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Guideline topic:
SIGN 159: Epilepsies in children and young people: investigative procedures and management

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General comments

Update of SIGN 81
Diagnosis and management of epilepsies in children and young people 2005

Search results

Patient search
The patient search was conducted using the stem search strategy outlined below in conjunction with the patient search filter.

Databases searched: Medline, embase,	Date searched: 22/08/17
Psychinfo, CINAHL, Psychology and behavioural sciences	28/8/17

Dates covered: 2007-August 2017

Total Hits:2808	Sifted results: 418

Economics Search

The economics search was conducted using the stem search strategy outlines below in conjunction with the SIGN economics filter, English only.

Databases searched :	Date searched:
Dates covered: 2012-2017	20/11/2017
Total Hits:	Sifted results:
NEED (27) (up to 2014 only)	19
Medline (807) and Embase (medline journals excluded) (409)	171

Systematic review search
The systematic review search was conducted using the stem search strategy outlined below in conjunction with the SIGN systematic review filters, English only.

Databases searched: Dates covered:2007-2017	Date searched:
Cochrane, DARE, HTA	24/11/17
Medline and Embase	27/11/17
Psychinfo and P&BSC	13/12/17

Total Hits:	Sifted results:
Cochrane (125)	89
DARE (up to 2014) (175)	145
HTA (122)	15

Medline (2365) and Embase (medline journals excluded) (42)	1338
Psychinfo (review), English Only (1971) and the psychology and behavioural sciences collection (54)	46

Update Searches

A search was conducted of Systematic Reviews and RCTs only on 22 June 2020

Dates Nov 2017 – Jun 2020.

SIGN Systematic review filters used. English Only.

Cochrane HSSS_SP RCT filter (medline) and SIGN RCT filter (Embase + medline journals excluded). English only.

Database	Total results:
Cochrane (243)	243
Medline and Embase – systematic reviews	1364
	Sifted results: 176

Database	Total results:
CENTRAL	2405
Medline and Embase - RCTs	1873
	Sifted results: 134

Stem search strategies

Patient stem search strategy
Medline
1   exp Epilepsy/
2   epilep$.tw.
3   (seizure$ or convulsion$).tw.
4   or/1-3
Embase
1   exp "seizure, epilepsy and convulsion"/
2   epilep$.tw.
3   (seizure$ or convulsion$).tw.
4   or/1-3

Search results (specific key questions)

KQ	Date of search	Databases	Study type	Date range	Initial recall	Sifted results
1a MRI	08/01/18	Medline, embase	NoF	2007-2018	1018	32
1b CT	12/01/18	Medline, embase	NoF	2007-2018	5190	10

2a Home VT vs hospital VT	12/01/18	Medline, embase	NoF	2007-2018	4330	40
2b Ambulatory eeg	12/01/18	Medline, embase	NoF	2007-2018	4330	8
2c sleep eeg	12/01/18	Medline, embase	NoF	2007-2018	4330	22
2ca Melatonin	9/11/18	Medline Embase	Nof	All	183	17
2d continuous eeg vs CFAM	12/01/18	Medline, embase	NoF	2007-2018	4330	11
4a AEDs	18/12/17	Embase, Medline, CENTRAL	RCT	2011-2017	6468	74
KQ4b Immuno	11/4/18	Medline, embase	NoF	All	530	14
KQ4c ACTH and steroids	11/4/18	Medline, embase	Obs	All	375	116 Not used
KQ4d ADHD and Stimulants	19/12/18	Medline Embase	NoF	All	190	31
KQ4e Anti-depressants	20/12/18	Medline Embase	NoF	All	456	17
KQ5 Ketogenic	12/4/18	Medline, embase	RCT	2015-2018	44	8
KQ5 Ketogenic	12/4/18	Medline, embase	Obs	2017-2018	225	90
KQ5 Ketogenic GLUT1	12/4/18	Medline, embase	Nof	All	154	21
KQ5 Ketogenic DOOSE	12/4/18	Medline, embase	Nof	All	45	10
KQ5 Status Ketogenic epilepticus	30/05/18	Medline, Embase	NoF	All	214	19
KQ6 Epidemiological	16/4/18	Medline, embase	Nof	All	2501	65
KQ6 early vs late surgery	16/4/18	Medline, embase	Nof	All	96	55
KQ7a VNS	3/5/18	Medline Embase	RCT	All	180	22
KQ7b DBS	3/5/18	Medline Embase	RCT	2016-2018	32	2
KQ8 Absence and attention	25/4/18	Medline, embase, Psychinfo, Psychological and behavioural sciences collection	NoF	All	290	32
10 Transition	04/01/18	Medline, Embase,	NoF	2007-2018	320	56

		CINAHL. Psychinfo				
11a Bed alarms	19/01/18	Medline, embase	NoF	All	20	9
11b SUDEP conversations	15/02/18	Medline, embase, Psychinfo, CINAHL	NoF	All	692	47

Search strategies used for specific key questions

The following are the main Medline strategies used for this guideline. All conventions and symbols are from the Ovid implementation of Medline. Strategies used in other databases were substantially the same, though different terminology may have been used to take account of different thesauri used in non-Medline databases. Search filters were added to identify studies of a particular type (systematic review, RCT, economics etc.) Listings of the search filters used by SIGN can be found on the SIGN Web site.

KQ1a MRI (Stem searches, No Filters, 2007-2018, English Only)
Medline
5   exp Magnetic Resonance Imaging/ (434321)
6   mri.tw. (221895)
7   or/5-6 (505911)
8   4 and 7 (23431)
9   Tesla.tw. (10640)
10   ("1.5" adj (t or tesla)).tw. (14302)
11   ("3" adj (T or tesla)).tw. (10792)
12   9 or 10 or 11 (28716)
13   8 and 12 (466)
14   limit 13 to (english language and yr="2007 -Current") (272)
Embase
5   exp nuclear magnetic resonance imaging/ (794625)
6   mri.tw. (332569)
7   or/5-6 (821921)
8   Tesla.tw. (15207)
9   ("1.5" adj (t or tesla)).tw. (17486)
10   ("3" adj (T or tesla)).tw. (13865)
11   or/8-10 (36136)
12   7 and 11 (28871)
13   4 and 7 and 12 (959)
14   limit 13 to (english language and yr="2007-Current") (746)

KQ1b CT
Medline (stem search, No filters, English only)
5   exp tomography, x-ray computed/ or exp positron emission tomography computed tomography/ or exp single photon emission computed tomography computed tomography/ (421288)
6   (CT adj2 scan$).tw. (94799)
7   5 or 6 (460997)
8   4 and 7 (8556)
16   limit 8 to (english language and yr="2007 -Current") (2261)
17   (animals not (humans and animals)).sh. (4780516)
18   16 not 17 (2233)
Embase (stem search, No filters, English only)
5   exp computer assisted tomography/ (865361)

6   (CT adj2 scan$).tw. (140449)
7   5 or 6 (886318)
8   4 and 7 (27549)
9   limit 8 to (english language and exclude medline journals and yr="2007 -Current") (2957)
10   (animals not (humans and animals)).sh. (376)
11   9 not 10 (2957)

KQ2 VT and EEG
Medline (stem search, No filters, English only)
5   exp Electroencephalography/ (152359)
6   electroencephal$.tw. (48610)
7   eeg.tw. (71221)
8   veeg.tw. (210)
9   (sleep adj2 eeg).tw. (2861)
10   (ambulatory adj2 eeg).tw. (249)
11   (continuous adj2 eeg).tw. (1192)
12   video telemetry.tw. (74)
13   (video adj2 eeg).tw. (3226)
14   or/5-13 (175503)
15   4 and 14 (51306)
16   limit 15 to (english language and yr="2007 -Current") (17939)
17   sensitiv$.tw. (1316179)
18   specific$.tw. (2949272)
19   17 or 18 (3849227)
20   16 and 19 (3334)
Embase (stem search, No filters, English only)
5   exp electroencephalography/ (120614)
6   electroencephal$.tw. (52840)
7   eeg.tw. (98007)
8   veeg.tw. (537)
9   (sleep adj2 eeg).tw. (4003)
10   (ambulatory adj2 eeg).tw. (392)
11   (continuous adj2 eeg).tw. (2263)
12   video telemetry.tw. (123)
13   (video adj2 eeg).tw. (6115)
14   or/5-13 (186125)
15   4 and 14 (65989)
16   limit 15 to (english language and exclude medline journals and yr="2007 -Current") (5375)
17   sensitiv$.tw. (1475916)
18   specific$.tw. (3310820)
19   17 or 18 (4292023)
20   16 and 19 (996)

KQ2ca Melatonin
Embase and medline
1   melatonin/ (31189)
2   melatonin.tw. (27311)
3   or/1-2 (34363)
4   exp "seizure, epilepsy and convulsion"/ (328503)
5   epilep$.tw. (173074)
6   (seizure$ or convulsion$).tw. (177042)
7   or/4-6 (366132)
8   3 and 7 (1047)

9   exp electroencephalography/ (104531)
10   electroencephal$.tw. (52862)
11   eeg.tw. (100177)
12   or/9-11 (174013)
13   8 and 12 (133)

KQ4a Drugs
Stem search + RCT filters (SIGN Embase RCT filter (Medline journals excluded) and
Cochrane HSSS_SP RCT filter for medline) dates 2011-2017.

KQ4b Immunosuppressants (Stem search, No Filter)
Medline
5   rituximab.tw. (16737)
6   rituxan.tw. (269)
7   mabthera.tw. (162)
8   azothioprine.tw. (29)
9   imuran.tw. (325)
10   azasan.tw. (0)
11   cyclophosphamide.tw. (44676)
12   cytophosphane.tw. (0)
13   cytoxan.tw. (703)
14   endoxan.tw. (464)
15   neosar.tw. (23)
16   procytox.tw. (2)
17   revimmune.tw. (2)
18   cycloblastin.tw. (0)
19   or/5-18 (59385)
20   4 and 19 (391)

Embase (Stem search, No Filter, medline journals excluded)
1   rituximab.tw. (36036)
2   rituxan.tw. (2951)
3   mabthera.tw. (2026)
4   azothioprine.tw. (80)
5   imuran.tw. (2738)
6   azasan.tw. (25)
7   cyclophosphamide.tw. (66317)
8   cytophosphane.tw. (2)
9   cytoxan.tw. (4678)
10   endoxan.tw. (4646)
11   neosar.tw. (198)
12   procytox.tw. (56)
13   revimmune.tw. (5)
14   cycloblastin.tw. (37)
15   or/1-14 (107225)
16   exp "seizure, epilepsy and convulsion"/ (335761)
17   epilep$.tw. (173661)
18   (seizure$ or convulsion$).tw. (174728)
19   or/16-18 (372613)
20   15 and 19 (1777)
21   limit 20 to (english language and exclude medline journals) (159)

KQ4c – ACTH and steroids (Stem search, SIGN Observational Filter, English only)
Medline
1   prednisolone.tw. (23645)

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2    hydrocortisone.tw. (15494)
3    cortisol.tw. (55486)
4    prednisone.tw. (24784)
5    deltasone.tw. (4)
6    orasone.tw. (0)
7    adasone.tw. (0)
8    prednisonum.tw. (1)
9    deltacortisone.tw. (20)
10   dexamethasone.tw. (51444)
11   corticosteroid/ (0)
12   or/1-11 (159247)
13   acth.tw. (36689)
14   Adrenocorticotropic hormone.tw. (7673)
15   adrenocorticotropin.tw. (4219)
16   corticotropin.tw. (14248)
17   (tetra-cosactide or tetracosactide).tw. (151)
18   or/13-17 (50725)
19   12 or 18 (195185)
20   exp Epilepsy/ (102548)
21   epilep$.tw. (120530)
22   (seizure$ or convulsion$).tw. (118597)
23   or/20-22 (202264)
24   19 and 23 (2031)
25   Epidemiologic studies/ (7646)
26   exp case control studies/ (906482)
27   exp cohort studies/ (1726989)
28   Case control.tw. (106861)
29   (cohort adj (study or studies)).tw. (152339)
30   Cohort analy$.tw. (6112)
31   (Follow up adj (study or studies)).tw. (44776)
32   (observational adj (study or studies)).tw. (79880)
33   Longitudinal.tw. (202009)
34   Retrospective.tw. (421014)
35   Cross sectional.tw. (273777)
36   Cross-sectional studies/ (261539)
37   or/25-36 (2544546)
38   24 and 37 (348)
39   limit 38 to english language (299)

Embase (Stem search, SIGN Observational Filter, English only, medline journals
excluded)
5    prednisolone.tw. (34203)
6    hydrocortisone.tw. (19147)
7    cortisol.tw. (69753)
8    prednisone.tw. (41062)
9    deltasone.tw. (264)
10   orasone.tw. (40)
11   adasone.tw. (1)
12   prednisonum.tw. (3)
13   deltacortisone.tw. (17)
14   dexamethasone.tw. (69041)
15   corticosteroid/ (221020)
16   or/5-15 (424749)
17   acth.tw. (41078)
18   Adrenocorticotropic hormone.tw. (8363)
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19 adrenocorticotropin.tw. (4486)
20 corticotropin.tw. (15799)
21 (tetra-cosactide or tetracosactide).tw. (267)
22 or/17-21 (56634)
23 16 or 22 (461013)
24 4 and 23 (9892)
25 Clinical Study/ (154087)
26 Case Control Study/ (124427)
27 Family Study/ (25436)
28 Longitudinal Study/ (110966)
29 Retrospective Study/ (636210)
30 Prospective Study/ (440403)
31 Randomized Controlled Trials/ (143443)
32 30 not 31 (435944)
33 Cohort Analysis/ (361958)
34 (cohort adj (study or studies)).mp. (223230)
35 (case control adj (study or studies)).tw. (112165)
36 (follow up adj (study or studies)).tw. (57841)
37 (observational adj (study or studies)).tw. (123602)
38 (epidemiologic$ adj (study or studies)).tw. (96313)
39 (cross sectional adj (study or studies)).tw. (159593)
40 or/25-29,32-39 (2046002)
41 24 and 40 (968)
42 limit 41 to (english language and exclude medline journals) (76)

KQ4d ADHD Stimulants
Medline and embase
1   exp Epilepsy/ (104962)
2   epilep$.tw. (125127)
3   (seizure$ or convulsion$).tw. (122748)
4   or/1-3 (208932)
5   Central Nervous System Stimulants/ (18861)
6   (atomoxetine or strattera).tw. (1448)
7   (methylphenidate or ritalin).tw. (6817)
8   (guanfacine or estulic or tenex).tw. (905)
9   (dexamphetamine or dexamfetamine or dextroamphetamine or dexedrine).tw. (1096)
10   (lisdexamfetamine or tyvense).tw. (328)
11   (bupropion or wellbutrin or zyban).tw. (4026)
12   (clonidine or catapres or kapvay or nexicion).tw. (14452)
13   (modafinil or provigil or alertec or modavigil).tw. (1484)
14   (imipramine or tofranil).tw. (9528)
15   or/5-14 (52458)
16   Attention Deficit Disorder with Hyperactivity/ (26134)
17   "attention deficit hyperactivity disorder".tw. (21688)
18   adhd.tw. (22030)
19   or/16-18 (35122)
20   4 and 15 and 19 (142)

KQ4e Anti-depressants (Limited to children, English only)

1   exp Serotonin Uptake Inhibitors/ (35393)
2   ssri.tw. (5717)
3   (citalopram or celexa or cipramil).tw. (4727)
4   (escitalopram or lexapro or cipralex).tw. (2200)

5   (fluvoxamine or luvox or faverin).tw. (2540)
6   (paroxetine or paxil or seroxat).tw. (5315)
7   (sertraline or zoloft or lustral).tw. (4170)
8   (dapoxetine or priligy).tw. (198)
9   (fluoxetine or prozac or serafem or oxactin).tw. (11551)
10   (vortioxetine or viibryd).tw. (304)
11   exp "Serotonin and Noradrenaline Reuptake Inhibitors"/ (4004)
12   snri.tw. (740)
13   (desvenlafaxine or pristiq).tw. (292)
14   (levomilnacipran or fetzima).tw. (70)
15   (milnacipran or ixel or savella).tw. (621)
16   (venlafaxine or efexor).tw. (3709)
17   (duloxetine or cymbalta or yentreve).tw. (2218)
18   exp Antidepressive Agents, Tricyclic/ (30433)
19   tricyclic$.tw. (15670)
20   (amitriptyline or tryptizol).tw. (6459)
21   (clomipramine or anafranil).tw. (2945)
22   (imipramine or tofranil).tw. (9526)
23   (lofepramine or gamanil).tw. (140)
24   (nortriptyline or allegron or pamelor).tw. (2266)
25   amoxapine.tw. (398)
26   (desipramine or norpramin).tw. (5424)
27   doxepin.tw. (1140)
28   (protriptyline or vivactil).tw. (324)
29   (trimipramine or surmontil).tw. (428)
30   exp Monoamine Oxidase Inhibitors/ (21212)
31   maoi.tw. (582)
32   (tranylcypromine or parnate).tw. (1331)
33   (phenelzine or nardil).tw. (1005)
34   (isocarboxazid or marplan).tw. (197)
35   (rasagiline or azilect).tw. (560)
36   (selegiline or eldepryl or zelapar).tw. (1376)
37   exp Antidepressive Agents/ (136792)
38   (anti-depress$ or antidepress$).tw. (62989)
39   or/1-38 (191944)
40   exp Epilepsy/ (104805)
41   epilep$.tw. (124877)
42   (seizure$ or convulsion$).tw. (122521)
43   or/40-42 (208577)
44   39 and 43 (3647)
45   depression/ (105165)
46   exp Mood Disorders/ (113110)
47   Mental Disorders/ (153341)
48   mental health/ (32308)
49   (depress$ or low mood or melachol$ or unhapp$ or sadness or dysphori$ or dysthymi$ or desponden$).tw. (424173)
50   or/45-49 (625465)
51   44 and 50 (1494)

KQ5 Medline (stem search+ Cochrane HSSS_SP RCT Filter, 2015-2018, English only)
5   Diet, Ketogenic/ (883)
6   ketogenic.tw. (2764)
7   modified atkins diet.tw. (134)
8   or/5-7 (2881)
9   4 and 8 (1475)

20   9 and 19 (106)
21   limit 20 to (english language and yr="2015 -Current") (38)

Embase (stem search+ SIGN Embase RCT filter, 2015-2018, English only, medline journal excluded)
5   ketogenic diet/ (3839)
6   ketogenic.tw. (4036)
7   modified atkins diet.tw. (230)
8   or/5-7 (5174)
9   4 and 8 (3265)
40   9 and 39 (350)
41   limit 40 to (english language and exclude medline journals and yr="2015 -Current") (10)

KQ5 Ketogenic Observational – as above
Medline (stem search+ Ketogenic diet terms+ SIGN Obs Filter, 2010-2018, English only)
Embase (stem search+ Ketogenic diet terms SIGN +Embase Obs filter, 2010-2018, English only, medline journals excluded)

KQ5 Ketogenic diet GLUT1
Medline (stem search, NoF, English only)
5   Diet, Ketogenic/ (883)
6   ketogenic.tw. (2764)
7   modified atkins diet.tw. (134)
8   or/5-7 (2881)
9   (GLUT-1 or GLUT1).tw. (5480)
10   glucose transporter 1.tw. (1629)
11   SCL2A1.tw. (13)
12   solute carrier family 2.tw. (112)
13   ((DeVivo or De Vivo) adj disease).tw. (4)
14   g1d.tw. (23)
15   or/9-14 (6169)
16   4 and 8 and 15 (137)

Embase (stem search, NoF, medline journals excluded, English only)
1   Diet, Ketogenic/ (3839)
2   ketogenic.tw. (4036)
3   modified atkins diet.tw. (230)
4   or/1-3 (5174)
5   (GLUT-1 or GLUT1).tw. (7539)
6   glucose transporter 1.tw. (2119)
7   SCL2A1.tw. (33)
8   solute carrier family 2.tw. (143)
9   ((DeVivo or De Vivo) adj disease).tw. (7)
10   g1d.tw. (23)
11   or/5-10 (8397)
12   exp "seizure, epilepsy and convulsion"/ (335834)
13   epilep$.tw. (173711)
14   (seizure$ or convulsion$).tw. (174768)
15   or/12-14 (372697)
16   4 and 11 and 15 (288)
17   limit 16 to (english language and exclude medline journals) (20)

KQ5 Ketogenic diet and DOOSE
Medline (stem search, NoFilter, English only)

1   Diet, Ketogenic/ (883)
2   ketogenic.tw. (2764)
3   modified atkins diet.tw. (134)
4   or/1-3 (2881)
5   myoclonic astatic epilepsy.tw. (129)
6   myoclonic atonic epilepsy.tw. (7)
7   doose.tw. (61)
8   Epilepsy with myoclonic-atonic seizures.tw. (16)
9   or/5-8 (181)
10   exp Epilepsy/ (102743)
11   epilep$.tw. (120717)
12   (seizure$ or convulsion$).tw. (118742)
13   or/10-12 (202496)
14   4 and 9 and 13 (34)
15   limit 14 to english language (32)

Embase (stem search, NoFilter, English only, medline journals excluded)
1   Diet, Ketogenic/ (3839)
2   ketogenic.tw. (4036)
3   modified atkins diet.tw. (230)
4   or/1-3 (5174)
5   exp "seizure, epilepsy and convulsion"/ (335834)
6   epilep$.tw. (173711)
7   (seizure$ or convulsion$).tw. (174768)
8   or/5-7 (372697)
9   myoclonic astatic epilepsy.tw. (211)
10   myoclonic atonic epilepsy.tw. (14)
11   doose.tw. (133)
12   Epilepsy with myoclonic-atonic seizures.tw. (26)
13   or/9-12 (329)
14   4 and 8 and 13 (73)
15   limit 14 to (english language and exclude medline journals) (17)

KQ5 Status Epilepticus (NoFilter, English only)
Medline
1   Diet, Ketogenic/ (907)
2   ketogenic.tw. (2812)
3   modified atkins diet.tw. (135)
4   or/1-3 (2933)
5   exp Status Epilepticus/ (7346)
6   status epilepticus.tw. (10574)
7   ((convulsive or refractive) adj status).tw. (1533)
8   ((prolong$ or serial or repeat$ or repetitive or cluster$) adj seizure$).tw. (1432)
9   or/5-8 (13374)
10   4 and 9 (142)
11   limit 10 to english language (132)

Embase (No filter, English only, medine journals excluded)
1   Diet, Ketogenic/ (3904)
2   ketogenic.tw. (4082)
3   modified atkins diet.tw. (231)
4   or/1-3 (5246)
5   epileptic state/ (19789)
6   status epilepticus.tw. (16374)
7   ((convulsive or refractive) adj status).tw. (2491)

8   ((prolong$ or serial or repeat$ or repetitive or cluster$) adj seizure$).tw. (2043)
9   or/5-8 (24116)
10   4 and 9 (537)
11   limit 10 to (english language and exclude medline journals) (89)

KQ6 epidemiological
Medline (Epilepsy stem + NoFilter, English only, children only)
5   natural history.tw. (43626)
6   population-based.tw. (108527)
7   ((long term or long-term) adj remission).tw. (2011)
8   (remission adj2 (epilep$ or seizure$)).tw. (479)
9   ((long term or long-term) adj outcome$).tw. (44211)
10   (outcome$ adj2 epilep$).tw. (801)
11   or/5-10 (197398)
12   4 and 11 (3967)
13   limit 12 to (english language and ("all infant (birth to 23 months)" or "all child (0 to 18 years)" or "newborn infant (birth to 1 month)" or "infant (1 to 23 months)" or "preschool child (2 to 5 years)" or "child (6 to 12 years)" or "adolescent (13 to 18 years)" or "young adult (19 to 24 years)")) (2295)

Embase (epilepsy stem, NoFilter , English, children only, medline journals excluded)
1   natural history.tw. (58856)
2   population-based.tw. (142792)
3   ((long term or long-term) adj remission).tw. (3090)
4   (remission adj2 (epilep$ or seizure$)).tw. (793)
5   ((long term or long-term) adj outcome$).tw. (69863)
6   (outcome$ adj2 epilep$).tw. (1477)
7   or/1-6 (273328)
8   exp "seizure, epilepsy and convulsion"/ (336017)
9   epilep$.tw. (173783)
10   (seizure$ or convulsion$).tw. (174831)
11   or/8-10 (372901)
12   7 and 11 (7526)
13   limit 12 to (english language and exclude medline journals and (infant <to one year> or child <unspecified age> or preschool child <1 to 6 years> or school child <7 to 12 years> or adolescent <13 to 17 years>)) (214)

KQ6 early vs late surgery
Medline (Epilepsy stem+ No filter, English only)
1   (early adj (refer$ or intervention or identif$)).tw. (27636)
2   exp Epilepsy/ (102753)
3   epilep$.tw. (120797)
4   (seizure$ or convulsion$).tw. (118808)
5   or/2-4 (202615)
6   Neurosurgical Procedures/ (25694)
7   surg$.tw. (1679915)
8   or/6-7 (1690629)
9   1 and 5 and 8 (80)
10   limit 9 to english language (75)

Embase (Epilepsy Stem+ No Filter, English only, medline journals excluded
1   exp "seizure, epilepsy and convulsion"/ (336017)
2   epilep$.tw. (173783)
3   (seizure$ or convulsion$).tw. (174831)
4   or/1-3 (372901)

5   surg$.tw. (2256758)
6   neurosurgery/ (55253)
7   5 or 6 (2287102)
8   (early adj (refer$ or intervention or identif$)).tw. (41971)
9   4 and 7 and 8 (191)
10   limit 9 to (english language and exclude medline journals) (30)

KQ7a VNS
Medline (stem search+ Cochrane HSSS_SP RCT Filter, English only)
5   vagus nerve stimulation/ (1158)
6   vagus nerve stimulation.tw. (1880)
7   vns.tw. (1599)
8   or/5-7 (2886)
9   randomized controlled trial.pt. (462579)
10   controlled clinical trial.pt. (92447)
11   randomized.ab. (413583)
12   placebo.ab. (189599)
13   clinical trials as topic/ (183889)
14   randomly.ab. (291464)
15   trial.ti. (183353)
16   9 or 10 or 11 or 12 or 13 or 14 or 15 (1154970)
17   exp animals/ not humans.sh. (4464699)
18   16 not 17 (1063684)
19   4 and 8 and 18 (152)
21   limit 20 to (english language) (141)

Embase (stem search+ SIGN Embase RCT filter, English only, medline journals excluded)

1   vagus nerve stimulation/ (9053)
2   vagus nerve stimulation.tw. (2856)
3   vns.tw. (2841)
4   or/1-3 (10202)
5   exp "seizure, epilepsy and convulsion"/ (337862)
6   epilep$.tw. (174727)
7   (seizure$ or convulsion$).tw. (175822)
8   or/5-7 (375013)
39   4 and 8 and 38 (443)
40   limit 39 to (english language and exclude medline journals) (45)

KQ7b
Medline (stem search+ Cochrane HSSS_SP RCT Filter, 2016-2018, English only)
1   deep brain stimulation.tw. (8741)
2   neuromodulation.tw. (4961)
3   neurostimulation.tw. (1768)
4   Deep Brain Stimulation/ (6997)
5   or/1-4 (16237)
6   exp Epilepsy/ (102928)
7   epilep$.tw. (121087)
8   (seizure$ or convulsion$).tw. (119100)
9   or/6-8 (203054)
10   5 and 9 (1149)
21   10 and 20 (107)
22   limit 21 to (english language and yr="2016 -Current") (23)

Embase (stem search+ SIGN Embase RCT filter, 2016-2018, English only, medline journals excluded)
5   brain depth stimulation/ (36951)
6   neuromodulation/ (35553)
7   nerve stimulation/ (32119)
8   deep brain stimulation.tw. (14301)
9   neuromodulation.tw. (8319)
10   neurostimulation.tw. (2915)
11   or/5-10 (102887)
12   4 and 11 (7005)
43   12 and 42 (543)
44   limit 43 to (english language and exclude medline journals and yr="2016 -Current") (10)

KQ8 Absence epilepsy and Attention
Medline (Stem search, English only No filter)

5   (absence adj2 (epilep$ or seizur$)).tw. (3280)
6   4 and 5 (3280)
7   adhd.tw. (20997)
8   exp "Attention Deficit and Disruptive Behavior Disorders"/ (28960)
9   attention.ti. (31626)
10   or/7-9 (54301)
11   6 and 10 (37)
12   limit 11 to english language (35)

Embase (stem search, English only, no filter, medline journals excluded)

1   (absence adj2 (epilep$ or seizur$)).tw. (4825)
2   adhd.tw. (29365)
3   exp "Attention Deficit and Disruptive Behavior Disorders"/ (51602)
4   attention.ti. (37711)
5   or/2-4 (76617)
6   exp "seizure, epilepsy and convulsion"/ (336481)
7   epilep$.tw. (174001)
8   (seizure$ or convulsion$).tw. (175071)
9   or/6-8 (373416)
10   1 and 5 and 9 (91)
11   limit 10 to (english language and exclude medline journals) (17)

PsychInfo, Psychology and Behavioral Sciences collection. English only, no filter

☐	S7	🔶 S3 AND S4 AND S5	Narrow by Language: - english Search modes - Boolean/Phrase	🔍 View Results (258)	
☐	S6	🔶 S3 AND S4 AND S5	Search modes - Boolean/Phrase	🔍 View Results (264)	
☐	S5	🔶 TX absence N/2 epilep* or seizur*	Search modes - Boolean/Phrase	🔍 View Results (57,141)	
☐	S4	🔶 SU attention deficit disorder OR TI attention	Search modes - Boolean/Phrase	🔍 View Results (56,177)	
☐	S3	🔶 S1 OR S2	Search modes - Boolean/Phrase	🔍 View Results (47,807)	
☐	S2	🔶 SU seizures	Search modes - Boolean/Phrase	🔍 View Results (18,442)	
☐	S1	🔶 SU epilepsy	Search modes - Boolean/Phrase	🔍 View Results (39,148)	

KQ10 Transition

Medline (stem search, no filter, English only)
5   (transition$ adj3 adult).tw. (1413)
6   (transfer$ adj3 adult).tw. (1016)
7   5 or 6 (2348)
8   4 and 7 (30)
Embase (stem search, no filters, English only)
5   (transfer$ adj3 adult).tw. (1424)
6   (transition$ adj3 adult).tw. (2293)
7   5 or 6 (3515)
8   4 and 7 (68)
PsychInfo, CINAHL, Psychology and Behavioral Sciences Collection
No filters, English only.

	Search ID#	Search Terms	Search Options	Actions
☐	S5	S3 AND S4	Search modes - Boolean/Phrase	🔍 View Results (222) ⓘ View Details ✎ Edit
☐	S4	TX transition to adult OR TX transfer to adult	Search modes - Boolean/Phrase	🔍 View Results (2,957) ⓘ View Details ✎ Edit
☐	S3	S1 OR S2	Search modes - Boolean/Phrase	🔍 View Results (87,860) ⓘ View Details ✎ Edit
☐	S2	TX epilepsy	Search modes - Boolean/Phrase	🔍 View Results (87,860) ⓘ View Details ✎ Edit
☐	S1	SU epilepsy	Search modes - Boolean/Phrase	🔍 View Results (50,289) ⓘ View Details ✎ Edit

KQ11a SUDEP and bed alarms
Medline (stem search, No filter)
1   SUDEP.tw. (726)
2   "sudden unexpected death in epilepsy".tw. (636)
3   (epilep$ adj2 (death or mortal$ or fatal$)).tw. (1212)
4   exp Epilepsy/ (101734)
5   epilep$.tw. (118948)
6   (seizure$ or convulsion$).tw. (117179)
7   or/4-6 (200056)
8   or/1-3 (1351)
9   7 and 8 (1328)
10   limit 9 to (english language and yr="2013 -Current") (511)
14   (bed adj alarm$).tw. (28)
15   (sleep adj alarm$).tw. (1)
16   (movement adj sensor$).tw. (170)
17   seizure detection device$.tw. (21)
18   seizure detection alarm$.tw. (2)
19   seizure detection monitor$.tw. (2)
20   nocturnal monitor$.tw. (56)
21   or/14-20 (279)
22   10 and 21 (13)

Embase (No filter)
1   SUDEP.tw. (1323)
2   "sudden unexpected death in epilepsy".tw. (958)
3   (epilep$ adj2 (death or mortal$ or fatal$)).tw. (1872)
4   exp epilepsy/ (213436)
5   epilep$.tw. (170969)
6   (seizure$ or convulsion$).tw. (171927)
7   or/1-3 (2193)
8   or/4-6 (307823)
9   (bed adj alarm$).tw. (54)
10   (sleep adj alarm$).tw. (2)
11   (movement adj sensor$).tw. (243)
12   seizure detection device$.tw. (32)
13   seizure detection alarm$.tw. (3)
14   seizure detection monitor$.tw. (2)

15   nocturnal monitor$.tw. (72)
16   or/9-15 (405)
17   7 and 8 and 16 (17)

KQ11b SUDEP Conversations
medline and embase (Stem search, No filter)
1   SUDEP.tw. (732)
2   "sudden unexpected death in epilepsy".tw. (642)
3   (epilep$ adj2 (death or mortal$ or fatal$)).tw. (1223)
4   exp Epilepsy/ (101989)
5   epilep$.tw. (119532)
6   (seizure$ or convulsion$).tw. (117722)
7   or/4-6 (200883)
8   or/1-3 (1363)
9   7 and 8 (1339)
10   discuss$.tw. (1314754)
11   conversation$.tw. (14694)
12   inform$.tw. (1206371)
13   address$.tw. (432691)
14   educat$.tw. (492390)
15   talk$.tw. (41990)
16   communicat$.tw. (240987)
17   or/10-16 (3225266)
18   9 and 17 (328)

CINAHL, Psychinfo, Psychological and behavioural sciences collection.

	Search ID#	Search Terms	Search Options	Actions
☐	S3	S1 AND S2	Search modes - Boolean/Phrase	🔍 View Results (484) ⓘ View Details
☐	S2	TX conversation* OR TX discuss* OR TX inform* OR TX educat* OR TX address* OR TX talk* OR TX communicat*	Search modes - Boolean/Phrase	🔍 View Results (5,310,034) ⓘ View D
☐	S1	TX sudden unexpected death in epilepsy OR TX SUDEP	Search modes - Boolean/Phrase	🔍 View Results (944) ⓘ View Details