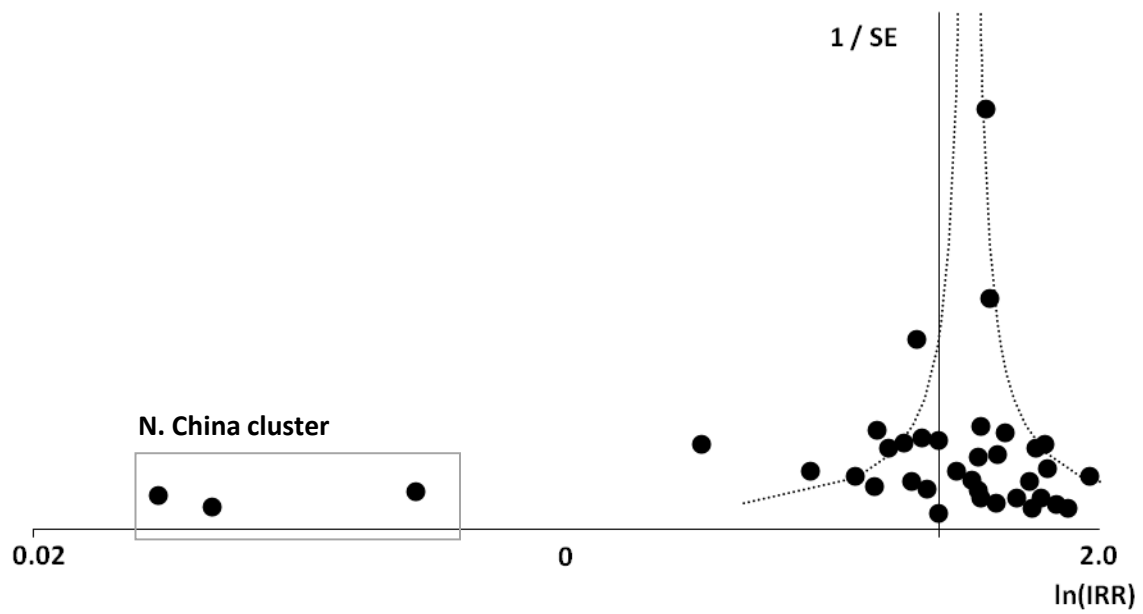
Webb AJS, Brain SAE, Wood R, Rinaldi S, Turner MR

Nuffield Department of Clinical Neurosciences, University of Oxford

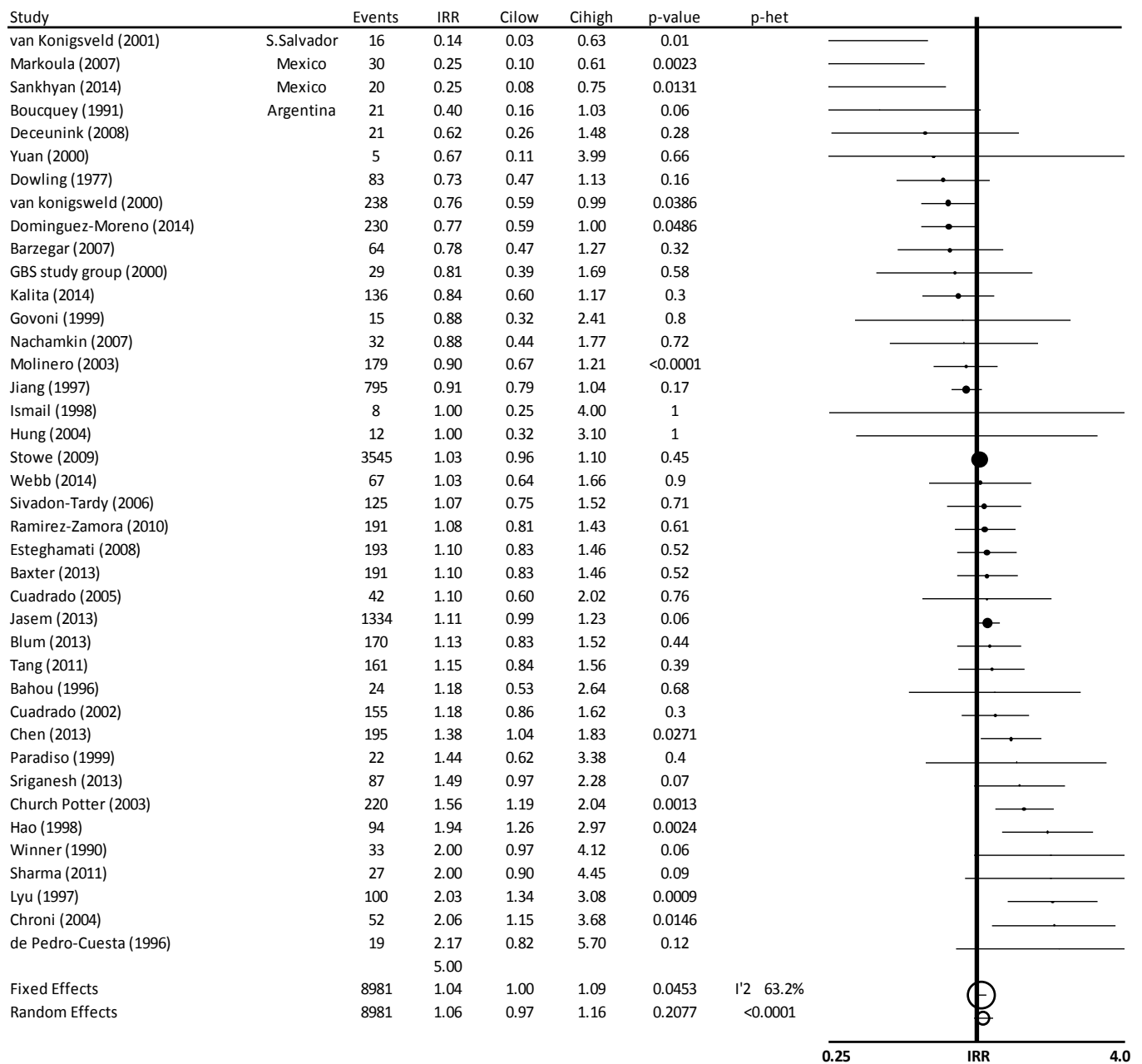
e-figure 1. Meta-analyses of the incidence rate ratios for GBS in each season compared to the average of all other seasons. A) Fixed effects B) Random effects.



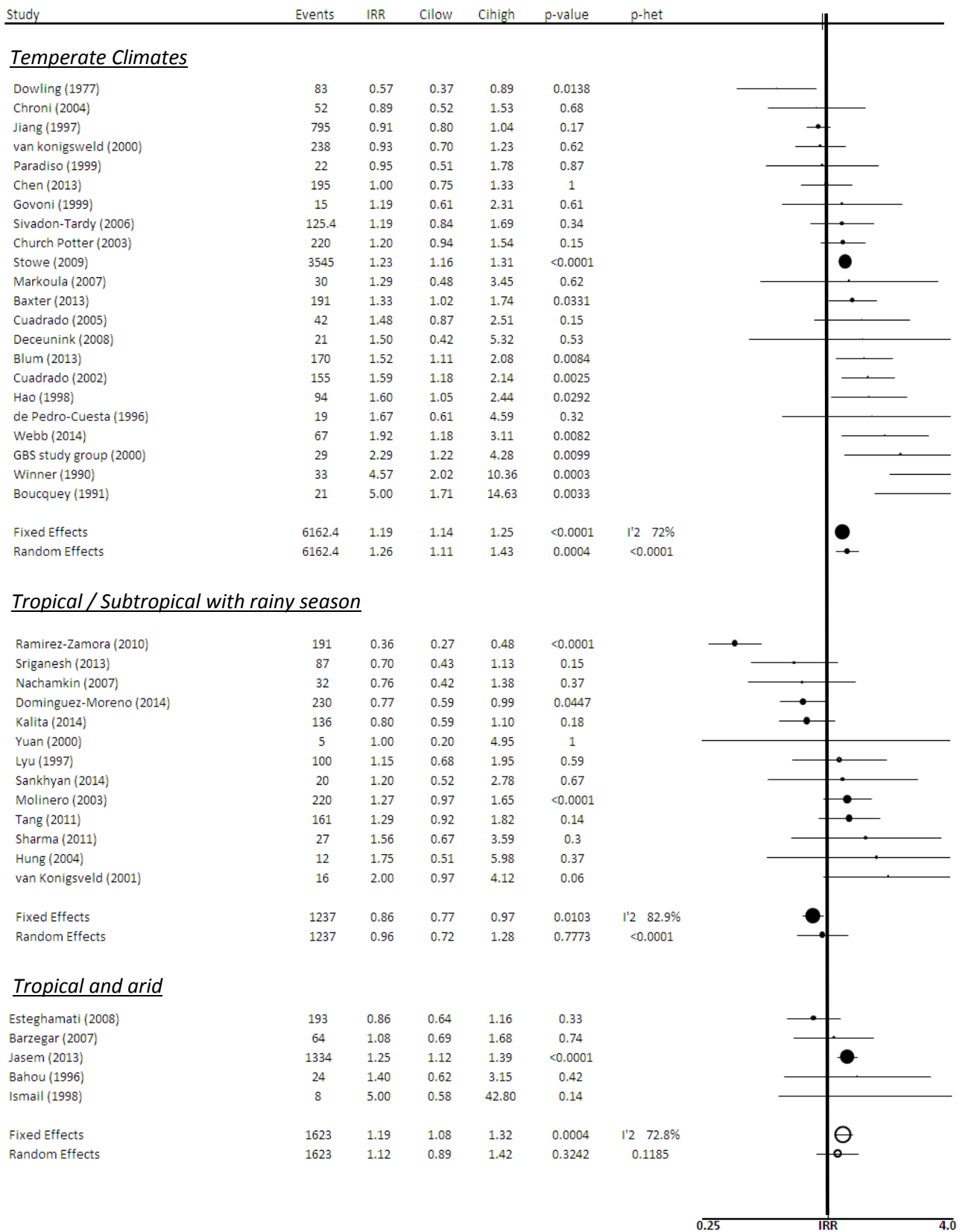
e-figure 2. Funnel plot of incidence rate ratios for winter vs summer in all studies reporting total number of Guillain-Barre syndrome patients.



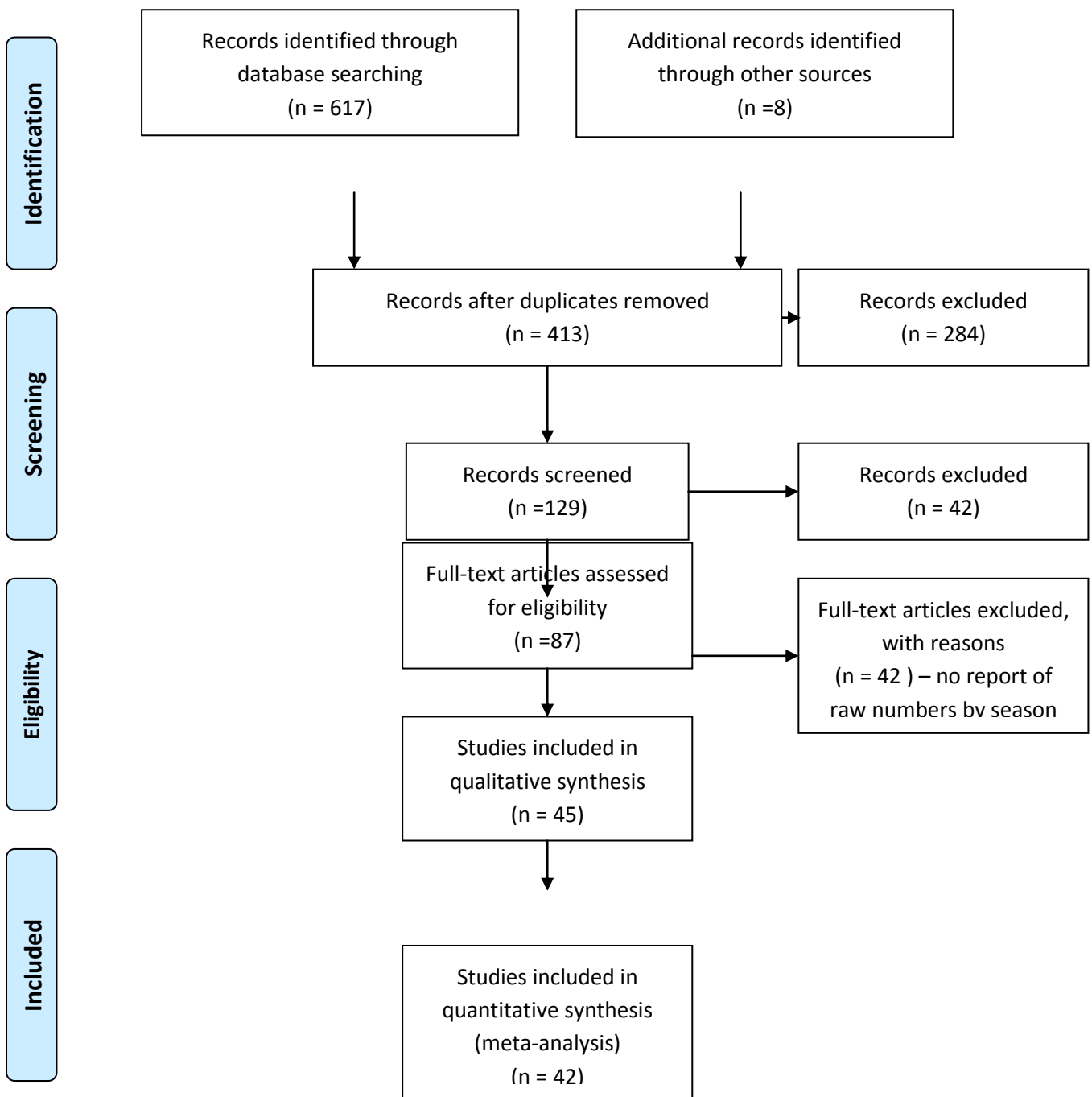
e-figure 3. Forest plot of the incidence rate ratio of Guillain-Barre syndrome in all studies comparing spring vs autumn.



e-figure 4. Forest plot of the incidence rate ratio of Guillain-Barre syndrome in all studies comparing winter vs summer by climate.



PRISMA Flowchart



e-Table 1. Characteristics of included studies

Year	1st author	Reference	Region	N	Male (%)	Age Mean (Range)	Design	
1977	Dowling	JAMA 238.4: 317	Western	176	-	-	Retrospective	Cohort
1981	Baoxun	Ann Neurol 9: S146	Far East	156	67.3	(3.5 - 80)	Retrospective	Notes review
1990	Winner	Q J Med 77.284: 1297	Western	72	44	44	Retrospective	Formal database
1991	Boucquey	J Neurol Sci 104.1: 56	Western	45	65.9	44 (20 - 40)	Retrospective	Notes review
1993	McKhann	Ann Neurol 33.4: 333	Far East	304	60	12	Retrospective	Notes review
1995	Ho	Brain 118.3: 597	Far East	129	50	14	Prospective	Cohort
1995	Kusumi	Psych Clin Neuro 49.3: 169	Far East	35	42.9	46.3	Retrospective	Formal database
1996	Bahou	J Neurol 243.2: 147	Middle East	47	78.7	(0.5 - 81)	Retrospective	Notes review
1997	Jiang	JNNP 62.5: 447	Western	1634	56.6	-	Retrospective	Formal database
1997	Lyu	JNNP 63.4: 494	Far East	167	66	35.3 (1.4 - 77)	Retrospective	Notes review
1998	Hao	J Neuroimm 81.1: 116	Far East	185	69.8	27.8 (2 - 70)	Retrospective	Cohort
1998	Ismail	Child Neuol 13.1: 488	Middle East	19	42	(0 - 12)	Retrospective	Cohort
1999	Govoni	J Neurol 246.11: 1010	Western	51	52.7	5 (20 -)	Prospective	Cohort
1999	Paradiso	Ann Neurol 46.5: 701	Latin America	61	54	(1.1 - 14)	Prospective	Case-control
2000	GBS study group	Neurol Sci 21.4: 229	Western	75	53.3	53.7 (18 - 87)	Prospective	Case-control
2000	van koningsveld	Neurology 54.3: 620	Western	476	58.7	-	Retrospective	Notes review
2000	Yuan	Eur Neurol 44.2: 79	Far East	11	72.7	44 (12 - 78)	Retrospective	Notes review
2001	van Koningsveld	Neurology 57.11: 1465	Latin America	49	63.8	-	Retrospective	Notes review
2002	Cuadrado	Eur Neurol 46.2: 83	Western	337	66.3	(20 -)	Retrospective	Notes review
2003	Church Potter	Neuroepidem 22.4: 245	Western	479	58.3	-	Retrospective	Case-control
2003	Molinero	J Child Neurol 18: 741	Latin America	394	55.6	(1-14)	Retrospective	Cohort

2004	Chroni	Eur J Neurol 11.6: 383	Western	105	-	47	Retrospective	Notes review
2004	Hung	Paed Neurol 30.2: 86	Far East	23	56.5	8.1 (- 17)	Retrospective	Cohort
2005	Cuadrado	Neurol Sci 25.2.: 57	Western	98	68	60 (20 -)	Prospective	Cohort
2005	Takahashi	J Clin Microbiol 43.1: 335	Far East	112	63	-	Retrospective	Notes review
2006	Sivadon-Tardy	Emerg Infect Dis 12.6: 990	Western	263	57	-	Prospective	Cohort
2007	Markoula	Acta Neurol Scan 115.3: 167	Western	46	65.2	55	Retrospective	Notes review
2007	Barzegar	BMC Neurol 5: 7	Middle East	143	56.5	5.4 (0 - 15)	Prospective	Cohort
2007	Nachamkin	Neurology 69.17: 2669	Latin America	121	-	6.3 (- 18)	Prospective	Cohort
2008	Deceunink	Can J Neurol Sci 35.4: 472	Western	33	36	(0.2 - 20)	Prospective	Cohort
2008	Esteghamati	Vaccine 26.59: 2068	Middle East	370	-	(5 - 14)	Retrospective	Notes review
2009	Stowe	Am J Epidem 169.3: 182	Western	775	53.9	-	Prospective	Cohort
2010	Ramirez-Zamora	Rev Neurol 48.6: 292	El Salvador	414	62	(- 12)	Retrospective	Cohort
2011	Sharma	Neurol India 59.5: 717	Indian Subcont		-	36.7	Prospective	Case-control
2011	Tang	Paed Neurol 45.4: 233	Far East	293	66.9	(- 18)	Retrospective	Notes review
2013	Baxter	Clin Infect Dis 57.2: 197	Western	415	58.6	48.5	Retrospective	Notes review
2013	Blum	J Periph Nerv Syst	Western	335	62	(18 -)	Retrospective	Notes review
2013	Chen	Eur J neurol	Far East	534	-	-	Retrospective	Notes review
2013	Jasem	BMC Neurol 13: 195	Middle East	2611	57.4	2 (- 15)	Prospective	Formal database
2013	Sriganesh	Neurol India 61.4: 349	Indian Subcont	155	67.1	30	Retrospective	Cohort
2014	Dominguez	Rev Neurol 58.1: 4	Latin America	467	62.1	41 (18 -)	Retrospective	Formal database
2014	Kalita	J Periph Nerv Syst :	Indian Subcont	328	75.3	30 (1 - 72)	Retrospective	Case-control
2014	Sankhyan	J Clin Neurosci 23.1: 427	Indian Subcont	65	66.2	5 (- 18)	Prospective	Cohort
2014	Webb	Current Report	Western	140	64	51 (2 – 88)	Retrospective	Notes review