

# Appendix I: Health economic evidence – search strategies

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## Abbreviations

EED	Economic Evaluation Database
Embase	Excerpta Medica Database
HTA	Health Technology Assessment
MEDLINE	Medical Literature Analysis and Retrieval System Online
NHS	National Health Service
PreMEDLINE	in-process and other non-indexed citations from MEDLINE
PsycINFO	Psychological Information Database

A broad preliminary search of the literature was undertaken in April 2013<sup>1</sup> to obtain an overview of the issues likely to be covered by the scope, and to help define key areas. Searches were limited to full and partial economic evaluations, and quality-of-life studies.

- National Health Service Economic Evaluation Database (NHS EED) [Cochrane Library]
- Excerpta Medica Database (Embase)
- Health Technology Assessment (HTA) database (technology assessments)
- Medical Literature Analysis and Retrieval System Online (MEDLINE/MEDLINE In-Process)

Further information about this process can be found in ‘Developing NICE guidelines: the manual’.

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<sup>1</sup> The Embase search was re-run on 13<sup>th</sup> November 2014 to capture records missed by the final update due to ‘delayed record processing’ – an issue reported by Elsevier on 30<sup>th</sup> October 2014.

Each search was constructed using the groups of terms set out in Table I.1. The full set of search terms is documented in sections A.1 to A.3. The selection of search terms was kept broad to maximise retrieval of evidence in a wide range of areas of interest to the Guideline Development Group.

**Table I.1: Summary of systematic search strategies: search strategy construction**

Summary of systematic search strategies for health economic evidence					
Review question(s)	Search type	Search construction	Study design searched	Databases searched	Date range searched
1.2,2.2,2.3	Focused search	Major bibliographic databases: [(named tools/methods AND learning disability terms version 1)] AND health economic/quality of life study design filter terms  Cochrane Library: [(named tools/methods AND learning disability terms version 1)]	Full and partial economic evaluations, quality of life studies	Major bibliographic databases: Embase, MEDLINE, PreMEDLINE, Psychological Information Database (PsycINFO)  Cochrane Library: HTA, NHS EED	1998 to October 2014
All review questions	Generic search	Major bibliographic databases: [(learning disability and challenging behaviour population terms version 1) AND (health economic/quality of life study design filter terms)]  Cochrane Library: [(learning disability and challenging behaviour population terms version 1)]	Full and partial economic evaluations, quality of life studies	Major bibliographic databases: Embase, MEDLINE, PreMEDLINE, PsycINFO  Cochrane Library: HTA, NHS EED	1998 to October 2014

## A.1 Section 1: population search terms

### A.1.1 Population search terms (version 1)

#### A.1.1.1 Embase, MEDLINE, PreMEDLINE, PsycINFO – Ovid

- 1 exp developmental disorder/ or intellectual impairment/ or exp mental deficiency/ or exp learning disorder/
- 2 1 use emez
- 3 developmental disabilities/ or exp intellectual disability/ or exp learning disorders/ or mentally disabled persons/
- 4 3 use mesz, prem
- 5 exp developmental disabilities/ or exp intellectual development disorder/ or "intellectual development disorder (attitudes toward)"/ or exp learning disabilities/
- 6 5 use psych
- 7 ((intellect\$ adj3 (deficien\$ or difficult\$ or disab\$ or disorder\$ or impair\$ or handicap\$ or incapacit\$ or handicap\$ or sub?average or sub?norm\$)) or (low\$2 adj2 intellect\$)).tw.
- 8 (learning adj3 (deficien\$ or difficult\$ or disab\$ or disorder\$ or handicap\$ or impair\$ or incapacit\$ or handicap\$ or sub?average or sub?norm\$)).tw.
- 9 (mental\$ adj3 (deficien\$ or disab\$ or handicap\$ or impair\$ or handicap\$ or incapacit\$ or retard\$ or sub?average or sub?norm\$)).tw.
- 10 ((subaverage or sub\$1 average or subnormal or sub\$1 normal\$) adj3 (cognit\$ or intel\$)).tw.
- 11 ((development\$ or neurodevelopment\$) adj disab\$).tw.
- 12 (education\$ adj5 su?bnorm\$).tw.
- 13 (cretin\$ or feeble minded\$ or imbecil\$ or moron\$).tw.
- 14 multipl\$ handicap\$.tw.
- 15 adrenoleukodystrophy/ or exp mental retardation malformation syndrome/ or cerebral palsy/ or coffin lowry syndrome/ or cat cry syndrome/ or down syndrome/ or mucopolysaccharidosis/ or phenylketonuria/ or pyruvate dehydrogenase/ or rubinstein syndrome/ or tuberous sclerosis/ or wagr syndrome/ or west syndrome/
- 16 15 use emez
- 17 adrenoleukodystrophy/ or angelman syndrome/ or cerebral palsy/ or coffin-lowry syndrome/ or cri-du-chat syndrome/ or de lange syndrome/ or down syndrome/ or lesch-nyhan syndrome/ or fragile x syndrome/ or mucopolysaccharidoses/ or exp phenylketonurias/ or exp prader-willi syndrome/ or pyruvate carboxylase deficiency disease/ or pyruvate dehydrogenase complex deficiency disease/ or rubinstein-taybi syndrome/ or tuberous sclerosis/ or wagr syndrome/ or spasms, infantile/

18 17 use mesz, prem

19 cerebral palsy/ or crying cat syndrome/ or cornelia de lange syndrome/ or down's syndrome/ or phenylketonuria/

20 19 use psyh

((adreno adj (leukodystrophy or leukomyeloneuropathy)) or (bronze schilder adj (disease or syndrome\$)) or mckusick 30010 or adrenoleukodystrophy or adrenomyeloneuropathy or adrenoleukomyeloneuropathy or divry bogaert type leukodystrophy or melanodermic leukodystrophy or siemerling-creutzfeldt or x ald or ((angelman or happy puppet) adj2 syndrom\$) or (((brain or central or cerebral) adj (palsy or paralysis or paresis)) or encephalopathia infantilis or spastic diplegia) or (coffin lowry or lowry coffin) or (cat cry or cri du chat or crying cat or ((5p or lejeune\$) adj2 (disease or syndrome))) or (amsterdam degenerative type or amsterdam dwarf or brachmann de lange or congenital muscular hypertrophic cerebral or de lange or typus degenerativus amstelodamensis) or ((down\$1 adj (disease or syndrome\$)) or ((mongolian or mongoloid) adj idiocy) or mongolism or mongoloidism or trisomy 21) or (childhood epileptic encephalopathy or lennox gastaut or lennox adj (disease\$ or syndrome))) or (hypoxanthine phosphoribosyltransferase deficiency syndrome or juvenile hyperuricemia or lesch nyhan or mckusick 30800 or nyhan adj (disease or syndrome\$)) or ((copper transport adj (disease or syndrome\$)) or ((kinky or steely) adj hair) or menkes or trichopoliodystrophy) or (bell martin or fragile x or gillian turner or martin bell or turner gillian or x chromosome fragility or (escalante\$ adj (disease or syndrome\$)) or (debility or oligiphreni\$ or oligophreny) or (((foelling or folling) adj2 (disease or syndrome\$)) or mckusick 26160 or oligophrenia or (phenylalanine adj4 monooxygenase deficiency syndrome) or hydroxylase deficiency syndrome or phenylketonuria\$) or (hho syndrome or (prader adj2 willi)) or (broad thumb hallux or (rubinstein adj2 (disease or syndrome\$ or taybi))) or ((bourneville adj2 (disease or syndrome\$)) or epiloia or (pringle adj2 (disease or syndrome\$)) or tuberose sclerosis) or ((wagr or william\$) adj (disease or syndrome\$)) or (west\$1 adj2 (disease or syndrome\$)).ti,ab.

22 autism/ or asperger syndrome/

23 22 use emez

24 autistic disorder/ or asperger syndrome/

25 24 use mesz, prem

26 autism/ or aspergers syndrome/

27 26 use psyh

28 (autis\$ or asperger\$ or pervasive developmen\$ disorder\$ or rett\$1).ti,ab.

29 ((communicative adj2 impair\$) or ((complex or high support) adj3 needs) or ((language or speech) adj2 (delay\$ or disorder\$))).ti,ab.

30 or/2,4,6-14,16,18,20-21,23,25,27-29

31 behav\$.ti,ab,hw.

abuse/ or acting out/ or agitation/ or exp aggression/ or exp anger/ or assault/ or exp child abuse/ or disruptive behavior/ or emotional abuse/ or patient abuse/ or physical abuse/ or exp sexual abuse/ or verbal hostility/ or exp violence/

33 32 use emez

34 acting out/ or exp domestic violence/ or exp aggression/ or exp anger/ or dangerous behavior/ or hate/ or hostility/ or sexual harrassment/ or torture/ or violence/

35 34 use mesz, prem

36 abuse reporting/ or acting out/ or exp aggressive behavior/ or aggressiveness/ or agitation/ or exp anger/ or anger control/ or battered females/ or exp child abuse/ or dangerousness/ or elder abuse/ or emotional abuse/ or exposure to violence/ or exp harrassment/ or hate/ or patient abuse/ or exp partner abuse/ or rebelliousness/ or retaliation/ or exp sexual abuse/ or threat/ or threat postures/ or torture/ or verbal abuse/ or exp violence/

37 36 use psych

38 (abus\$ or aggress\$ or agitat\$ or agonistic or anger or angry or assault\$ or attack\$ or bizarre or combative or danger\$ or destruct\$ or disrupt\$ or disturb\$ or harass\$ or hostile\$ or intimidat\$ or rage\$ or threat\$ or un?toward or violen\$).ti,ab.

39 or/32,35,37-38

40 automutilation/ or drug overdose/ or exp suicidal behavior/

41 40 use emez

42 overdose/ or self-injurious behavior/ or self mutilation/ or stereotypic movement disorder/ or suicide/ or suicidal ideation/ or suicide, attempted/

43 42 use mesz, prem

44 drug overdoses/ or self destructive behavior/ or exp self injurious behavior/ or attempted suicide/ or suicidal ideation/ or suicide/ or suicide prevention/ or suicide prevention centers/ or suicidology/

45 44 use psych

46 (auto?aggress\$ or auto?mutilat\$ or cutt\$ or overdos\$ or para?suicid\$ or (self adj2 cut\$ or self?damag\$ or self?destruct\$ or self?harm\$ or self?hurt\$ or self?inflict\$ or self?injur\$ or self?mutilat\$ or self?poison\$vor self?wound\$ or suicid\$).ti,ab.

47 or/41,43,45-46

48 exp impulse control disorder/

49 48 use emez

50 impulse control disorders/

51 50 use mesz, prem

52 exp impulse control disorders/ or explosive disorder/

53 52 use psych

54 ((impulse control adj disorder\$) or (explosive adj2 disorder)).ti,ab.

55 or/49,51,53-54

56 conduct disorder/ or oppositional defiant disorder/

57 56 use emez

58 exp child behavior/ or conduct disorder/

59 58 use mesz, prem

60 exp behavior problems/ or conduct disorder/ or oppositional defiant disorder/

61 60 use psych

62 (conduct\$ or (oppositional adj3 (defiant\$ or disorder\$))).ti,ab.

63 or/57,59,61-62

64 (attenti\$ or disrupt\$ or impulsiv\$ or inattenti\$).sh.

(attenti\$ adj3 (adolescen\$ or adult\$ or behav\$ or child\$ or class or classes or  
65 classroom\$ or condition\$ or difficult\$ or disorder\$ or learn\$ or people or person\$ or poor  
or problem\$ or process\$ or youngster\$)).ti,ab.

66 (impulsiv\$ or inattentiv\$ or adhd or (attenti\$ adj3 deficit\$) or hyperactiv\$ or (hyper adj1  
activ\$) or hyperkin\$).ti,ab. or (overactiv\$.tw. not overactive bladder\$.ti.)

67 or/64-66

absenteeism/ or antisocial behavior/ or arson/ or conflict/ or delinquency/ or fraud/ or  
68 gang/ or juvenile delinquency/ or psychopathy/ or rape/ or recumbency/ or theft/ or  
torture/

69 68 use emez

70 "conflict (psychology)"/ or firesetting behavior/ or fraud/ or juvenile delinquency/ or rape/  
or sex offences/ or theft/ or torture/

71 70 use mesz, prem

exp adjudication/ or arson/ or attack behavior/ or exp behavior problems/ or bullying/ or  
conflict/ or exp criminal behavior/ or cruelty/ or deception/ or exp gangs/ or homicide/ or  
72 exp juvenile delinquency/ or physical abuse/ or psychopathy/ or exp rape/ or  
rebelliousness/ or runaway behavior/ or school violence/ or exp sex offences/ or exp  
theft/ or exp truancy/ or vandalism/ or violence/

73 72 use psych

((adjust\$ adj2 (difficult\$ or problem\$)) or anti?social\$ or arson or asbo or asocial or  
bully\$ or bullie\$ or callous\$ or delinquen\$ or deviant\$ or (fire\$ adj2 (alight or set\$ or  
start\$)) or mal?adjust\$ or psychopath\$ or pyromania or shop?lift\$ or steal\$ or temper\$1  
74 or theft\$ or unemotional trait\$ or vandali\$ or (sex\$ adj2 (abus\$ or harass\$ or offen\$)) or  
((social or unemotional) adj (difficult\$ or problem\$)) or noncompliant\$ or non  
compliant\$).ti,ab.

75 or/69,71,73-74

76 (repetitiv\$ or self stimulat\$ or stereotyp\$ or sucking).hw.

((crumpl\$ or tear\$) adj2 paper\$) or fingering\$ or (finger\$ adj2 (flex\$ or tap\$)) or flapping or knee shaking or humming or ((loud\$ or nois\$) adj2 (instrument\$ or vocali\$)) or lip pucker\$ or repetitive\$ or ritualistic or (rocking or (body adj2 rock\$)) or self?stimulat\$ or staring or stemming or stereotyp\$ or (thumb adj2 suck\$) or (wav\$ adj2 (arm\$ or hand\$))).ti,ab.

78 wander\$.ti,ab,hw.

79 withdrawn\$.ti,ab,hw.

80 or/31,39,47,55,63,67,75-79

81 30 and 80

## A.1.2 Cochrane Library – Wiley

#1 mesh descriptor: [developmental disabilities] this term only

#2 mesh descriptor: [intellectual disability] explode all trees

#3 mesh descriptor: [learning disorders] explode all trees

#4 mesh descriptor: [mentally disabled persons] this term only

#5 ((intellect\* near/3 (deficien\* or difficult\* or disab\* or disorder\* or impair\* or incapacit\* or subnorm\* or subaverage or "sub norm\*" or "sub\* average" )) or handicap\* or (low\*2 near/2 intellect\*)):ti

#6 ((intellect\* near/3 (deficien\* or difficult\* or disab\* or disorder\* or impair\* or incapacit\* or subnorm\* or subaverage or "sub norm\*" or "sub\* average")) or handicap\* or (low\*2 near/2 intellect\*)):ab

#7 (learning near/3 (deficien\* or difficult\* or disab\* or disorder\* or impair\* or incapacit\* or subnorm\* or subaverage or "sub\* norm\*" or "sub\* average")):ti

#8 (learning near/3 (deficien\* or difficult\* or disab\* or disorder\* or impair\* or incapacit\* or subnorm\* or subaverage or "sub\* norm\*" or sub\* average\*)):ab

#9 (mental\* near/3 (deficien\* or disab\* or impair\* or incapacit\* or retard\* or subnorm\* or subaverage or "sub\* norm\*" or "sub\* average")):ti

#10 (mental\* near/3 (deficien\* or disab\* or impair\* or incapacit\* or retard\* or subnorm\* or subnorm\* or subaverage or "sub\* norm\*" or "sub\* average")):ab

#11 ((subaverage or "sub\* average" or subnormal or "sub\* normal\*") near/3 (cognit\* or intel\*)):ti

#12 ((subaverage or "sub\* average" or subnormal or "sub\* normal\*") near/3 (cognit\* or intel\*)):ab

#13 ((development\* or neurodevelopment\*) near/1 disab\*):ti

#14 ((development\* or neurodevelopment\*) near/1 disab\*):ab

#15 (education\* near/5 (subnorm\* or "sub norm\*")):ti

#16 (education\* near/5 (subnorm\* or "sub norm\*")):ab



- #17 (cretin\* or "feeble-minded\*" or imbecil\* or moron\*):ti
- #18 (cretin\* or "feeble-minded\*" or imbecil\* or moron\*):ab
- #19 mesh descriptor: [adrenoleukodystrophy] this term only
- #20 mesh descriptor: [angelman syndrome] this term only
- #21 mesh descriptor: [cerebral palsy] this term only
- #22 mesh descriptor: [coffin-lowry syndrome] this term only
- #23 mesh descriptor: [cri-du-chat syndrome] this term only
- #24 mesh descriptor: [de lange syndrome] this term only
- #25 mesh descriptor: [down syndrome] this term only
- #26 mesh descriptor: [lesch-nyhan syndrome] this term only
- #27 mesh descriptor: [fragile x syndrome] this term only
- #28 mesh descriptor: [mucopolysaccharidoses] this term only
- #29 mesh descriptor: [phenylketonurias] explode all trees
- #30 mesh descriptor: [prader-willi syndrome] this term only
- #31 mesh descriptor: [pyruvate carboxylase deficiency disease] this term only
- #32 mesh descriptor: [pyruvate dehydrogenase complex deficiency disease] this term only
  
- #33 mesh descriptor: [rubinstein-taybi syndrome] this term only
- #34 mesh descriptor: [tuberous sclerosis] this term only
- #35 mesh descriptor: [wagr syndrome] this term only
- #36 mesh descriptor: [spasms, infantile] this term only
- #37 ((adreno near/1 (leukodystrophy or leukomyeloneuropathy)) or ("bronze schilder" near/1 (disease or syndrome\*)) or "mckusick 30010" or adrenoleukodystrophy or adrenomyeloneuropathy or adrenoleukomyeloneuropathy or "divry bogaert type leukodystrophy" or "melanodermic leukodystrophy" or "siemerling-creutzfeldt" or "x ald" or ((angelman or "happy puppet") near/2 syndrom\*) or (((brain or central or cerebral) near/1 (palsy or paralysis or paresis)) or "encephalopathia infantilis" or "spastic diplegia") or ("coffin lowry" or "lowry coffin") or ("cat cry" or "cri du chat" or "crying cat" or ((5p or lejeune\*) near/2 (disease or syndrome))) or ("amsterdam degenerative type" or "amsterdam dwarf" or brachmann or "de lange" or "congenital muscular hypertrophic cerebral" or "de lange" or "typus degenerativus amstelodamensis") or ((down\* near/1 (disease or syndrome\*)) or ((mongolian or mongoloid) near/1 idiocy) or mongolism or mongoloidism or trisomy 21) or ("childhood epileptic encephalopathy" or "lennox gastaut" or (lennox near/1 (disease\* or syndrome))) or ("hypoxanthine phosphoribosyltransferase deficiency syndrome" or "juvenile hyperuricemia" or "lesch nyhan" or "mckusick 30800" or (nyhan near/1 (disease or syndrome\*))) or (("copper transport" near/1 (disease or syndrome\*)) or ((kinky or steely) near/1 hair) or menkes or trichopoliodystrophy) or ("bell martin" or "fragile x" or "gillian turner" or "martin bell" or "turner gillian" or "x chromosome fragility" or (escalante\* near/1 (disease or syndrome\*))) or (debility or oligiphreni\* or oligophreny) or (((foelling or folling) near/2 (disease or syndrome\*)) or "mckusick 26160" or oligophrenia) or (phenylalanine near/1 "4 monooxygenase deficiency syndrome") or "hydroxylase deficiency syndrome" or phenylketonuria\*) or ("hho syndrome" or (prader near/2 willi)) or ("broad thumb-hallux" or

(rubinstein near/2 (disease or syndrome\* or taybi)) or ((bourneville near/2 (disease or syndrome\*)) or epiloia or (pringle near/2 (disease or syndrome\*)) or "tuberoze sclerosis") or ((wagr or william\*) near/1 (disease or syndrome\*)) or (west\* near/2 (disease or syndrome\*)):ti

#38 ((adreno near/1 (leukodystrophy or leukomyeloneuropathy)) or ("bronze schilder" near/1 (disease or syndrome\*)) or "mckusick 30010" or adrenoleukodystrophy or adrenomyeloneuropathy or adrenoleukomyeloneuropathy or "divry bogaert type leukodystrophy" or "melanodermic leukodystrophy" or "siemerling-creutzfeldt" or "x ald" or ((angelman or "happy puppet") near/2 syndrom\*) or (((brain or central or cerebral) near/1 (palsy or paralysis or paresis)) or "encephalopathia infantilis" or "spastic diplegia") or ("coffin-lowry" or "lowry coffin") or ("cat cry" or "cri du chat" or "crying cat" or ((5p or lejeune\*) near/2 (disease or syndrome))) or ("amsterdam degenerative type" or "amsterdam dwarf" or brachmann or "de lange" or "congenital muscular hypertrophic cerebral" or "de lange" or "typus degenerativus amstelodamensis") or ((down\* near/1 (disease or syndrome\*)) or ((mongolian or mongoloid) near/1 idiocy) or mongolism or mongoloidism or trisomy 21) or ("childhood epileptic encephalopathy" or "lennox gastaut" or (lennox near/1 (disease\* or syndrome))) or ("hypoxanthine phosphoribosyltransferase deficiency syndrome" or "juvenile hyperuricemia" or "lesch nyhan" or "mckusick 30800" or (nyhan near/1 (disease or syndrome\*))) or ("copper transport" near/1 (disease or syndrome\*)) or ((kinky or steely) near/1 hair) or menkes or trichopoliodystrophy) or ("bell martin" or "fragile x" or "gillian turner" or "martin bell" or "turner gillian" or "x chromosome fragility" or (escalante\* near/1 (disease or syndrome\*))) or (debility or oligiphreni\* or oligophreny) or (((foelling or folling) near/2 (disease or syndrome\*)) or "mckusick 26160" or oligophrenia or (phenylalanine near/1 "4 monooxygenase deficiency syndrome") or "hydroxylase deficiency syndrome" or phenylketonuria\*) or ("hho syndrome" or (prader near/2 willi)) or ("broad thumb-hallux" or (rubinstein near/2 (disease or syndrome\* or taybi)) or ((bourneville near/2 (disease or syndrome\*)) or epiloia or (pringle near/2 (disease or syndrome\*)) or "tuberoze sclerosis") or ((wagr or william\*) near/1 (disease or syndrome\*)) or (west\* near/2 (disease or syndrome\*)):ab

#39 (autis\* or asperger\* or "pervasive developmen\* disorder\*" or rett\*):ti,ab,kw

#40 ((communicative near/2 impair\*) or ((complex or "high support") near/3 needs) or ((language or speech) near/2 (delay\* or disorder\*)):ti,ab,kw

#41 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24 or #25 or #26

#42 #27 or #28 or #29 or #30 or #31 or #32 or #33 or #34 or #35 or #36 or #37 or #38 or #39 or #40

#43 #41 or #42

#44 behav\*:ti,ab,kw

#45 mesh descriptor: [acting out] this term only

#46 mesh descriptor: [domestic violence] explode all trees

#47 mesh descriptor: [aggression] explode all trees

#48 mesh descriptor: [anger] explode all trees

#49 mesh descriptor: [dangerous behavior] this term only

#50 mesh descriptor: [hate] this term only

#51 mesh descriptor: [hostility] this term only

- #52 mesh descriptor: [sexual harassment] this term only
- #53 mesh descriptor: [torture] explode all trees
- #54 mesh descriptor: [violence] this term only
- #55 (abus\* or aggress\* or agitat\* or agonistic or anger or angry or assault\* or attack\* or bizarre or combative or danger\* or destruct\* or disrupt\* or disturb\* or harass\* or hostile\* or intimidat\* or rage\* or threat\* or untoward or "un toward" or violen\*):ti
- #56 (abus\* or aggress\* or agitat\* or agonistic or anger or angry or assault\* or attack\* or bizarre or combative or danger\* or destruct\* or disrupt\* or disturb\* or harass\* or hostile\* or intimidat\* or rage\* or threat\* or untoward or "un toward" or violen\*):ab
- #57 mesh descriptor: [drug overdose] this term only
- #58 mesh descriptor: [self-injurious behavior] explode all trees
- #59 mesh descriptor: [self mutilation] this term only
- #60 mesh descriptor: [suicide] explode all trees
- #61 mesh descriptor: [suicide, attempted] this term only
- #62 mesh descriptor: [suicidal ideation] this term only
- #63 (autoaggress\* or "auto aggress\*" or automutilat\* or "auto mutilat\*" or cutt\* or overdos\* or parasuicid\* or "para suicid\*" or (self near/2 cut\*) or selfdamag\* or "self damage\*" or selfdestruct\* or "self destruct\*" or selfharm\* or "self harm\*" or selfhurt or "self hurt\*" or selfinflict\* or "self inflict\*" or selfinjur\* or "self injur\*" or selfmutilat\* or "self mutilat\*" or selfpoison\* or "self poison\*" or "self wound\*" or suicid\*):ti
- #64 (autoaggress\* or "auto aggress\*" or automutilat\* or "auto mutilat\*" or cutt\* or overdos\* or parasuicid\* or "para suicid\*" or (self near/2 cut\*) or selfdamag\* or "self damage\*" or selfdestruct\* or "self destruct\*" or selfharm\* or "self harm\*" or selfhurt or "self hurt\*" or selfinflict\* or "self inflict\*" or selfinjur\* or "self injur\*" or selfmutilat\* or "self mutilat\*" or selfpoison\* or "self poison\*" or "self wound\*" or suicid\*):ab
- #65 mesh descriptor: [impulse control disorders] explode all trees
- #66 mesh descriptor: [firesetting behavior] this term only
- #67 mesh descriptor: [trichotillomania] this term only
- #68 ((impulse control near/1 disorder\*) or (explosive near/2 disorder)):ti
- #69 ((impulse control near/1 disorder\*) or (explosive near/2 disorder)):ab
- #70 mesh descriptor: [child behavior] explode all trees
- #71 mesh descriptor: [child behavior disorders] this term only
- #72 mesh descriptor: [attention deficit and disruptive behavior disorders] 1 tree(s) exploded
- #73 mesh descriptor: [stereotypic movement disorder] this term only
- #74 (attenti\* or disrupt\* or impulsiv\* or inattenti\*):kw
- #75 (attenti\* near/3 (adolescen\* or adult\* or behav\* or child\* or class or classes or classroom\* or condition\* or difficult\* or disorder\* or learn\* or people or person\* or poor or problem\* or process\* or youngster\*)):ti

- #76 (attenti\* near/3 (adolescen\* or adult\* or behav\* or child\* or class or classes or classroom\* or condition\* or difficult\* or disorder\* or learn\* or people or person\* or poor or problem\* or process\* or youngster\*)):ab
- #77 (impulsiv\* or inattentiv\* or adhd or (attenti\* near/3 deficit\*) or hyperactiv\* or (hyper near/1 activ\*) or hyperkin\*) or overactiv\*:ti
- #78 (impulsiv\* or inattentiv\* or adhd or (attenti\* near/3 deficit\*) or hyperactiv\* or (hyper near/1 activ\*) or hyperkin\*) or overactiv\*:ab
- #79 mesh descriptor: [conflict (psychology)] this term only
- #80 mesh descriptor: [fraud] this term only
- #81 mesh descriptor: [juvenile delinquency] this term only
- #82 mesh descriptor: [rape] this term only
- #83 mesh descriptor: [theft] this term only
- #84 mesh descriptor: [torture] this term only
- #85 ((adjust\* near/2 (difficult\* or problem\*)) or antisocial\* or "anti social\*" or arson or asbo or asocial or bully\* or bullie\* or callous\* or delinquen\* or deviant\* or (fire\* near/2 (alight or set\* or start\*)) or maladjust\* or "mal adjust\*" or psychopath\* or pyromania or shoplift\* or "shop lift\*" or steal\* or temper\*1 or theft\* or "unemotional trait\*" or vandali\* or (sex\* near/2 (abus\* or harass\* or offen\*)) or ((social or unemotional) near/1 (difficult\* or problem\*)) or noncomplan\* or "non complian\*"):ti
- #86 ((adjust\* near/2 (difficult\* or problem\*)) or antisocial\* or "anti social\*" or arson or asbo or asocial or bully\* or bullie\* or callous\* or delinquen\* or deviant\* or (fire\* near/2 (alight or set\* or start\*)) or maladjust\* or "mal adjust\*" or psychopath\* or pyromania or shoplift\* or "shop lift\*" or steal\* or temper\*1 or theft\* or "unemotional trait\*" or vandali\* or (sex\* near/2 (abus\* or harass\* or offen\*)) or ((social or unemotional) near/1 (difficult\* or problem\*)) or noncomplan\* or "non complian\*"):ab
- #87 (((crumpl\* or tear\*) near/2 paper\*) or fingering\* or (finger\* near/2 (flex\* or tap\*)) or flapping or "knee shaking" or humming or ((loud\* or nois\*) near/2 (instrument\* or vocali\*)) or "lip pucker\*" or repetitive\* or ritualistic or (rocking or (body near/2 rock\*)) or ("self stimulat\*" or selfstimulat\*) or staring or stemming or stereotyp\* or (thumb near/2 suck\*) or (wav\* near/2 (arm\* or hand\*))) :ti
- #88 77 (((crumpl\* or tear\*) near/2 paper\*) or fingering\* or (finger\* near/2 (flex\* or tap\*)) or flapping or "knee shaking" or humming or ((loud\* or nois\*) near/2 (instrument\* or vocali\*)) or "lip pucker\*" or repetitive\* or ritualistic or (rocking or (body near/2 rock\*)) or ("self stimulat\*" or selfstimulat\*) or staring or stemming or stereotyp\* or (thumb near/2 suck\*) or (wav\* near/2 (arm\* or hand\*))) :ab
- #89 wander\* or withdrawn\*:ti,ab,kw
- #90 #44 or #45 or #46 or #47 or #48 or #49 or #50 or #51 or #52 or #53 or #54 or #55 or #56 or #57 or #58 or #59 or #60 or #61 or #62 or #63 or #64 or #65 or #66 or #67 or #68 or #69 or #70
- #91 #71 or #72 or #73 or #74 or #75 or #76 or #77 or #78 or #79 or #80 or #81 or #82 or #83 or #84 or #85 or #86 or #87 or #88 or #89
- #92 #90 or #91
- #93 #43 and #92

## A.2 Section 2: intervention search terms

### A.2.1 Review questions: 1.2, 2.2, 2.3

#### A.2.1.1 Embase, MEDLINE, PreMEDLINE, PsycINFO – Ovid

(adaptive behavio?r scale\$ or affective communication assessment \$ or (assessment adj2 communication adj2 interaction skill) or autism behavio?r checklist\$ or autonomy scale\$ or british picture vocabulary test\$ or (cardiff health check adj2 people adj3 learning disability) or (characteristics adj3 treatment environment) or chapas or passad or children\$ communication checklist or children\$ social behavio?r questionnaire or client behavio?r measure or (clinical evaluation adj2 language fundamentals) or celf 4 or celf4 or celf preschool 2 or celf preschool2 or celf p 2 or celf p2 or celfp2 or communication assessment profile or community adjustment scale or conner\$ rating scale\$ or conner\$3 or derbyshire language scheme or developmental disability distress assessment tool or dis?dat or early communication assessment or (emotionality adj2 activity adj2 sociability temperament survey adj2 children) or eas survey or eas temperament survey or (functional assessment adj2 problem behavio?r\$) or group home management schedule or (evaluation of\$1 social interaction) or henderson environmental learning process scale or (home and community social behavio?r scale\$) or hcsbs or hcsbs2 or school social behavio?r scale\$ or ssbs or ssbs2 or (home observation adj3 measurement adj3 environment) or (home infant adj2 toddlers form) or (home adj2 (preschool or pre school) adj2 age form) or home elementary age form or homesf or home sf or (index adj2 adult 1 autonomy) or (index adj2 community involvement) or (index adj2 participation adj2 domestic life) or (index adj2 physical environment) or life experience checklist or manchester pragmatics profile or mccormick toy or non communicating children\$ pain checklist or physical quality instrument or playground observation checklist or pragmatics profile or (preschool language scale adj2 fourth edition) or pls 4 or pls4 or ((pre-verbal or preverbal) adj2 communication schedule) or (programme analysis adj2 service systems) or rapport measurement or receptive expressive emergent language test or (receptive adj2 expressive one word picture vocabulary test\$) or owpvt 4 or owpvt4 or eowpvt 4 or eowpvt4 or rowpvt 4 or rowpvt4 or residential management survey \$ or revised class play or revised residence management practices or (scales adj2 independent behavio?r adj2 revised) or (reynell zinkin scale\$ and visual impairment\$) or (sensory integration adj2 praxis test) or sensory processing measure or sensory profile or ((infant or toddler) adj2 sensory profile) or sensory profile school companion or ((adult\$ or adolescent\$) adj2 sensory profile) or social climate scale\$ or social information-processing skill\$ measure or sips measure\$ or social skills improvement system or social skills rating system or south london object test or staff behavio?r measure or activity measure or responsibility scale or (test adj2 reception adj2 grammar) or (trichotillomania scale adj2 children) or (triple c and (checklist adj3 communicative competencies)) or vineland adaptive behavio?r scale).ti,ab.

(antecedent behavio?r consequences chart\$ or abc chart\$ or abc incident analysis or aberrant behavio?r checklist or (american association adj2 mental deficiency) or adaptive behavio?r scale\$ or (residential adj2 community adj2 second edition) or abs rc\$ or absrc or (assessment adj2 motor adj2 process skills) or school amps or bayley behavio?r rating scale or behavio?r checklist or behavio?r problems inventory or behavio?r screening 2 questionnaire or (behavio?ral assessment system adj2 children) or bipolar adjective checklist or ((care giv\$ or caregiv\$) adj problem checklist) or clinical global impression\$ or challenging behavio?r attributions scale or challenging behavio?r interview or (checklist adj2 challenging behavio?r) or child behavio?r checklist or (children\$ scale adj2 hostility adj2 aggression adj2 (reactive or proactive)) or c sharp or csharp or (adult scale adj2 hostility adj2 aggression adj2 reactive proactive) or a\$1 sharp or asharp or contextual

assessment inventory or developmental behavior checklist or (diagnostic assessment adj3 severely handicapped) or dash ii or dashii or disability assessment schedule or emotional problems scale\$ or eyberg child behavior inventory or family observation schedule or fos riii or fosriii or functional analysis screening tool or (hcr 20 and historical) or (hcr20 and historical) or (historical clinical risk management adj2 (cerebral palsy or crying cat syndrome or cornelia de lange syndrome or down's syndrome or phenylketonuria)) or (health adj3 nation outcome scales adj2 people adj2 learning disabilities) or health action plan or health action checklist or (home adj2 community problem checklist) or health equalities framework or home situation\$ questionnaire or (institute adj2 basic research modified overt aggression scale) or ibr moas or ibrmoas or ibr modified overt aggression scale or ((interview protocol adj2 challenging behavior) and revised) or (inventory adj2 client adj2 agency planning) or (minnesota sex offender screening tool and revised) or mnsost r or mnsostr or modified overt aggression scale or motivation assessment scale or nisonger child behavior rating form or ncbrf or (nisonger child behavior rating form and problem behavior) or ncbrf pb or ncbrfpb or overt aggression scale or parental concerns questionnaire or pdd behavior inventory or pddbi or pdd bi or preschool behavior checklist or problem behavior questionnaire or (psychopathy checklist adj2 revised) or questions about behavioral function or (rapid risk assessment adj2 sexual offence recidivism) or rrasor or (reiss screen adj2 maladaptive behavior) or (repetitive behavior scale adj2 revised) or (revised children\$ anxiety adj2 depression scale) or risk matrix 2000 or (scales adj2 independent behavior adj2 revised) or general maladaptive index or (schedule adj2 handicaps behavior adj2 skills) or hbs schedule or (screen adj2 child anxiety related emotional disorders) or spence children\$ anxiety scale or sex offender risk appraisal guide or (social dysfunction adj2 aggression scale) or (strengths adj2 difficulties questionnaire) or treatment need matrix or visual analog scale or violence risk appraisal guide or walker problem behavior identification checklist or ward anger rating scale).ti,ab.

((professional quality adj2 life scale) or dispositional resiliency scale or drs 15 or drs15 or beck depression inventory or abbreviated dyadic adjustment scale or (abbreviated quality adj2 life enjoyment adj2 satisfaction questionnaire) or q les q 18 or qlesq18 or qles q18 or attributional style questionnaire internal negative or asq in\$1 or asqin or automatic thoughts questionnaire or caregiver strain questionnaire or (burden adj2 care questionnaire) or fam iii or famiii or family assessment measure or ((carer uplift adj2 3 burden scale) and uplift) or (depression anxiety adj2 stress scale) or general health questionnaire or malaise inventory or maslach burnout inventory or (maslow assessment adj2 needs) or mans ld or mansld or mcmaster family assessment device or parental stress index or patient health questionnaire or phq 2 or phq2 or phq 9 or phq9 or personal wellbeing index or profile of mood states or (questionnaire on resources adj2 stress) or situational guilt scale or (state-trait anxiety inventory adj2 trait scale) or (statetrait anxiety inventory adj2 trait scale) or stress arousal checklist).ti,ab.

4 or/1-3 and *[ld terms]*

5 ((assess\$ adj5 (battery or batteries or checklist\$ or check list\$ or index or instrument\$ or interview\$ or inventor\$ or item\$ or measure\$1 or questionnaire\$ or rate or rating or scale\$ or score\$ or screen\$ or (self adj (assess\$ or report\$)) or subscale\$ or survey\$ or tool\$ or test form\$)).ti. and *[ld terms]*

6 or/4-5

## A.3 Section 3: study design filter terms

### A.3.1 Health economic and quality of life study design filter

#### A.3.1.1 Embase, MEDLINE, PreMEDLINE, PsycINFO – Ovid

- 1 budget/ or exp economic evaluation/ or exp fee/ or funding/ or exp health care cost/ or health economics/ or exp pharmacoeconomics/ or resource allocation/
- 2 1 use emez  
exp budgets/ or exp "costs and cost analysis"/ or economics/ or exp economics, hospital/
- 3 or exp economics, medical/ or economics, nursing/ or economics, pharmaceutical/ or exp "fees and charges"/ or exp resource allocation/ or value of life/
- 4 3 use mesz, prem  
exp "costs and cost analysis"/ or "cost containment"/ or economics/ or finance/ or
- 5 funding/ or health care economics/ or pharmacoeconomics/ or exp professional fees/ or resource allocation/
- 6 5 use psyh  
(cost\$ or economic\$ or pharmacoeconomic\$ or pharmaco economic\$).ti. or (cost\$ adj2 (effective\$ or utilit\$ or benefit\$ or minimi\$)).ab. or economic model\$.tw. or (budget\$ or fee or fees or financ\$ or price or prices or pricing or resource\$ allocat\$ or (value adj2 (monetary or money))).ti,ab.
- 7  
8 decision theory/ or decision tree/ or monte carlo method/ or \*nonbiological model/ or (statistical model/ and exp economic aspect/) or stochastic model/ or \*theoretical model/
- 9 8 use emez
- 10 exp decision theory/ or markov chains/ or exp models, economic/ or \*models, organizational/ or \*models, theoretical/ or monte carlo method/
- 11 10 use mesz, prem
- 12 exp decision theory/ or exp stochastic modeling/
- 13 12 use psyh
- 14 ((decision adj (analy\$ or model\$ or tree\$)) or economic model\$ or markov or monte carlo).ti,ab.
- 15 quality adjusted life year/ or "quality of life index"/ or short form 12/ or short form 20/ or short form 36/ or short form 8/ or sickness impact profile/
- 16 15 use emez
- 17 quality-adjusted life years/ or sickness impact profile/
- 18 17 use mesz, prem
- 19 "\*quality of life"/

- 20 19 use psych
- 21 (((disability or quality) adj adjusted) or (adjusted adj2 life)).ti,ab.
- 22 (disutili\$ or (utilit\$ adj1 (health or score\$ or value\$ or weigh\$))).ti,ab.
- 23 (health year equivalent or hye or hyes).ti,ab.
- 24 (daly or qal or qald or qale or qaly or qtime\$ or qwb\$).ti,ab.
- 25 discrete choice.ti,ab.
- 26 (euroqol\$ or euro qol\$ or eq5d\$ or eq 5d\$).ti,ab.
- 27 (hui or hui1 or hui2 or hui3).ti,ab.
- 28 ((quality adj2 (wellbeing or well being)) or quality adjusted life or qwb or (value adj2 (money or monetary))).ti,ab.
- 29 (qol or hq1\$ or hqol\$ or h qol\$ or hrqol or hr qol or hr ql or hrql).ti,ab.
- 30 rosser.ti,ab.
- 31 sickness impact profile.ti,ab.
- 32 (standard gamble or time trade\$ or tto or willingness to pay).ti,ab.
- 33 (sf36 or sf 36 or short form 36 or shortform 36 or sf thirtysix or sf thirty six or shortform thirtysix or shortform thirty six or short form thirtysix or short form thirty six).ti,ab.
- 34 (sf6 or sf 6 or short form 6 or shortform 6 or sf six or sfsix or shortform six or short form six).ti,ab.
- 35 (sf12 or sf 12 or short form 12 or shortform 12 or sf twelve or sftwelve or shortform twelve or short form twelve).ti,ab.
- 36 (sf16 or sf 16 or short form 16 or shortform 16 or sf sixteen or sfsixteen or shortform sixteen or short form sixteen).ti,ab
- 37 (sf20 or sf 20 or short form 20 or shortform 20 or sf twenty or sftwenty or shortform twenty or short form twenty).ti,ab.
- 38 or/ 2,4,6-7,9,11,13-14,16,18,20-37