

Appendix 3: Details of previous studies that studied if there is any ‘weekend effect’ in stroke patients [posted as supplied by author]

Year	Study period	Country	Data source	Stroke subtype	ICD codes used	Potentially inaccurate codes	If admission method available	Double-counting	Severity included	Comorbidity included	Outcome measure	‘Weekend effect’
2001	1988-1997 ^{e1}	Canada	Administrative database	ICH	431	432.9/unspecified intracranial bleed not included	Elective admissions, urgent referrals and elective transfers excluded	NR	NR	CCI	Death	No
2004	1998 ^{e2}	US	Administrative database	Stroke	430, 431, 432, 434, 436	433 not included; 432 included SDH/EDH, 436 included seizure	Separate analyses for all admissions, all unscheduled admissions and all unscheduled admissions from ED	NR	NR	CCI	Death	No
2005	2000-2001 ^{e3}	Japan	Prospective registry	IS/ICH	NR	-	-	NR	NIHSS	RF and premorbid disability	Death and mRS	Yes
2007	2003-2004 ^{e4}	Canada	Administrative database	IS	163, 164 OR 433.01, 433.11, 433.21, 433.31, 433.81, 433.91, 434.01, 434.11, 434.91	No	Not reported	NR	NR	CCI	Death	Yes
2007	1968-2005 ^{e5}	Sweden	Administrative database	IS	NR	-	Not reported	Only first ischemic stroke	NR	NR	Death	Yes
2008	1988-2003 ^{e6}	Japan	Prospective registry	Stroke	NR	-	-	Only first-ever stroke	NR	NR	Death	Yes
2009	2003-2006 ^{e7}	Germany	Prospective registry	IS	163	164 not included	-	NR	Motor deficit, consciousness/ cardioembolic	RF and premorbid mRS	Death and mRS	No
2009	2005 ^{e8}	Taiwan	Administrative database	IS	433.01, 433.11, 433.21, 433.31, 433.81, 433.91, 434.01, 434.11, 434.91	No	Not reported	NR	NR	CCI	Death	Yes
2009	2004-2007 ^{e9}	US	Retrospective hospital-based study with two centres	IS/TIA/ ICH	NR	-	-	NR	NIHSS	NR	Death and mRS	No
2009	2003-2007 ^{e10}	US	Prospective registry	IS/ICH/ SAH	430, 431, 433, 434, 436	Did not specify 433/434; 436 included seizure ; 432.9/unspecified intracranial bleed not included	-	NR	NR	RF	Death	Yes
2009	2004 ^{e11}	US	Administrative database	ICH	431	432.9/unspecified intracranial bleed not included	Not reported	NR	NR	RF	Death	Yes
2009	2004 ^{e12}	US	Administrative database	SAH	430	No	Not reported	NR	NR	RF	Death	No
2010	2002-2007 ^{e13}	US	Administrative database	IS	433.01, 433.11, 433.21, 433.31, 433.81, 433.91, 434.01, 434.11, 434.91, 437.1	437.1/acute cerebrovascular insufficiency or chronic cerebral ischemia	Only admissions through ED included	NR	NR	RF	Death	No
2010	1998-2006 ^{e14}	US	Administrative database	IS	433.01, 433.11, 433.21, 433.31, 433.81, 433.91, 434.01, 434.11, 434.91	No	Not reported	NR	NR	NR	Death	No
2010	2003-2008 ^{e15}	Canada	Prospective registry	Stroke	NR	-	-	Only first stroke	CNS	CCI	Death	Yes
2010	1988-2003 ^{e16}	Japan	Prospective registry	SAH	NR	-	-	Only first-ever SAH	JCS	RF	Death	No
2011	2008-2009 ^{e17}	China	Retrospective single centre	ICH	NR	-	-	NR	ICS	NR	Death and mRS	No
2011	2006-2009 ^{e18}	China	Retrospective single centre	SAH	NR	-	-	NR	NR	CCI	Death	No
2011	2000-2004 ^{e19}	Holland	Administrative database	IS	433, 434, 436	Did not specify 433/434; 436 included seizure	Included also non-emergency cases but adjusted for admission method	NR	NR	CCI	Death	Yes
2011	1987-2004 ^{e20}	US	Prospective cohort	Stroke	NR (physician-validated)	-	-	NR	Symptoms used as a proxy	CCI	Death	No
Year	Study period	Country	Data source	Stroke subtype	ICD codes used	Potentially inaccurate codes	If admission method available	Double-counting	Severity included	Comorbidity included	Outcome measure	‘Weekend effect’

2011	1996-2007 ^{e21}	US	Administrative database	IS	433.01, 433.11, 433.21, 433.31, 433.81, 433.91, 434.01, 434.11, 434.91	No		Not reported	Only the first discharge record	NR	RF	Death	Yes
2012	2004-2005 ^{e22}	Korea	Prospective registry	IS	NR	-		-	NR	NIHSS	RF and premorbid mRS	Death and mRS	No
2012	2004-2005 ^{e23}	Poland	Prospective registry	IS	NR	-		-	NR	Consciousness/ cardioembolic	RF and premorbid mRS	mRS	Yes
2012	2008-2009 ^{e24}	Spain	Prospective single centre	ICH/IS	NR	-		-	NR	NIHSS	RF	mRS	No
2012	2009-2010 ^{e25}	UK	Administrative database	Acute CVD	G436, I60, I61, I62, I63, I66	I62 included SDH/EDH, I66/occlusion without infarct, I64 not included		Stratified by emergency vs. elective admissions but not reported for stroke	NR	NR	CCI, admission route	Death	Yes
2012	2009-2010 ^{e26}	UK	Administrative database	Stroke	I60-I64	I62 included SDH/EDH		Admission method known but not used in analyses	NR	NR	CCI	Death	Yes
2012	2002-2009 ^{e27}	US	Prospective registry	IS	NR	-		-	NR	NIHSS	NR	Death and mRS	No
2013	2006-2008 ^{e28}	Brazil	Prospective single centre	IS/ICH	NR	-		-	Only first-time stroke	NR	RF	Death	No
2013	1985-2010 ^{e29}	France	Population-based cohort	Stroke/ TIA	NR (multiple sources)	-		-	Only first-in-study events	NIHSS	RF	Death	No
2014	2000-2007 ^{e30}	Australia	Administrative database	Stroke	ICD 10/DRG B70	Included TGA, SDH and occlusion of artery without infarct, and other CVD		Only included admissions through ED	When patient readmitted within 1 week of discharge, only the last episode of care is taken	NR	CCI	Death	Yes
2014	2011-2012 ^{e31}	England	Prospective registry	IS/ICH	NR	-		-	NR	Consciousness	Premorbid functional status	Death	No
2014	2010-2011 ^{e32}	Japan	Administrative database	Stroke	I60.0-I60.9, I61.0-I61.9, I62.0, I62.1, I62.9, I63.0-I63.9	SDH/EDH included; I64 not included		Not reported	NR	JCS	RF	mRS	No
2014	2009-2013 ^{e33}	US	Retrospective single centre	ICH	NR	-		-	NR	Yes/no details	NR	mRS	No
2015	2010 ^{e34}	Denmark	Administrative database	Stroke	I60, I61, I63, I64	I62.9 unspecified intracranial haemorrhage not included		Subgroup analyses including only admissions from ED for all but not reported for stroke	Only first acute admission	NR	CCI	Death	Yes
2015	- ^{e35}	Spain	Retrospective single centre	Stroke	NR	-		-	NR	NIHSS	NR	mRS	No
2015	2004-2011 ^{e36}	UK	Administrative database	IS/ICH/ unknown stroke	I61-I64	I62 included SDH/EDH		Not reported	Only the first admission	NR	RF	Death	Yes
2015	2013-2014 ^{e37}	UK	Administrative database	Cardiovascular disease	ICD 10 but no detailed codes reported	-		Adjusted for admission urgency	NR	NR	CCI/predicted mortality risk	Death	Yes
2015	2004-2012 ^{e38}	England & Wales	Administrative database	Stroke/ SAH	I60, I61-64	I62 included SDH/EDH		Not mentioned how emergency admissions were defined	NR	NR	NR	Death	Yes
2015	2010-2011 ^{e39}	Japan	Administrative database	IS	I63	I64 not included		Not reported	NR	NR	RF and premorbid mRS	Death and mRS	No
2015	2002-2012 ^{e40}	Japan	Prospective single centre	IS	NR	-		-	NR	NIHSS	RF and premorbid mRS	mRS	No
2016	2005-2013 ^{e41}	Scotland	Administrative database	IS/ICH	NR	-		Not reported	NR	NR	RF	Death	Yes
2016	2002-2013 ^{e42}	Korea	Administrative database	IS	I63, G45	TIA included; I64 not included		Not reported	NR	NR	CCI	Death	Yes

IS=ischemic stroke, ICH=intracerebral haemorrhage, SAH=subarachnoid haemorrhage, EDH=extradural haemorrhage, SDH=subdural haemorrhage, TIA=transient ischaemic attack, TGA=transient global amnesia, CVD=cerebrovascular disease, ED=Emergency Department, NIHSS=The National Institutes of Health Stroke Scale, JCS=Japan Coma Scale, CNS=Canadian Neurological Scale, ICS=Intracerebral haemorrhage Score, CCI=Charlson Comorbidity Index, RF=risk factors, mRS=modified Rankin Scale, NR=not reported.

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