

Perioperative care in adults

NICE guideline: search strategies

NICE guideline <number>

Search strategies

November 2019

Draft for Consultation

*This guideline was developed by the
National Guideline Centre*

Disclaimer

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or service users. The recommendations in this guideline are not mandatory and the guideline does not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and, where appropriate, their carer or guardian.

Local commissioners and providers have a responsibility to enable the guideline to be applied when individual health professionals and their patients or service users wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with compliance with those duties.

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Appendix A: Information and support

Perioperative Care Information search strategy A

This literature search strategy was used for the following reviews;

- **What information and support is useful for adults undergoing surgery, and their families and carers, before, during and after an operation?**

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018.{NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

A.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 1: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	2000 – 30 May 2019	Exclusions Qualitative studies
Embase (OVID)	2000 – 30 May 2019	Exclusions Qualitative studies
CINAHL, Current Nursing and Allied Health Literature (EBSCO)	2000 – 30 May 2019	Exclusions Qualitative studies
PsycINFO (ProQuest)	2000 – 1 March 2019	Exclusions Qualitative studies

Medline (Ovid) search terms

1.	exp Perioperative Care/ or exp Perioperative Period/ or Preoperative Care/
2.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
3.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
4.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
5.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 during adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
6.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
7.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
8.	or/1-7

9.	limit 8 to English language
10.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
11.	9 not 10
12.	letter/
13.	editorial/
14.	news/
15.	exp historical article/
16.	Anecdotes as Topic/
17.	comment/
18.	case report/
19.	(letter or comment*).ti.
20.	or/12-19
21.	randomized controlled trial/ or random*.ti,ab.
22.	20 not 21
23.	animals/ not humans/
24.	exp Animals, Laboratory/
25.	exp Animal Experimentation/
26.	exp Models, Animal/
27.	exp Rodentia/
28.	(rat or rats or mouse or mice).ti.
29.	or/22-28
30.	11 not 29
31.	Patients/ or Inpatients/ or Outpatients/
32.	Caregivers/ or exp Family/ or exp Parents/ or exp Legal-Guardians/
33.	(patient* or carer* or caregiver* or famil* or parent* or father* or mother* or spouse* or wife or wives or husband* or next of kin or significant other* or partner* or guardian* or inpatient* or outpatient* or in patient* or out patient*).ti,ab.
34.	or/31-33
35.	exp Information-Services/ or Publications/ or Books/ or Pamphlets/ or Counseling/ or Directive-Counseling/ or Decision Making/
36.	34 and 35
37.	Patient Education as Topic/
38.	patient acceptance of health care/
39.	patient satisfaction/
40.	patient education handout/
41.	Consumer Health Information/
42.	Patient participation/
43.	Physician-patient relations/ or Professional-Patient Relations/
44.	((patient* or carer* or caregiver* or famil* or parent* or father* or mother* or spouse* or wife or wives or husband* or next of kin or significant other* or partner* or guardian* or inpatient* or outpatient* or in patient* or out patient*) adj3 (inform* or educat* or support* or advice* or advise*).ti,ab.
45.	(information* adj3 (service* or need* or requirement* or support* or seek* or access* or disseminat* or barrier*).ti,ab.
46.	((patient* or carer* or caregiver* or famil* or parent* or father* or mother* or spouse* or wife or wives or husband* or next of kin or significant other* or partner* or guardian* or inpatient* or outpatient* or in patient* or out patient*) adj3 (service* or information* or

	material* or virtual* or app or apps or blog* or booklet* or brochure* or dvd* or elearn* or e-learn* or email* or e-mail* or e mail* or facebook or facetime or face time or forum* or handout* or hand-out* or hand out* or helpline* or hotline* or internet* or ipad* or iphone* or leaflet* or online or magazine* or mobile phone* or newsletter* or pamphlet* or palm pilot* or personal digital assistant* or pocket pc* or podcast* or poster? or skype* or smartphone* or smart phone* or social media or social network* or sms or text messag* or twitter or tweet* or video* or web* or wiki* or youtube* or manual* or publication* or literature or computer* or interactive or telephone* or phone*)).ti,ab.
47.	((educat* or learn* or support*) adj3 (service* or information* or material* or virtual* or app or apps or blog* or booklet* or brochure* or dvd* or elearn* or e-learn* or email* or e-mail* or e mail* or facebook or facetime or face time or forum* or handout* or hand-out* or hand out* or helpline* or hotline* or internet* or ipad* or iphone* or leaflet* or online or magazine* or mobile phone* or newsletter* or pamphlet* or palm pilot* or personal digital assistant* or pocket pc* or podcast* or poster? or skype* or smartphone* or smart phone* or social media or social network* or sms or text messag* or twitter or tweet* or video* or web* or wiki* or youtube* or manual* or publication* or literature or computer* or interactive or telephone* or phone*)).ti,ab.
48.	((decision* or decid*) adj3 (support* or aid* or tool*)).ti,ab.
49.	((decision making or choice) adj (behavior* or behaviour*)).ti,ab.
50.	(informed adj (choice* or decision*)).ti,ab.
51.	or/36-50
52.	Qualitative research/ or Narration/ or exp Interviews as Topic/ or exp Questionnaires/ or Health care surveys/
53.	(qualitative or interview* or focus group* or theme* or questionnaire* or survey*).ti,ab.
54.	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them* or ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic* adj3 analys*) or theoretical samp* or purposive samp* or hermeneutic* or heidegger* or husserl* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).ti,ab.
55.	or/52-54
56.	30 and 51 and 55

Embase (Ovid) search terms

1.	*preoperative period/ or *preoperative care/ or *peroperative care/ or *intraoperative period/ or *postoperative period/ or *postoperative care/ or *perioperative nursing/ or *surgical patient/
2.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
3.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
4.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
5.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 during adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
6.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
7.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
8.	or/1-7
9.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
10.	8 not 9
11.	limit 10 to English language

12.	letter.pt. or letter/
13.	note.pt.
14.	editorial.pt.
15.	case report/ or case study/
16.	(letter or comment*).ti.
17.	or/12-16
18.	randomized controlled trial/ or random*.ti,ab.
19.	17 not 18
20.	animal/ not human/
21.	nonhuman/
22.	exp Animal Experiment/
23.	exp Experimental Animal/
24.	animal model/
25.	exp Rodent/
26.	(rat or rats or mouse or mice).ti.
27.	or/19-26
28.	11 not 27
29.	*patient/ or *hospital patient/ or *outpatient/
30.	*caregiver/ or *family/ or *adult child/ or *family relation/ or *grandparent/ or *parent/ or *father/ or *mother/ or *legal guardian/
31.	(patient* or carer* or caregiver* or famil* or parent* or father* or mother* or spouse* or wife or wives or husband* or next of kin or significant other* or partner* or guardian* or inpatient* or outpatient*).ti,ab.
32.	or/29-31
33.	*information service/ or *documentation/ or *publication/ or *book/ or *counseling/ or *directive counseling/
34.	32 and 33
35.	*patient education/
36.	*consumer health information/
37.	*patient satisfaction/ or *patient attitude/
38.	*patient participation/
39.	*patient information/
40.	*doctor patient relation/
41.	((patient* or carer* or caregiver* or famil* or parent* or father* or mother* or spouse* or wife or wives or husband* or next of kin or significant other* or partner* or guardian* or inpatient* or outpatient* or in patient* or out patient*) adj3 (inform* or educat* or support* or advice* or advise*).ti,ab.
42.	((patient* or carer* or caregiver* or famil* or parent* or father* or mother* or spouse* or wife or wives or husband* or next of kin or significant other* or partner* or guardian* or inpatient* or outpatient* or in patient* or out patient*) adj3 (service* or information* or material* or virtual* or app or apps or blog* or booklet* or brochure* or dvd* or elearn* or e-learn* or email* or e-mail* or e mail* or facebook or facetime or face time or forum* or handout* or hand-out* or hand out* or helpline* or hotline* or internet* or ipad* or iphone* or leaflet* or online or magazine* or mobile phone* or newsletter* or pamphlet* or palm pilot* or personal digital assistant* or pocket pc* or podcast* or poster? or skype* or smartphone* or smart phone* or social media or social network* or sms or text messag* or twitter or tweet* or video* or web* or wiki* or youtube* or manual* or publication* or literature or computer* or interactive or telephone* or phone*).ti,ab.
43.	(information* adj3 (service* or need* or requirement* or support* or seek* or access* or disseminat* or barrier*).ti,ab.

44.	((educat* or learn* or support*) adj3 (service* or information* or material* or virtual* or app or apps or blog* or booklet* or brochure* or dvd* or elearn* or e-learn* or email* or e-mail* or e mail* or facebook or facetime or face time or forum* or handout* or hand-out* or hand out* or helpline* or hotline* or internet* or ipad* or iphone* or leaflet* or online or magazine* or mobile phone* or newsletter* or pamphlet* or palm pilot* or personal digital assistant* or pocket pc* or podcast* or poster? or skype* or smartphone* or smart phone* or social media or social network* or sms or text messag* or twitter or tweet* or video* or web* or wiki* or youtube* or manual* or publication* or literature or computer* or interactive or telephone* or phone*)).ti,ab.
45.	((decision* or decid*) adj3 (support* or aid* or tool*)).ti,ab.
46.	((decision making or choice) adj (behavior* or behaviour*)).ti,ab.
47.	(informed adj (choice* or decision*)).ti,ab.
48.	or/34-47
49.	health survey/ or exp questionnaire/ or exp interview/ or qualitative research/ or narrative/
50.	(qualitative or interview* or focus group* or theme* or questionnaire* or survey*).ti,ab.
51.	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them* or ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic* adj3 analys*) or theoretical sampl* or purposive sampl* or hermeneutic* or heidegger* or husserl* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).ti,ab.
52.	or/49-51
53.	28 and 48 and 52

CINAHL, Current Nursing and Allied Health Literature (EBSCO)

#1.	(MH "Preoperative Care+")
#2.	(MH "Perioperative Care+")
#3.	(MH "Preoperative Period+")
#4.	(MH "Perioperative Nursing")
#5.	(MH "Postoperative Care+")
#6.	(MH "Intraoperative Care")
#7.	(MM "Intraoperative Period")
#8.	(MM "Postoperative Period")
#9.	TI (((care* or caring or treat* or nurs* or recover* or monitor*) N3 (before or prior or advance or during or after) N3 (surg* or operat* or anaesthes* or anesthes*))) OR AB (((care* or caring or treat* or nurs* or recover* or monitor*) N3 (before or prior or advance or during or after) N3 (surg* or operat* or anaesthes* or anesthes*)))
#10.	TI (((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) N3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))) OR AB (((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) N3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#11.	TI (((care* or caring or treat* or nurs* or recover* or monitor*) n3 during n3 (surg* or operat* or anaesthes* or anesthes*))) OR AB (((care* or caring or treat* or nurs* or recover* or monitor*) n3 during n3 (surg* or operat* or anaesthes* or anesthes*)))
#12.	TI (((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) n3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))) OR AB (((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) n3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#13.	TI (((postoperative* or postop* or post-op* or post-surg* or postsurg*) n3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))) OR AB (((postoperative* or postop* or post-op* or post-surg* or postsurg*) n3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))

#14.	TI (((care* or caring or treat* or nurs* or recover* or monitor*) n3 after n3 (surg* or operat* or anaesthes* or anesthes*))) OR AB (((care* or caring or treat* or nurs* or recover* or monitor*) n3 after n3 (surg* or operat* or anaesthes* or anesthes*)))
#15.	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14
#16.	PT anecdote or PT audiovisual or PT bibliography or PT biography or PT book or PT book review or PT brief item or PT cartoon or PT commentary or PT computer program or PT editorial or PT games or PT glossary or PT historical material or PT interview or PT letter or PT listservs or PT masters thesis or PT obituary or PT pamphlet or PT pamphlet chapter or PT pictorial or PT poetry or PT proceedings or PT "questions and answers" or PT response or PT software or PT teaching materials or PT website
#17.	S15 not S16
#18.	((MH "Child+") OR (MH "Pediatrics+") OR (MH "Infant+")) NOT ((MH "Adult+") OR (MH "Adolescence+") OR (MH "Middle Age") OR (MH "Aged+"))
#19.	S17 NOT S18
#20.	(MH "Patients")
#21.	(MH "Inpatients")
#22.	(MH "Outpatients")
#23.	(MH "Caregivers")
#24.	(MH "Family+")
#25.	(MH "Parents+")
#26.	(MH "Guardianship, Legal+")
#27.	TI ((patient* or carer* or caregiver* or famil* or parent* or father* or mother* or spouse* or wife or wives or husband* or next of kin or significant other* or partner* or guardian* or inpatient* or outpatient* or in patient* or out patient*)) OR AB ((patient* or carer* or caregiver* or famil* or parent* or father* or mother* or spouse* or wife or wives or husband* or next of kin or significant other* or partner* or guardian* or inpatient* or outpatient* or in patient* or out patient*))
#28.	S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27
#29.	(MH "Information Services+") OR (MH "Books") OR (MH "Counseling") OR (MH "Pamphlets") OR (MH "Decision Making")
#30.	S28 AND S29
#31.	(MH "Patient Education+") OR (MH "Patient Satisfaction") OR (MH "Patient Preference") OR (MH "Consumer Health Information+") OR (MH "Consumer Participation") OR (MH "Physician-Patient Relations") OR (MH "Professional-Patient Relations")
#32.	TI (((patient* or carer* or caregiver* or famil* or parent* or father* or mother* or spouse* or wife or wives or husband* or next of kin or significant other* or partner* or guardian* or inpatient* or outpatient* or in patient* or out patient*) N3 (inform* or educat* or support* or advice* or advise*))) OR AB (((patient* or carer* or caregiver* or famil* or parent* or father* or mother* or spouse* or wife or wives or husband* or next of kin or significant other* or partner* or guardian* or inpatient* or outpatient* or in patient* or out patient*) N3 (inform* or educat* or support* or advice* or advise*)))
#33.	TI ((information* N3 (service* or need* or requirement* or support* or seek* or access* or disseminat* or barrier*))) OR AB ((information* N3 (service* or need* or requirement* or support* or seek* or access* or disseminat* or barrier*)))
#34.	TI (((patient* or carer* or caregiver* or famil* or parent* or father* or mother* or spouse* or wife or wives or husband* or next of kin or significant other* or partner* or guardian* or inpatient* or outpatient* or in patient* or out patient*) N3 (service* or information* or material* or virtual* or app or apps or blog* or booklet* or brochure* or dvd* or elearn* or e-learn* or email* or e-mail* or e mail* or facebook or facetime or face time or forum* or handout* or hand-out* or hand out* or helpline* or hotline* or internet* or ipad* or iphone* or leaflet* or online or magazine* or mobile phone* or

	newsletter* or pamphlet* or palm pilot* or personal digital assistant* or pocket pc* or podcast* or poster? or skype* or smartphone* or smart phone* or social media or social network* or sms or text messag* or twitter or tweet* or video* or web* or wiki* or youtube* or manual* or publication* or literature or computer* or interactive or telephone* or phone*)) OR AB (((patient* or carer* or caregiver* or famil* or parent* or father* or mother* or spouse* or wife or wives or husband* or next of kin or significant other* or partner* or guardian* or inpatient* or outpatient* or in patient* or out patient*) N3 (service* or information* or material* or virtual* or app or apps or blog* or booklet* or brochure* or dvd* or elearn* or e-learn* or email* or e-mail* or e mail* or facebook or facetime or face time or forum* or handout* or hand-out* or hand out* or helpline* or hotline* or internet* or ipad* or iphone* or leaflet* or online or magazine* or mobile phone* or newsletter* or pamphlet* or palm pilot* or personal digital assistant* or pocket pc* or podcast* or poster? or skype* or smartphone* or smart phone* or social media or social network* or sms or text messag* or twitter or tweet* or video* or web* or wiki* or youtube* or manual* or publication* or literature or computer* or interactive or telephone* or phone*)))
#35.	TI (((educat* or learn* or support*) N3 (service* or information* or material* or virtual* or app or apps or blog* or booklet* or brochure* or dvd* or elearn* or e-learn* or email* or e-mail* or e mail* or facebook or facetime or face time or forum* or handout* or hand-out* or hand out* or helpline* or hotline* or internet* or ipad* or iphone* or leaflet* or online or magazine* or mobile phone* or newsletter* or pamphlet* or palm pilot* or personal digital assistant* or pocket pc* or podcast* or poster? or skype* or smartphone* or smart phone* or social media or social network* or sms or text messag* or twitter or tweet* or video* or web* or wiki* or youtube* or manual* or publication* or literature or computer* or interactive or telephone* or phone*))) OR AB (((educat* or learn* or support*) N3 (service* or information* or material* or virtual* or app or apps or blog* or booklet* or brochure* or dvd* or elearn* or e-learn* or email* or e-mail* or e mail* or facebook or facetime or face time or forum* or handout* or hand-out* or hand out* or helpline* or hotline* or internet* or ipad* or iphone* or leaflet* or online or magazine* or mobile phone* or newsletter* or pamphlet* or palm pilot* or personal digital assistant* or pocket pc* or podcast* or poster? or skype* or smartphone* or smart phone* or social media or social network* or sms or text messag* or twitter or tweet* or video* or web* or wiki* or youtube* or manual* or publication* or literature or computer* or interactive or telephone* or phone*)))
#36.	TI (((decision* or decid*) N3 (support* or aid* or tool*))) OR AB (((decision* or decid*) N3 (support* or aid* or tool*)))
#37.	TI (((decision making or choice) N1 (behavior* or behaviour*))) OR AB (((decision making or choice) N1 (behavior* or behaviour*)))
#38.	TI ((informed N1 (choice* or decision*))) OR AB ((informed N1 (choice* or decision*)))
#39.	S30 OR S31 OR S32 OR S33 OR S34 OR S35 OR S36 OR S37 OR S38
#40.	(MH "Qualitative Studies+")
#41.	(MH "Qualitative Validity+")
#42.	(MH "Interviews+") OR (MH "Focus Groups") OR (MH "Surveys") OR (MH "Questionnaires+")
#43.	(qualitative or interview* or focus group* or theme* or questionnaire* or survey*)
#44.	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them* or ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic* adj3 analys*) or theoretical sampl* or purposive sampl* or hermeneutic* or heidegger* or husserl* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*)
#45.	S40 OR S41 OR S42 OR S43 OR S44
#46.	S19 AND S39 AND S45

PsycINFO (ProQuest)

1.	(((MAINSUBJECT.EXACT("Patients") OR MAINSUBJECT.EXACT("Outpatients") OR
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<p>MAINSUBJECT.EXACT.EXPLODE("Parents") OR MAINSUBJECT.EXACT("Caregivers") OR MAINSUBJECT.EXACT.EXPLODE("Family") OR MAINSUBJECT.EXACT("Guardianship")) OR ti,ab(patient* OR carer* OR caregiver* OR famil* OR parent* OR father* OR mother* OR spouse* OR wife OR wives OR husband* OR next of kin OR significant other* OR partner* OR guardian* OR inpatient* OR outpatient* OR in patient* OR out patient*)) AND (mainsubject.Exact("preoperative care" OR "intraoperative care" OR "preoperative period" OR "perioperative care" OR "postoperative care" OR "postoperative period" OR "intraoperative period" OR "perioperative period" OR "perioperative nursing") OR ti,ab(pre-operative* OR preoperative* OR preop* OR pre-op* OR pre-surg* OR presurg* OR perioperative* OR peri-operative* OR intraoperative* OR intra-operative* OR intrasurg* OR intra-surg* OR peroperat* OR per-operat* OR postoperative* OR postop* OR post-op* OR post- surg* OR postsurg*)) AND (MAINSUBJECT.EXACT("Client Participation") OR MAINSUBJECT.EXACT("Client Education") OR (MAINSUBJECT.EXACT("Client Attitudes") OR MAINSUBJECT.EXACT("Client Satisfaction")) OR ab((information OR educat* OR learn* OR support* OR decision* OR decide* OR choice* OR satisfaction* OR participat*)) OR ti((information OR educat* OR learn* OR support* OR decision* OR decide* OR choice* OR satisfaction* OR participat*))) AND ((su.exact.explode("qualitative research") OR su.exact("narratives") OR su.exact.explode("questionnaires") OR su.exact.explode("interviews") OR su.exact.explode("health care services") OR ti,ab(qualitative OR interview* OR focus group* OR theme* OR questionnaire* OR survey*) OR ti,ab(metasynthes* OR meta- synthes* OR metasummar* OR meta-summar* OR metastud* OR meta-stud* OR metathem* OR meta-them* OR ethno* OR emic OR etic OR phenomenolog* OR grounded theory OR constant compar* OR (thematic* NEAR/3 analys*) OR theoretical- sAMPL* OR purposive-sAMPL* OR hermeneutic* OR heidegger* OR husserl* OR colaizzi* OR van kaam* OR van manen* OR giorgi* OR glaser* OR strauss* OR ricoeur* OR spiegelberg* OR merleau*)) NOT (su.exact.explode("rodents") OR su.exact.explode("mice") OR (su.exact("animals") NOT (su.exact("human males") OR su.exact("human females")))) OR ti(rat OR rats OR mouse OR mice))Limits applied</p>

Appendix B: Enhanced recovery programmes

Perioperative Care Enhanced Recovery Programmes search strategy B

This literature search strategy was used for the following reviews;

- **What is the clinical and cost effectiveness of non-invasive cardiac output monitoring during major, complex or high risk surgery in adults?**

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018. {NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

B.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 2: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 30 May 2019	Exclusions
Embase (OVID)	1974 – 30 May 2019	Exclusions
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 5 of 12 CENTRAL to 2019 Issue 5 of 12 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 4 of 4	None

Medline (Ovid) search terms

57.	postoperative care/ or exp Postoperative Period/ or exp perioperative nursing/
58.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
59.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
60.	or/1-3
61.	limit 4 to English language
62.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
63.	5 not 6
64.	letter/
65.	editorial/
66.	news/
67.	exp historical article/
68.	Anecdotes as Topic/

69.	comment/
70.	case report/
71.	(letter or comment*).ti.
72.	or/8-15
73.	randomized controlled trial/ or random*.ti,ab.
74.	16 not 17
75.	animals/ not humans/
76.	exp Animals, Laboratory/
77.	exp Animal Experimentation/
78.	exp Models, Animal/
79.	exp Rodentia/
80.	(rat or rats or mouse or mice).ti.
81.	or/18-24
82.	7 not 25
83.	((enhance* or fast track or accelerate*) adj5 (recover* or rehab*)).ti,ab.
84.	ERAS.ti,ab.
85.	((FT or fast track or recover* or rehab*) adj5 (protocol* or program*)).ti,ab.
86.	or/27-29
87.	26 and 30

Embase (Ovid) search terms

54.	*postoperative care/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
55.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
56.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
57.	or/1-3
58.	limit 4 to English language
59.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
60.	5 not 6
61.	letter.pt. or letter/
62.	note.pt.
63.	editorial.pt.
64.	case report/ or case study/
65.	(letter or comment*).ti.
66.	or/8-12
67.	randomized controlled trial/ or random*.ti,ab.
68.	13 not 14
69.	animal/ not human/
70.	nonhuman/
71.	exp Animal Experiment/
72.	exp Experimental Animal/
73.	animal model/
74.	exp Rodent/
75.	(rat or rats or mouse or mice).ti.

76.	or/15-22
77.	7 not 23
78.	((enhance* or fast track or accelerate*) adj5 (recover* or rehab*)):ti,ab.
79.	ERAS.ti,ab.
80.	((FT or fast track or recover* or rehab*) adj5 (protocol* or program*)):ti,ab.
81.	or/25-27
82.	24 and 28

Cochrane Library (Wiley) search terms

#47.	MeSH descriptor: [Postoperative Care] this term only
#48.	MeSH descriptor: [Postoperative Period] this term only
#49.	MeSH descriptor: [Perioperative Nursing] this term only
#50.	(or #1-#3)
#51.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) near/3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)):ti,ab
#52.	((care* or caring or treat* or nurs* or recover* or monitor*) near/3 (after) near/3 (surg* or operat* or anaesthes* or anesthes*)):ti,ab
#53.	(or #4-#6)
#54.	((enhance* or "fast track" or accelerate*) near/5 (recover* or rehab*)):ti,ab
#55.	ERAS:ti,ab
#56.	((FT or "fast track" or recover* or rehab*) near/5 protocol* or program*):ti,ab
#57.	(or #8-#10)
#58.	#7 and #11

B.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to the perioperative care population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional health economics searches were run on Medline and Embase.

Table 3: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 30 May 2019	Exclusions Health economics studies
Embase	2014 – 30 May 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - Inception – 02 May 2019 NHSEED - Inception to 02 May 2019	None

Medline (Ovid) search terms

1.	exp Preoperative Care/ or exp Perioperative Care/ or exp Perioperative Period/ or exp Perioperative Nursing/
2.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)):ti,ab.
3.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or

	intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
4.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
5.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
6.	1 or 2 or 3 or 4 or 5
7.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
8.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
9.	7 or 8
10.	postoperative care/ or exp Postoperative Period/ or exp Perioperative nursing/
11.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
12.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
13.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
14.	10 or 11 or 12 or 13
15.	exp Preoperative Care/ or Preoperative Period/
16.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
17.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
18.	15 or 16 or 17
19.	6 or 9 or 14 or 18
20.	letter/
21.	editorial/
22.	news/
23.	exp historical article/
24.	Anecdotes as Topic/
25.	comment/
26.	case report/
27.	(letter or comment*).ti.
28.	or/20-27
29.	randomized controlled trial/ or random*.ti,ab.
30.	28 not 29
31.	animals/ not humans/
32.	exp Animals, Laboratory/
33.	exp Animal Experimentation/
34.	exp Models, Animal/
35.	exp Rodentia/
36.	(rat or rats or mouse or mice).ti.
37.	or/30-36
38.	19 not 37
39.	limit 38 to English language
40.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
41.	39 not 40
42.	economics/
43.	value of life/

44.	exp "costs and cost analysis"/
45.	exp Economics, Hospital/
46.	exp Economics, medical/
47.	Economics, nursing/
48.	economics, pharmaceutical/
49.	exp "Fees and Charges"/
50.	exp budgets/
51.	budget*.ti,ab.
52.	cost*.ti.
53.	(economic* or pharmaco?economic*).ti.
54.	(price* or pricing*).ti,ab.
55.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
56.	(financ* or fee or fees).ti,ab.
57.	(value adj2 (money or monetary)).ti,ab.
58.	or/42-57
59.	41 and 58

Embase (Ovid) search terms

1.	*preoperative period/ or *intraoperative period/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
2.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
3.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
4.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
5.	1 or 2 or 3 or 4
6.	peroperative care/ or exp peroperative care/ or exp perioperative nursing/
7.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
8.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
9.	6 or 7 or 8
10.	postoperative care/ or exp postoperative period/ or perioperative nursing/
11.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
12.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
13.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
14.	10 or 11 or 12 or 13
15.	exp preoperative care/ or preoperative period/
16.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
17.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
18.	15 or 16 or 17
19.	5 or 9 or 14 or 18
20.	letter.pt. or letter/
21.	note.pt.

22.	editorial.pt.
23.	case report/ or case study/
24.	(letter or comment*).ti.
25.	or/20-24
26.	randomized controlled trial/ or random*.ti,ab.
27.	25 not 26
28.	animal/ not human/
29.	nonhuman/
30.	exp Animal Experiment/
31.	exp Experimental Animal/
32.	animal model/
33.	exp Rodent/
34.	(rat or rats or mouse or mice).ti.
35.	or/27-34
36.	19 not 35
37.	limit 36 to English language
38.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
39.	37 not 38
40.	health economics/
41.	exp economic evaluation/
42.	exp health care cost/
43.	exp fee/
44.	budget/
45.	funding/
46.	budget*.ti,ab.
47.	cost*.ti.
48.	(economic* or pharmaco?economic*).ti.
49.	(price* or pricing*).ti,ab.
50.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
51.	(financ* or fee or fees).ti,ab.
52.	(value adj2 (money or monetary)).ti,ab.
53.	or/40-52
54.	39 and 53

NHS EED and HTA (CRD) search terms

#1.	MeSH DESCRIPTOR Preoperative Care EXPLODE ALL TREES
#2.	MeSH DESCRIPTOR Perioperative Care EXPLODE ALL TREES
#3.	MeSH DESCRIPTOR Perioperative Period EXPLODE ALL TREES
#4.	MeSH DESCRIPTOR Perioperative Nursing EXPLODE ALL TREES
#5.	((((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))

#6.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*))
#7.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#8.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#9.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#10.	(* IN HTA)
#11.	(* IN NHSEED)
#12.	#9 AND #10
#13.	#9 AND #11
#14.	MeSH DESCRIPTOR Intraoperative Care EXPLODE ALL TREES
#15.	#1 OR #2 OR #3 OR #4 OR #14
#16.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*))
#17.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*))
#18.	((postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*))
#19.	((after adj3 (surg* or operat* or anaesthes* or anesthes*))
#20.	((post adj3 (operat* or anaesthes* or anesthes*))
#21.	((pre-operat* or preoperat* or pre-surg* or presurg*))
#22.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*))
#23.	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22
#24.	#10 AND #23
#25.	#11 AND #23
#26.	#12 OR #13 OR #24 OR #25

Appendix C: Risk stratification tools

Perioperative Care Risk Tools search strategy C

This literature search strategy was used for the following reviews;

- **Which validated preoperative risk stratification tools best identify increased risk of mortality and morbidity in adults who will be undergoing surgery?**

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018.{NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

C.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 4: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 30 May 2019	Exclusions
Embase (OVID)	1974 – 30 May 2019	Exclusions
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 5 of 12 CENTRAL to 2019 Issue 5 of 12 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 4 of 4	None

Medline (Ovid) search terms

88.	exp Preoperative Care/ or Preoperative Period/
89.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
90.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
91.	or/1-3
92.	limit 4 to English language
93.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
94.	5 not 6
95.	letter/
96.	editorial/
97.	news/
98.	exp historical article/
99.	Anecdotes as Topic/
100.	comment/
101.	case report/

102.	(letter or comment*).ti.
103.	or/8-15
104.	randomized controlled trial/ or random*.ti,ab.
105.	16 not 17
106.	animals/ not humans/
107.	exp Animals, Laboratory/
108.	exp Animal Experimentation/
109.	exp Models, Animal/
110.	exp Rodentia/
111.	(rat or rats or mouse or mice).ti.
112.	or/18-24
113.	7 not 25
114.	Decision Support Techniques/
115.	Health Status Indicators/
116.	(POSSUM or "Physiological and Operative Severity Score").ti,ab.
117.	SORT.ti,ab.
118.	"Surgical Outcome Risk Tool".ti,ab.
119.	((risk* or predict* or prognos*) adj2 (tool* or rule* or index* or indices or score* or scoring or scale* or model* or system* or algorithm* or stratif* or criteria or calculat*).ti,ab.
120.	or/27-32
121.	26 and 33

Embase (Ovid) search terms

83.	*preoperative care/ or *preoperative period/
84.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
85.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
86.	or/1-3
87.	limit 4 to English language
88.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
89.	5 not 6
90.	letter.pt. or letter/
91.	note.pt.
92.	editorial.pt.
93.	case report/ or case study/
94.	(letter or comment*).ti.
95.	or/8-12
96.	randomized controlled trial/ or random*.ti,ab.
97.	13 not 14
98.	animal/ not human/
99.	nonhuman/
100.	exp Animal Experiment/
101.	exp Experimental Animal/
102.	animal model/
103.	exp Rodent/

104.	(rat or rats or mouse or mice).ti.
105.	or/15-22
106.	7 not 23
107.	Health Status Indicator/
108.	(POSSUM or "Physiological and Operative Severity Score").ti,ab.
109.	SORT.ti,ab.
110.	"Surgical Outcome Risk Tool".ti,ab.
111.	((risk* or predict* or prognos*) adj2 (tool* or rule* or index* or indices or score* or scoring or scale* or model* or system* or algorithm* or stratif* or criteria or calculat*).ti,ab.
112.	or/25-29
113.	24 and 30

Cochrane Library (Wiley) search terms

#59.	MeSH descriptor: [Preoperative Care] this term only
#60.	MeSH descriptor: [Preoperative Period] this term only
#61.	MeSH descriptor: [Perioperative Nursing] this term only
#62.	(pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*):ti,ab
#63.	(before or prior or advance) near/3 (surg* or operat* or anaesthes* or anesthes*):ti,ab
#64.	(or #1-#5)
#65.	MeSH descriptor: [Decision Support Techniques] this term only
#66.	MeSH descriptor: [Health Status Indicators] this term only
#67.	(POSSUM or "Physiological and Operative Severity Score"):ti,ab
#68.	SORT:ti,ab
#69.	"Surgical Outcome Risk Tool":ti,ab
#70.	((risk* or predict* or prognos*) near/2 (tool* or rule* or index* or indices or score* or scoring or scale* or model* or system* or algorithm* or stratif* or criteria or calculat*).ti,ab
#71.	(or #7-#12)
#72.	#6 and #13

C.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to the perioperative care population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional health economics searches were run on Medline and Embase.

Table 5: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 30 May 2019	Exclusions Health economics studies
Embase	2014 – 30 May 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - Inception – 02 May 2019	None

Database	Dates searched	Search filter used
	NHSEED - Inception to 02 May 2019	

Medline (Ovid) search terms

60.	exp Preoperative Care/ or exp Perioperative Care/ or exp Perioperative Period/ or exp Perioperative Nursing/
61.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
62.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
63.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
64.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
65.	1 or 2 or 3 or 4 or 5
66.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
67.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
68.	7 or 8
69.	postoperative care/ or exp Postoperative Period/ or exp Perioperative nursing/
70.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
71.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
72.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
73.	10 or 11 or 12 or 13
74.	exp Preoperative Care/ or Preoperative Period/
75.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
76.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
77.	15 or 16 or 17
78.	6 or 9 or 14 or 18
79.	letter/
80.	editorial/
81.	news/
82.	exp historical article/
83.	Anecdotes as Topic/
84.	comment/
85.	case report/
86.	(letter or comment*).ti.
87.	or/20-27
88.	randomized controlled trial/ or random*.ti,ab.
89.	28 not 29
90.	animals/ not humans/
91.	exp Animals, Laboratory/
92.	exp Animal Experimentation/
93.	exp Models, Animal/

94.	exp Rodentia/
95.	(rat or rats or mouse or mice).ti.
96.	or/30-36
97.	19 not 37
98.	limit 38 to English language
99.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
100.	39 not 40
101.	economics/
102.	value of life/
103.	exp "costs and cost analysis"/
104.	exp Economics, Hospital/
105.	exp Economics, medical/
106.	Economics, nursing/
107.	economics, pharmaceutical/
108.	exp "Fees and Charges"/
109.	exp budgets/
110.	budget*.ti,ab.
111.	cost*.ti.
112.	(economic* or pharmaco?economic*).ti.
113.	(price* or pricing*).ti,ab.
114.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
115.	(financ* or fee or fees).ti,ab.
116.	(value adj2 (money or monetary)).ti,ab.
117.	or/42-57
118.	41 and 58

Embase (Ovid) search terms

55.	*preoperative period/ or *intraoperative period/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
56.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
57.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
58.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
59.	1 or 2 or 3 or 4
60.	peroperative care/ or exp peroperative care/ or exp perioperative nursing/
61.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
62.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
63.	6 or 7 or 8
64.	postoperative care/ or exp postoperative period/ or perioperative nursing/
65.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
66.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
67.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.

68.	10 or 11 or 12 or 13
69.	exp preoperative care/ or preoperative period/
70.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
71.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
72.	15 or 16 or 17
73.	5 or 9 or 14 or 18
74.	letter.pt. or letter/
75.	note.pt.
76.	editorial.pt.
77.	case report/ or case study/
78.	(letter or comment*).ti.
79.	or/20-24
80.	randomized controlled trial/ or random*.ti,ab.
81.	25 not 26
82.	animal/ not human/
83.	nonhuman/
84.	exp Animal Experiment/
85.	exp Experimental Animal/
86.	animal model/
87.	exp Rodent/
88.	(rat or rats or mouse or mice).ti.
89.	or/27-34
90.	19 not 35
91.	limit 36 to English language
92.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
93.	37 not 38
94.	health economics/
95.	exp economic evaluation/
96.	exp health care cost/
97.	exp fee/
98.	budget/
99.	funding/
100.	budget*.ti,ab.
101.	cost*.ti.
102.	(economic* or pharmaco?economic*).ti.
103.	(price* or pricing*).ti,ab.
104.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
105.	(financ* or fee or fees).ti,ab.
106.	(value adj2 (money or monetary)).ti,ab.
107.	or/40-52

108.	39 and 53
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NHS EED and HTA (CRD) search terms

#27.	MeSH DESCRIPTOR Preoperative Care EXPLODE ALL TREES
#28.	MeSH DESCRIPTOR Perioperative Care EXPLODE ALL TREES
#29.	MeSH DESCRIPTOR Perioperative Period EXPLODE ALL TREES
#30.	MeSH DESCRIPTOR Perioperative Nursing EXPLODE ALL TREES
#31.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#32.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*))
#33.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#34.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#35.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#36.	(* IN HTA)
#37.	(* IN NHSEED)
#38.	#9 AND #10
#39.	#9 AND #11
#40.	MeSH DESCRIPTOR Intraoperative Care EXPLODE ALL TREES
#41.	#1 OR #2 OR #3 OR #4 OR #14
#42.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*))
#43.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*))
#44.	((postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*))
#45.	((after adj3 (surg* or operat* or anaesthes* or anesthes*))
#46.	((post adj3 (operat* or anaesthes* or anesthes*))
#47.	((pre-operat* or preoperat* or pre-surg* or presurg*))
#48.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*))
#49.	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22
#50.	#10 AND #23
#51.	#11 AND #23
#52.	#12 OR #13 OR #24 OR #25

Appendix D: Pre-operative optimisation clinics

Perioperative Care Optimisation search strategy D

This literature search strategy was used for the following reviews;

- **In older people (>60 years) who will be undergoing surgery, what is the clinical and cost effectiveness of pre-operative optimisation clinics?**

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018. {NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

D.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 6: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies
Embase (OVID)	1974 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 5 of 12 CENTRAL to 2019 Issue 5 of 12 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 4 of 4	None

Medline (Ovid) search terms

122.	exp Preoperative Care/ or Preoperative Period/
123.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
124.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
125.	or/1-3
126.	limit 4 to English language
127.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
128.	5 not 6
129.	letter/
130.	editorial/

131.	news/
132.	exp historical article/
133.	Anecdotes as Topic/
134.	comment/
135.	case report/
136.	(letter or comment*).ti.
137.	or/8-15
138.	randomized controlled trial/ or random*.ti,ab.
139.	16 not 17
140.	animals/ not humans/
141.	exp Animals, Laboratory/
142.	exp Animal Experimentation/
143.	exp Models, Animal/
144.	exp Rodentia/
145.	(rat or rats or mouse or mice).ti.
146.	or/18-24
147.	7 not 25
148.	Geriatric Assessment/
149.	Health Services for the Aged/
150.	Geriatrics/
151.	(gemu or gemus).ti,ab.
152.	(frail* or sarcopeni* or elder* or senior* or gerontolog* or geriatric* or veteran* or (old* adj (people or person* or resident* or adult* or patient* or age*))).ti,ab.
153.	(Nurses Improving Care for Healthsystem Elders or modified Hospital Elder Life Program or mHELP or hospitali?ed elder life program*).ti,ab.
154.	(geriatrician* or anaesthetist* or anesthetist*).ti,ab.
155.	((optimis* or optimiz*) adj3 (clinic* or surg*)).ti,ab.
156.	or/27-34
157.	26 and 35
158.	randomized controlled trial.pt.
159.	controlled clinical trial.pt.
160.	randomi#ed.ab.
161.	placebo.ab.
162.	randomly.ab.
163.	clinical trials as topic.sh.
164.	trial.ti.
165.	or/37-43
166.	Meta-Analysis/
167.	Meta-Analysis as Topic/
168.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
169.	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
170.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
171.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
172.	(search* adj4 literature).ab.

173.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
174.	cochrane.jw.
175.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
176.	or/45-54
177.	36 and (44 or 55)

Embase (Ovid) search terms

114.	*preoperative care/ or *preoperative period/
115.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
116.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
117.	or/1-3
118.	limit 4 to English language
119.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
120.	5 not 6
121.	letter.pt. or letter/
122.	note.pt.
123.	editorial.pt.
124.	case report/ or case study/
125.	(letter or comment*).ti.
126.	or/8-12
127.	randomized controlled trial/ or random*.ti,ab.
128.	13 not 14
129.	animal/ not human/
130.	nonhuman/
131.	exp Animal Experiment/
132.	exp Experimental Animal/
133.	animal model/
134.	exp Rodent/
135.	(rat or rats or mouse or mice).ti.
136.	or/15-22
137.	7 not 23
138.	geriatric assessment/
139.	exp elderly care/
140.	exp geriatrics/
141.	(gemu or gemus).ti,ab.
142.	(frail* or sarcopeni* or elder* or senior* or gerontolog* or geriatric* or veteran* or (old* adj (people or person* or resident* or adult* or patient* or age*))).ti,ab.
143.	(Nurses Improving Care for Healthsystem Elders or modified Hospital Elder Life Program or mHELP or hospitali?ed elder life program*).ti,ab.
144.	(geriatrician* or anaesthetist* or anesthetist*).ti,ab.
145.	((optimis* or optimiz*) adj3 (clinic* or surg*)).ti,ab.
146.	or/25-32
147.	24 and 33
148.	random*.ti,ab.

149.	factorial*.ti,ab.
150.	(crossover* or cross over*).ti,ab.
151.	((doubl* or singl*) adj blind*).ti,ab.
152.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
153.	crossover procedure/
154.	single blind procedure/
155.	randomized controlled trial/
156.	double blind procedure/
157.	or/35-43
158.	systematic review/
159.	Meta-Analysis/
160.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
161.	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
162.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
163.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
164.	(search* adj4 literature).ab.
165.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
166.	cochrane.jw.
167.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
168.	or/45-54
169.	34 and (44 or 55)

Cochrane Library (Wiley) search terms

#73.	MeSH descriptor: [Preoperative Care] this term only
#74.	MeSH descriptor: [Preoperative Period] this term only
#75.	MeSH descriptor: [Perioperative Nursing] this term only
#76.	(pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*):ti,ab
#77.	(before or prior or advance) near/3 (surg* or operat* or anaesthes* or anesthes*):ti,ab
#78.	(or #1-#5)
#79.	MeSH descriptor: [Geriatric Assessment] explode all trees
#80.	MeSH descriptor: [Health Services for the Aged] explode all trees
#81.	MeSH descriptor: [Geriatrics] explode all trees
#82.	(gemu or gemus):ti,ab
#83.	(frail* or sarcopeni* or elder* or senior* or gerontolog* or geriatric* or veteran* or (old* near (people or person* or resident* or adult* or patient* or age*))) :ti,ab
#84.	(Nurses Improving Care for Healthsystem Elders or modified Hospital Elder Life Program or mHELP or hospitali?ed elder life program*):ti,ab
#85.	(geriatrician* or anaesthetist* or anesthetist*):ti,ab
#86.	((optimis* or optimiz*) near/3 (clinic* or surg*)):ti,ab
#87.	(or #7-#14)
#88.	#6 and #15

D.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to the perioperative care population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional health economics searches were run on Medline and Embase.

Table 7: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 30 May 2019	Exclusions Health economics studies
Embase	2014 – 30 May 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - Inception – 02 May 2019 NHSEED - Inception to 02 May 2019	None

Medline (Ovid) search terms

119.	exp Preoperative Care/ or exp Perioperative Care/ or exp Perioperative Period/ or exp Perioperative Nursing/
120.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
121.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
122.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
123.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
124.	1 or 2 or 3 or 4 or 5
125.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
126.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
127.	7 or 8
128.	postoperative care/ or exp Postoperative Period/ or exp Perioperative nursing/
129.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
130.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
131.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
132.	10 or 11 or 12 or 13
133.	exp Preoperative Care/ or Preoperative Period/
134.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
135.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
136.	15 or 16 or 17
137.	6 or 9 or 14 or 18
138.	letter/
139.	editorial/

140.	news/
141.	exp historical article/
142.	Anecdotes as Topic/
143.	comment/
144.	case report/
145.	(letter or comment*).ti.
146.	or/20-27
147.	randomized controlled trial/ or random*.ti,ab.
148.	28 not 29
149.	animals/ not humans/
150.	exp Animals, Laboratory/
151.	exp Animal Experimentation/
152.	exp Models, Animal/
153.	exp Rodentia/
154.	(rat or rats or mouse or mice).ti.
155.	or/30-36
156.	19 not 37
157.	limit 38 to English language
158.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
159.	39 not 40
160.	economics/
161.	value of life/
162.	exp "costs and cost analysis"/
163.	exp Economics, Hospital/
164.	exp Economics, medical/
165.	Economics, nursing/
166.	economics, pharmaceutical/
167.	exp "Fees and Charges"/
168.	exp budgets/
169.	budget*.ti,ab.
170.	cost*.ti.
171.	(economic* or pharmaco?economic*).ti.
172.	(price* or pricing*).ti,ab.
173.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
174.	(financ* or fee or fees).ti,ab.
175.	(value adj2 (money or monetary)).ti,ab.
176.	or/42-57
177.	41 and 58

Embase (Ovid) search terms

109.	*preoperative period/ or *intraoperative period/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
110.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
111.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or

	monitor* or recover* or medicine)).ti,ab.
112.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
113.	1 or 2 or 3 or 4
114.	peroperative care/ or exp peroperative care/ or exp perioperative nursing/
115.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
116.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
117.	6 or 7 or 8
118.	postoperative care/ or exp postoperative period/ or perioperative nursing/
119.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
120.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
121.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
122.	10 or 11 or 12 or 13
123.	exp preoperative care/ or preoperative period/
124.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
125.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
126.	15 or 16 or 17
127.	5 or 9 or 14 or 18
128.	letter.pt. or letter/
129.	note.pt.
130.	editorial.pt.
131.	case report/ or case study/
132.	(letter or comment*).ti.
133.	or/20-24
134.	randomized controlled trial/ or random*.ti,ab.
135.	25 not 26
136.	animal/ not human/
137.	nonhuman/
138.	exp Animal Experiment/
139.	exp Experimental Animal/
140.	animal model/
141.	exp Rodent/
142.	(rat or rats or mouse or mice).ti.
143.	or/27-34
144.	19 not 35
145.	limit 36 to English language
146.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
147.	37 not 38
148.	health economics/
149.	exp economic evaluation/

150.	exp health care cost/
151.	exp fee/
152.	budget/
153.	funding/
154.	budget*.ti,ab.
155.	cost*.ti.
156.	(economic* or pharmaco?economic*).ti.
157.	(price* or pricing*).ti,ab.
158.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
159.	(financ* or fee or fees).ti,ab.
160.	(value adj2 (money or monetary)).ti,ab.
161.	or/40-52
162.	39 and 53

NHS EED and HTA (CRD) search terms

#53.	MeSH DESCRIPTOR Preoperative Care EXPLODE ALL TREES
#54.	MeSH DESCRIPTOR Perioperative Care EXPLODE ALL TREES
#55.	MeSH DESCRIPTOR Perioperative Period EXPLODE ALL TREES
#56.	MeSH DESCRIPTOR Perioperative Nursing EXPLODE ALL TREES
#57.	(((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#58.	(((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)))
#59.	(((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#60.	(((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#61.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#62.	(* IN HTA)
#63.	(* IN NHSEED)
#64.	#9 AND #10
#65.	#9 AND #11
#66.	MeSH DESCRIPTOR Intraoperative Care EXPLODE ALL TREES
#67.	#1 OR #2 OR #3 OR #4 OR #14
#68.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*))
#69.	(((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)))
#70.	((postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*))
#71.	((after adj3 (surg* or operat* or anaesthes* or anesthes*)))
#72.	((post adj3 (operat* or anaesthes* or anesthes*)))
#73.	((pre-operat* or preoperat* or pre-surg* or presurg*))
#74.	(((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)))
#75.	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22
#76.	#10 AND #23

#77.	#11 AND #23
#78.	#12 OR #13 OR #24 OR #25

Appendix E: Management of anaemia

Perioperative Care Iron search strategy E

This literature search strategy was used for the following reviews:

- **What is the most clinically and cost effective oral iron supplementation strategy for the preoperative management of iron deficiency anaemia?**
- **What is the most clinically and cost effective management strategy for the preoperative management of iron deficiency anaemia?**

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018. {NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

E.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 8: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 30 May 2019	Exclusions
Embase (OVID)	1974 – 30 May 2019	Exclusions
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 5 of 12 CENTRAL to 2019 Issue 5 of 12 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 4 of 4	None

Medline (Ovid) search terms

178.	exp Preoperative Care/ or Preoperative Period/
179.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
180.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
181.	or/1-3
182.	limit 4 to English language
183.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
184.	5 not 6
185.	letter/
186.	editorial/
187.	news/
188.	exp historical article/
189.	Anecdotes as Topic/

190.	comment/
191.	case report/
192.	(letter or comment*).ti.
193.	or/8-15
194.	randomized controlled trial/ or random*.ti,ab.
195.	16 not 17
196.	animals/ not humans/
197.	exp Animals, Laboratory/
198.	exp Animal Experimentation/
199.	exp Models, Animal/
200.	exp Rodentia/
201.	(rat or rats or mouse or mice).ti.
202.	or/18-24
203.	7 not 25
204.	exp Anemia/
205.	(anemi* or anaemi*).ti,ab.
206.	27 or 28
207.	26 and 29

Embase (Ovid) search terms

170.	*preoperative care/ or *preoperative period/
171.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
172.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
173.	or/1-3
174.	limit 4 to English language
175.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
176.	5 not 6
177.	letter.pt. or letter/
178.	note.pt.
179.	editorial.pt.
180.	case report/ or case study/
181.	(letter or comment*).ti.
182.	or/8-12
183.	randomized controlled trial/ or random*.ti,ab.
184.	13 not 14
185.	animal/ not human/
186.	nonhuman/
187.	exp Animal Experiment/
188.	exp Experimental Animal/
189.	animal model/
190.	exp Rodent/
191.	(rat or rats or mouse or mice).ti.
192.	or/15-22
193.	7 not 23

194.	exp Anemia/
195.	(anemi* or anaemi*).ti,ab.
196.	25 or 26
197.	24 and 27

Cochrane Library (Wiley) search terms

#89.	MeSH descriptor: [Preoperative Care] this term only
#90.	MeSH descriptor: [Preoperative Period] this term only
#91.	MeSH descriptor: [Perioperative Nursing] this term only
#92.	(pre-operat* or preoperati* or pre-surg* or presurg*):ti,ab
#93.	(before or prior or advance or pre or prepar*) near/3 (surg* or operat* or anaesthes* or anesthes*):ti,ab
#94.	(or #1-#5)
#95.	MeSH descriptor: [Anemia] explode all trees
#96.	(anemi* or anaemi*).ti,ab
#97.	#7 or #8
#98.	#6 and #9

E.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to the perioperative care population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional health economics searches were run on Medline and Embase.

Table 9: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 30 May 2019	Exclusions Health economics studies
Embase	2014 – 30 May 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - Inception – 02 May 2019 NHSEED - Inception to 02 May 2019	None

Medline (Ovid) search terms

178.	exp Preoperative Care/ or exp Perioperative Care/ or exp Perioperative Period/ or exp Perioperative Nursing/
179.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
180.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
181.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
182.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.

183.	1 or 2 or 3 or 4 or 5
184.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
185.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
186.	7 or 8
187.	postoperative care/ or exp Postoperative Period/ or exp Perioperative nursing/
188.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
189.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
190.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
191.	10 or 11 or 12 or 13
192.	exp Preoperative Care/ or Preoperative Period/
193.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
194.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
195.	15 or 16 or 17
196.	6 or 9 or 14 or 18
197.	letter/
198.	editorial/
199.	news/
200.	exp historical article/
201.	Anecdotes as Topic/
202.	comment/
203.	case report/
204.	(letter or comment*).ti.
205.	or/20-27
206.	randomized controlled trial/ or random*.ti,ab.
207.	28 not 29
208.	animals/ not humans/
209.	exp Animals, Laboratory/
210.	exp Animal Experimentation/
211.	exp Models, Animal/
212.	exp Rodentia/
213.	(rat or rats or mouse or mice).ti.
214.	or/30-36
215.	19 not 37
216.	limit 38 to English language
217.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
218.	39 not 40
219.	economics/
220.	value of life/
221.	exp "costs and cost analysis"/
222.	exp Economics, Hospital/
223.	exp Economics, medical/
224.	Economics, nursing/
225.	economics, pharmaceutical/

226.	exp "Fees and Charges"/
227.	exp budgets/
228.	budget*.ti,ab.
229.	cost*.ti.
230.	(economic* or pharmaco?economic*).ti.
231.	(price* or pricing*).ti,ab.
232.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
233.	(financ* or fee or fees).ti,ab.
234.	(value adj2 (money or monetary)).ti,ab.
235.	or/42-57
236.	41 and 58

Embase (Ovid) search terms

163.	*preoperative period/ or *intraoperative period/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
164.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
165.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
166.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
167.	1 or 2 or 3 or 4
168.	peroperative care/ or exp peroperative care/ or exp perioperative nursing/
169.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
170.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
171.	6 or 7 or 8
172.	postoperative care/ or exp postoperative period/ or perioperative nursing/
173.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
174.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
175.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
176.	10 or 11 or 12 or 13
177.	exp preoperative care/ or preoperative period/
178.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
179.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
180.	15 or 16 or 17
181.	5 or 9 or 14 or 18
182.	letter.pt. or letter/
183.	note.pt.
184.	editorial.pt.
185.	case report/ or case study/
186.	(letter or comment*).ti.
187.	or/20-24

188.	randomized controlled trial/ or random*.ti,ab.
189.	25 not 26
190.	animal/ not human/
191.	nonhuman/
192.	exp Animal Experiment/
193.	exp Experimental Animal/
194.	animal model/
195.	exp Rodent/
196.	(rat or rats or mouse or mice).ti.
197.	or/27-34
198.	19 not 35
199.	limit 36 to English language
200.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
201.	37 not 38
202.	health economics/
203.	exp economic evaluation/
204.	exp health care cost/
205.	exp fee/
206.	budget/
207.	funding/
208.	budget*.ti,ab.
209.	cost*.ti.
210.	(economic* or pharmaco?economic*).ti.
211.	(price* or pricing*).ti,ab.
212.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
213.	(financ* or fee or fees).ti,ab.
214.	(value adj2 (money or monetary)).ti,ab.
215.	or/40-52
216.	39 and 53

NHS EED and HTA (CRD) search terms

#79.	MeSH DESCRIPTOR Preoperative Care EXPLODE ALL TREES
#80.	MeSH DESCRIPTOR Perioperative Care EXPLODE ALL TREES
#81.	MeSH DESCRIPTOR Perioperative Period EXPLODE ALL TREES
#82.	MeSH DESCRIPTOR Perioperative Nursing EXPLODE ALL TREES
#83.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#84.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*))
#85.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#86.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))

#87.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#88.	(* IN HTA)
#89.	(* IN NHSEED)
#90.	#9 AND #10
#91.	#9 AND #11
#92.	MeSH DESCRIPTOR Intraoperative Care EXPLODE ALL TREES
#93.	#1 OR #2 OR #3 OR #4 OR #14
#94.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*))
#95.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*))
#96.	((postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*))
#97.	((after adj3 (surg* or operat* or anaesthes* or anesthes*))
#98.	((post adj3 (operat* or anaesthes* or anesthes*))
#99.	((pre-operat* or preoperat* or pre-surg* or presurg*))
#100.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*))
#101.	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22
#102.	#10 AND #23
#103.	#11 AND #23
#104.	#12 OR #13 OR #24 OR #25

Appendix F:Anticoagulants

Perioperative Care Anticoagulant search strategy F

This literature search strategy was used for the following reviews;

- **What is the most clinically and cost effective strategy for managing anticoagulant medication?**

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018.{NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

F.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 10: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies Observational studies
Embase (OVID)	1974 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies Observational studies
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 5 of 12 CENTRAL to 2019 Issue 5 of 12 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 4 of 4	None

Medline (Ovid) search terms

208.	exp Preoperative Care/ or Preoperative Period/
209.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
210.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
211.	or/1-3
212.	limit 4 to English language
213.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
214.	5 not 6
215.	letter/
216.	editorial/

217.	news/
218.	exp historical article/
219.	Anecdotes as Topic/
220.	comment/
221.	case report/
222.	(letter or comment*).ti.
223.	or/8-15
224.	randomized controlled trial/ or random*.ti,ab.
225.	16 not 17
226.	animals/ not humans/
227.	exp Animals, Laboratory/
228.	exp Animal Experimentation/
229.	exp Models, Animal/
230.	exp Rodentia/
231.	(rat or rats or mouse or mice).ti.
232.	or/18-24
233.	7 not 25
234.	anticoagulants/ or acenocoumarol/ or coumarins/ or phenindione/ or phenprocoumon/ or warfarin/
235.	warfarin*.ti,ab.
236.	(coumarin* or coumadin or dicoumarol or acenocoumarol or phenprocoumon or phenidione or (vitamin k adj2 antagonist*).ti,ab.
237.	or/27-29
238.	26 and 30
239.	randomized controlled trial.pt.
240.	controlled clinical trial.pt.
241.	randomi#ed.ab.
242.	placebo.ab.
243.	randomly.ab.
244.	clinical trials as topic.sh.
245.	trial.ti.
246.	or/32-38
247.	Meta-Analysis/
248.	Meta-Analysis as Topic/
249.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
250.	((systematic* or evidence*) adj2 (review* or overview*).ti,ab.
251.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
252.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
253.	(search* adj4 literature).ab.
254.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
255.	cochrane.jw.
256.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
257.	or/40-49
258.	Epidemiologic studies/

259.	Observational study/
260.	exp Cohort studies/
261.	(cohort adj (study or studies or analys* or data)).ti,ab.
262.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.
263.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
264.	Controlled Before-After Studies/
265.	Historically Controlled Study/
266.	Interrupted Time Series Analysis/
267.	(before adj2 after adj2 (study or studies or data)).ti,ab.
268.	or/51-60
269.	exp case control study/
270.	case control*.ti,ab.
271.	or/62-63
272.	61 or 64
273.	Cross-sectional studies/
274.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
275.	or/66-67
276.	61 or 68
277.	61 or 64 or 68
278.	39 or 50 or 70
279.	31 and 71
280.	31 and (39 or 50 or 72)

Embase (Ovid) search terms

198.	*preoperative care/ or *preoperative period/
199.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
200.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
201.	or/1-3
202.	limit 4 to English language
203.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
204.	5 not 6
205.	letter.pt. or letter/
206.	note.pt.
207.	editorial.pt.
208.	case report/ or case study/
209.	(letter or comment*).ti.
210.	or/8-12
211.	randomized controlled trial/ or random*.ti,ab.
212.	13 not 14
213.	animal/ not human/
214.	nonhuman/
215.	exp Animal Experiment/
216.	exp Experimental Animal/

217.	animal model/
218.	exp Rodent/
219.	(rat or rats or mouse or mice).ti.
220.	or/15-22
221.	7 not 23
222.	*anticoagulant agent/ or *acenocoumarol/ or *coumarin derivative/ or *phenindione/ or *phenprocoumon/ or *warfarin/
223.	warfarin*.ti,ab.
224.	(coumarin* or coumadin or dicoumarol or acenocoumarol or phenprocoumon or phenidione or (vitamin k adj2 antagonist*).ti,ab.
225.	or/25-27
226.	24 and 28
227.	random*.ti,ab.
228.	factorial*.ti,ab.
229.	(crossover* or cross over*).ti,ab.
230.	((doubl* or singl*) adj blind*).ti,ab.
231.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
232.	crossover procedure/
233.	single blind procedure/
234.	randomized controlled trial/
235.	double blind procedure/
236.	or/30-38
237.	systematic review/
238.	Meta-Analysis/
239.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
240.	((systematic* or evidence*) adj2 (review* or overview*).ti,ab.
241.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
242.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
243.	(search* adj4 literature).ab.
244.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
245.	cochrane.jw.
246.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
247.	or/40-49
248.	Epidemiologic studies/
249.	Observational study/
250.	exp Cohort studies/
251.	(cohort adj (study or studies or analys* or data)).ti,ab.
252.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.
253.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
254.	Controlled Before-After Studies/
255.	Historically Controlled Study/
256.	Interrupted Time Series Analysis/

257.	(before adj2 after adj2 (study or studies or data)).ti,ab.
258.	or/51-60
259.	exp case control study/
260.	case control*.ti,ab.
261.	or/62-63
262.	61 or 64
263.	Cross-sectional studies/
264.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
265.	or/66-67
266.	61 or 68
267.	61 or 64 or 68
268.	39 or 50 or 70
269.	29 and 71
270.	29 and (39 or 50 or 72)

Cochrane Library (Wiley) search terms

#99.	MeSH descriptor: [Preoperative Care] this term only
#100.	MeSH descriptor: [Preoperative Period] this term only
#101.	(pre-operat* or preoperati*or pre-surg* or presurg*):ti,ab
#102.	(before or prior or advance or pre or prepar*) near/3 (surg* or operat* or anaesthes* or anesthes*):ti,ab
#103.	(or #1-#4)
#104.	MeSH descriptor: [Anticoagulants] this term only
#105.	MeSH descriptor: [Acenocoumarol] this term only
#106.	MeSH descriptor: [Coumarins] this term only
#107.	MeSH descriptor: [Phenindione] this term only
#108.	MeSH descriptor: [Phenprocoumon] this term only
#109.	MeSH descriptor: [Warfarin] this term only
#110.	(or #6-#11)
#111.	warfarin*:ti,ab
#112.	(coumarin* or coumadin or dicoumarol or acenocoumarol or phenprocoumon or phenidione or (vitamin k adj2 antagonist*)):ti,ab
#113.	#12 or #13 or #14
#114.	#5 and #15

F.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to the perioperative care population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional health economics searches were run on Medline and Embase.

Table 11: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 30 May 2019	Exclusions

Database	Dates searched	Search filter used
		Health economics studies
Embase	2014 – 30 May 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - Inception – 02 May 2019 NHSEED - Inception to 02 May 2019	None

Medline (Ovid) search terms

237.	exp Preoperative Care/ or exp Perioperative Care/ or exp Perioperative Period/ or exp Perioperative Nursing/
238.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
239.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
240.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
241.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
242.	1 or 2 or 3 or 4 or 5
243.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
244.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
245.	7 or 8
246.	postoperative care/ or exp Postoperative Period/ or exp Perioperative nursing/
247.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
248.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
249.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
250.	10 or 11 or 12 or 13
251.	exp Preoperative Care/ or Preoperative Period/
252.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
253.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
254.	15 or 16 or 17
255.	6 or 9 or 14 or 18
256.	letter/
257.	editorial/
258.	news/
259.	exp historical article/
260.	Anecdotes as Topic/
261.	comment/
262.	case report/
263.	(letter or comment*).ti.
264.	or/20-27
265.	randomized controlled trial/ or random*.ti,ab.

266.	28 not 29
267.	animals/ not humans/
268.	exp Animals, Laboratory/
269.	exp Animal Experimentation/
270.	exp Models, Animal/
271.	exp Rodentia/
272.	(rat or rats or mouse or mice).ti.
273.	or/30-36
274.	19 not 37
275.	limit 38 to English language
276.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
277.	39 not 40
278.	economics/
279.	value of life/
280.	exp "costs and cost analysis"/
281.	exp Economics, Hospital/
282.	exp Economics, medical/
283.	Economics, nursing/
284.	economics, pharmaceutical/
285.	exp "Fees and Charges"/
286.	exp budgets/
287.	budget*.ti,ab.
288.	cost*.ti.
289.	(economic* or pharmaco?economic*).ti.
290.	(price* or pricing*).ti,ab.
291.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
292.	(financ* or fee or fees).ti,ab.
293.	(value adj2 (money or monetary)).ti,ab.
294.	or/42-57
295.	41 and 58

Embase (Ovid) search terms

217.	*preoperative period/ or *intraoperative period/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
218.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
219.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
220.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
221.	1 or 2 or 3 or 4
222.	peroperative care/ or exp peroperative care/ or exp perioperative nursing/
223.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
224.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.

225.	6 or 7 or 8
226.	postoperative care/ or exp postoperative period/ or perioperative nursing/
227.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
228.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
229.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
230.	10 or 11 or 12 or 13
231.	exp preoperative care/ or preoperative period/
232.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
233.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
234.	15 or 16 or 17
235.	5 or 9 or 14 or 18
236.	letter.pt. or letter/
237.	note.pt.
238.	editorial.pt.
239.	case report/ or case study/
240.	(letter or comment*).ti.
241.	or/20-24
242.	randomized controlled trial/ or random*.ti,ab.
243.	25 not 26
244.	animal/ not human/
245.	nonhuman/
246.	exp Animal Experiment/
247.	exp Experimental Animal/
248.	animal model/
249.	exp Rodent/
250.	(rat or rats or mouse or mice).ti.
251.	or/27-34
252.	19 not 35
253.	limit 36 to English language
254.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
255.	37 not 38
256.	health economics/
257.	exp economic evaluation/
258.	exp health care cost/
259.	exp fee/
260.	budget/
261.	funding/
262.	budget*.ti,ab.
263.	cost*.ti.
264.	(economic* or pharmaco?economic*).ti.

265.	(price* or pricing*).ti,ab.
266.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
267.	(financ* or fee or fees).ti,ab.
268.	(value adj2 (money or monetary)).ti,ab.
269.	or/40-52
270.	39 and 53

NHS EED and HTA (CRD) search terms

#105.	MeSH DESCRIPTOR Preoperative Care EXPLODE ALL TREES
#106.	MeSH DESCRIPTOR Perioperative Care EXPLODE ALL TREES
#107.	MeSH DESCRIPTOR Perioperative Period EXPLODE ALL TREES
#108.	MeSH DESCRIPTOR Perioperative Nursing EXPLODE ALL TREES
#109.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#110.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*))
#111.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#112.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#113.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#114.	(* IN HTA)
#115.	(* IN NHSEED)
#116.	#9 AND #10
#117.	#9 AND #11
#118.	MeSH DESCRIPTOR Intraoperative Care EXPLODE ALL TREES
#119.	#1 OR #2 OR #3 OR #4 OR #14
#120.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*))
#121.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*))
#122.	((postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*))
#123.	((after adj3 (surg* or operat* or anaesthes* or anesthes*))
#124.	((post adj3 (operat* or anaesthes* or anesthes*))
#125.	((pre-operat* or preoperat* or pre-surg* or presurg*))
#126.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*))
#127.	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22
#128.	#10 AND #23
#129.	#11 AND #23
#130.	#12 OR #13 OR #24 OR #25

Appendix G: Nutritional screening

Perioperative Care Nutritional Screening search strategy G

This literature search strategy was used for the following reviews;

- **Does nutritional screening in preoperative assessment improve surgical outcome for adults?**

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018.{NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

G.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 12: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies
Embase (OVID)	1974 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 5 of 12 CENTRAL to 2019 Issue 5 of 12 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 4 of 4	None
Epistemonikos (Epistemonikos Foundation)	Inception - 10 May 2019	Systematic review studies

Medline (Ovid) search terms

281.	exp Preoperative Care/ or Preoperative Period/
282.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
283.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
284.	or/1-3
285.	limit 4 to English language
286.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
287.	5 not 6
288.	letter/
289.	editorial/

290.	news/
291.	exp historical article/
292.	Anecdotes as Topic/
293.	comment/
294.	case report/
295.	(letter or comment*).ti.
296.	or/8-15
297.	randomized controlled trial/ or random*.ti,ab.
298.	16 not 17
299.	animals/ not humans/
300.	exp Animals, Laboratory/
301.	exp Animal Experimentation/
302.	exp Models, Animal/
303.	exp Rodentia/
304.	(rat or rats or mouse or mice).ti.
305.	or/18-24
306.	7 not 25
307.	nutrition assessment/
308.	Nutritional Status/
309.	Serum Albumin/
310.	body mass index/
311.	((nutrition* or malnutrition* or malnourish* or undernourish* or under nourish* or undernutrition*) adj5 (screen* or assess* or status or exam* or index* or indices or survey* or questionnaire* or marker* or tool*)).ti,ab.
312.	(albumin* or prealbumin*).ti,ab.
313.	((body mass index or Quetelet*or BMI) adj6 (screen* or assess* or status or exam*)).ti,ab.
314.	Decision Support Techniques/
315.	((score* or scoring or stratif*) adj3 (system* or schem* or tool*)).ti,ab.
316.	or/27-35
317.	26 and 36
318.	randomized controlled trial.pt.
319.	controlled clinical trial.pt.
320.	randomi#ed.ab.
321.	placebo.ab.
322.	randomly.ab.
323.	clinical trials as topic.sh.
324.	trial.ti.
325.	or/38-44
326.	Meta-Analysis/
327.	Meta-Analysis as Topic/
328.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
329.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
330.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
331.	(search strategy or search criteria or systematic search or study selection or data

	extraction).ab.
332.	(search* adj4 literature).ab.
333.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
334.	cochrane.jw.
335.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
336.	or/46-55
337.	37 and (45 or 56)

Embase (Ovid) search terms

271.	*preoperative care/ or *preoperative period/
272.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
273.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
274.	or/1-3
275.	limit 4 to English language
276.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
277.	5 not 6
278.	letter.pt. or letter/
279.	note.pt.
280.	editorial.pt.
281.	case report/ or case study/
282.	(letter or comment*).ti.
283.	or/8-12
284.	randomized controlled trial/ or random*.ti,ab.
285.	13 not 14
286.	animal/ not human/
287.	nonhuman/
288.	exp Animal Experiment/
289.	exp Experimental Animal/
290.	animal model/
291.	exp Rodent/
292.	(rat or rats or mouse or mice).ti.
293.	or/15-22
294.	7 not 23
295.	nutritional assessment/
296.	nutritional status/
297.	serum albumin/
298.	*body mass/
299.	((nutrition* or malnutrition* or malnourish* or undernourish* or under nourish* or undernutrition*) adj5 (screen* or assess* or status or exam* or index* or indices or survey* or questionnaire* or marker* or tool*)).ti,ab.
300.	(albumin* or prealbumin*).ti,ab.
301.	((body mass index or Quetelet* or BMI) adj6 (screen* or assess* or status or exam*)).ti,ab.
302.	decision support system/
303.	((score* or scoring or stratif*) adj3 (system* or schem* or tool*)).ti,ab.

304.	or/25-33
305.	24 and 34
306.	random*.ti,ab.
307.	factorial*.ti,ab.
308.	(crossover* or cross over*).ti,ab.
309.	((doubl* or singl*) adj blind*).ti,ab.
310.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
311.	crossover procedure/
312.	single blind procedure/
313.	randomized controlled trial/
314.	double blind procedure/
315.	or/36-44
316.	systematic review/
317.	Meta-Analysis/
318.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
319.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
320.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
321.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
322.	(search* adj4 literature).ab.
323.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
324.	cochrane.jw.
325.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
326.	or/46-55
327.	35 and (45 or 56)

Cochrane Library (Wiley) search terms

#115.	MeSH descriptor: [Preoperative Care] this term only
#116.	MeSH descriptor: [Preoperative Period] this term only
#117.	MeSH descriptor: [Perioperative Nursing] this term only
#118.	(pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*):ti,ab
#119.	(before or prior or advance) near/3 (surg* or operat* or anaesthes* or anesthes*):ti,ab
#120.	(or #1-#5)
#121.	MeSH descriptor: [Nutrition Assessment] this term only
#122.	MeSH descriptor: [Nutritional Status] this term only
#123.	MeSH descriptor: [Serum Albumin] this term only
#124.	MeSH descriptor: [Body Mass Index] this term only
#125.	((nutrition* or malnutrition* or malnourish* or undernourish* or under nourish* or undernutrition*) near/5 (screen* or assess* or status or exam* or index* or indices or survey* or questionnaire* or marker* or tool*)):ti,ab
#126.	(albumin* or prealbumin*):ti,ab
#127.	((body mass index or Quetelet*or BMI) near/6 (screen* or assess* or status or exam*)):ti,ab
#128.	MeSH descriptor: [Decision Support Techniques] this term only
#129.	((score* or scoring or stratif*) near/3 (system* or schem* or tool*)):ti,ab

#130.	(or #7-#15)
#131.	#6 and #16

Epistemonikos (Epistemonikos Foundation) search terms

1.	(advanced_title_en:((pre-operative* OR preoperative* OR preop* OR pre-op* OR pre-surg* OR presurg*) AND (nutrition* OR malnutrition* OR malnourish* OR undernourish* OR under nourish* OR undernutrition* OR MNA OR MUST)) OR advanced_abstract_en:((pre-operative* OR preoperative* OR preop* OR pre-op* OR pre-surg* OR presurg*) AND (nutrition* OR malnutrition* OR malnourish* OR undernourish* OR under nourish* OR undernutrition* OR MNA OR MUST))) [Filters: classification=systematic-review, protocol=no]
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G.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to the perioperative care population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional health economics searches were run on Medline and Embase.

Table 13: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 30 May 2019	Exclusions Health economics studies
Embase	2014 – 30 May 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - Inception – 02 May 2019 NHSEED - Inception to 02 May 2019	None

Medline (Ovid) search terms

296.	exp Preoperative Care/ or exp Perioperative Care/ or exp Perioperative Period/ or exp Perioperative Nursing/
297.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
298.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
299.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
300.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
301.	1 or 2 or 3 or 4 or 5
302.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
303.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
304.	7 or 8
305.	postoperative care/ or exp Postoperative Period/ or exp Perioperative nursing/
306.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.

307.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
308.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
309.	10 or 11 or 12 or 13
310.	exp Preoperative Care/ or Preoperative Period/
311.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
312.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
313.	15 or 16 or 17
314.	6 or 9 or 14 or 18
315.	letter/
316.	editorial/
317.	news/
318.	exp historical article/
319.	Anecdotes as Topic/
320.	comment/
321.	case report/
322.	(letter or comment*).ti.
323.	or/20-27
324.	randomized controlled trial/ or random*.ti,ab.
325.	28 not 29
326.	animals/ not humans/
327.	exp Animals, Laboratory/
328.	exp Animal Experimentation/
329.	exp Models, Animal/
330.	exp Rodentia/
331.	(rat or rats or mouse or mice).ti.
332.	or/30-36
333.	19 not 37
334.	limit 38 to English language
335.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
336.	39 not 40
337.	economics/
338.	value of life/
339.	exp "costs and cost analysis"/
340.	exp Economics, Hospital/
341.	exp Economics, medical/
342.	Economics, nursing/
343.	economics, pharmaceutical/
344.	exp "Fees and Charges"/
345.	exp budgets/
346.	budget*.ti,ab.
347.	cost*.ti.
348.	(economic* or pharmaco?economic*).ti.
349.	(price* or pricing*).ti,ab.
350.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.

351.	(financ* or fee or fees).ti,ab.
352.	(value adj2 (money or monetary)).ti,ab.
353.	or/42-57
354.	41 and 58

Embase (Ovid) search terms

271.	*preoperative period/ or *intraoperative period/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
272.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
273.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
274.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
275.	1 or 2 or 3 or 4
276.	peroperative care/ or exp peroperative care/ or exp perioperative nursing/
277.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
278.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
279.	6 or 7 or 8
280.	postoperative care/ or exp postoperative period/ or perioperative nursing/
281.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
282.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
283.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
284.	10 or 11 or 12 or 13
285.	exp preoperative care/ or preoperative period/
286.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
287.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
288.	15 or 16 or 17
289.	5 or 9 or 14 or 18
290.	letter.pt. or letter/
291.	note.pt.
292.	editorial.pt.
293.	case report/ or case study/
294.	(letter or comment*).ti.
295.	or/20-24
296.	randomized controlled trial/ or random*.ti,ab.
297.	25 not 26
298.	animal/ not human/
299.	nonhuman/
300.	exp Animal Experiment/
301.	exp Experimental Animal/
302.	animal model/

303.	exp Rodent/
304.	(rat or rats or mouse or mice).ti.
305.	or/27-34
306.	19 not 35
307.	limit 36 to English language
308.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
309.	37 not 38
310.	health economics/
311.	exp economic evaluation/
312.	exp health care cost/
313.	exp fee/
314.	budget/
315.	funding/
316.	budget*.ti,ab.
317.	cost*.ti.
318.	(economic* or pharmaco?economic*).ti.
319.	(price* or pricing*).ti,ab.
320.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
321.	(financ* or fee or fees).ti,ab.
322.	(value adj2 (money or monetary)).ti,ab.
323.	or/40-52
324.	39 and 53

NHS EED and HTA (CRD) search terms

#131.	MeSH DESCRIPTOR Preoperative Care EXPLODE ALL TREES
#132.	MeSH DESCRIPTOR Perioperative Care EXPLODE ALL TREES
#133.	MeSH DESCRIPTOR Perioperative Period EXPLODE ALL TREES
#134.	MeSH DESCRIPTOR Perioperative Nursing EXPLODE ALL TREES
#135.	((((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#136.	((((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)))
#137.	((((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#138.	((((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#139.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#140.	(* IN HTA)
#141.	(* IN NHSEED)
#142.	#9 AND #10
#143.	#9 AND #11
#144.	MeSH DESCRIPTOR Intraoperative Care EXPLODE ALL TREES
#145.	#1 OR #2 OR #3 OR #4 OR #14

#146.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*))
#147.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*))
#148.	((postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*))
#149.	((after adj3 (surg* or operat* or anaesthes* or anesthes*))
#150.	((post adj3 (operat* or anaesthes* or anesthes*))
#151.	((pre-operat* or preoperat* or pre-surg* or presurg*))
#152.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*))
#153.	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22
#154.	#10 AND #23
#155.	#11 AND #23
#156.	#12 OR #13 OR #24 OR #25

Appendix H: Fasting

Perioperative Care Fasting search strategy H

This literature search strategy was used for the following reviews;

- **What is the most clinically and cost effective preoperative fasting strategy for adults?**

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018.{NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

H.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 14: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 31 May 2019	Exclusions Randomised controlled trials Systematic review studies
Embase (OVID)	1974 – 31 May 2019	Exclusions Randomised controlled trials Systematic review studies
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 5 of 12 CENTRAL to 2019 Issue 5 of 12 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 4 of 4	None
Epistemonikos (Epistemonikos Foundation)	Inception - 19 February 2019	Systematic review studies

Medline (Ovid) search terms

338.	exp Preoperative Care/ or Preoperative Period/
339.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
340.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
341.	or/1-3
342.	limit 4 to English language
343.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
344.	5 not 6
345.	letter/
346.	editorial/

347.	news/
348.	exp historical article/
349.	Anecdotes as Topic/
350.	comment/
351.	case report/
352.	(letter or comment*).ti.
353.	or/8-15
354.	randomized controlled trial/ or random*.ti,ab.
355.	16 not 17
356.	animals/ not humans/
357.	exp Animals, Laboratory/
358.	exp Animal Experimentation/
359.	exp Models, Animal/
360.	exp Rodentia/
361.	(rat or rats or mouse or mice).ti.
362.	or/18-24
363.	7 not 25
364.	Fasting/ or Food deprivation/
365.	Water deprivation/
366.	hunger/ or thirst/
367.	(meal* or solid or solids or drink* or water or liquid* or milk or beverage* or hydrat* or eat* or ate or food* or feed* or carbohydrate* or fasting or fasted or starv* or hung* or thirst*).ti,ab.
368.	((fluid* or oral* or consume or consumption) adj4 (restrict* or limit* or stop* or abstinence or abstain* or deprive* or deprivation or lack* or fast* or starve* or hung* or thirst* or intake or intaking or ingest*).ti,ab.
369.	("nil by mouth" or "nothing by mouth" or NBM or "nil per os" or "nihil per os" or "nulla per os" or "non per os" or NPO).ti,ab.
370.	or/27-32
371.	26 and 33
372.	randomized controlled trial.pt.
373.	controlled clinical trial.pt.
374.	randomi#ed.ab.
375.	placebo.ab.
376.	randomly.ab.
377.	clinical trials as topic.sh.
378.	trial.ti.
379.	or/35-41
380.	Meta-Analysis/
381.	Meta-Analysis as Topic/
382.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
383.	((systematic* or evidence*) adj3 (review* or overview*).ti,ab.
384.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
385.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
386.	(search* adj4 literature).ab.

387.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
388.	cochrane.jw.
389.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
390.	or/43-52
391.	34 and (42 or 53)

Embase (Ovid) search terms

328.	*preoperative care/ or *preoperative period/
329.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
330.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*).ti,ab.
331.	or/1-3
332.	limit 4 to English language
333.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
334.	5 not 6
335.	letter.pt. or letter/
336.	note.pt.
337.	editorial.pt.
338.	case report/ or case study/
339.	(letter or comment*).ti.
340.	or/8-12
341.	randomized controlled trial/ or random*.ti,ab.
342.	13 not 14
343.	animal/ not human/
344.	nonhuman/
345.	exp Animal Experiment/
346.	exp Experimental Animal/
347.	animal model/
348.	exp Rodent/
349.	(rat or rats or mouse or mice).ti.
350.	or/15-22
351.	7 not 23
352.	*diet restriction/ or food deprivation/
353.	water deprivation/
354.	*hunger/ or thirst/
355.	(meal* or solid or solids or drink* or water or liquid* or milk or beverage* or hydrat* or eat* or ate or food* or feed* or carbohydrate* or fasting or fasted or starv* or hung* or thirst*).ti,ab.
356.	((fluid* or oral* or consume or consumption) adj4 (restrict* or limit* or stop* or abstinence or abstain* or deprive* or deprivation or lack* or fast* or starve* or hung* or thirst* or intake or intaking or ingest*).ti,ab.
357.	("nil by mouth" or "nothing by mouth" or NBM or "nil per os" or "nihil per os" or "nulla per os" or "non per os" or NPO).ti,ab.
358.	or/25-30
359.	24 and 31
360.	random*.ti,ab.

361.	factorial*.ti,ab.
362.	(crossover* or cross over*).ti,ab.
363.	((doubl* or singl*) adj blind*).ti,ab.
364.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
365.	crossover procedure/
366.	single blind procedure/
367.	randomized controlled trial/
368.	double blind procedure/
369.	or/33-41
370.	systematic review/
371.	Meta-Analysis/
372.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
373.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
374.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
375.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
376.	(search* adj4 literature).ab.
377.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
378.	cochrane.jw.
379.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
380.	or/43-52
381.	32 and (42 or 53)

Cochrane Library (Wiley) search terms

#132.	MeSH descriptor: [Preoperative Care] this term only
#133.	MeSH descriptor: [Preoperative Period] this term only
#134.	MeSH descriptor: [Perioperative Nursing] this term only
#135.	(pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*):ti,ab
#136.	(before or prior or advance) near/3 (surg* or operat* or anaesthes* or anesthes*):ti,ab
#137.	(or #1-#5)
#138.	MeSH descriptor: [Fasting] this term only
#139.	MeSH descriptor: [Food Deprivation] this term only
#140.	MeSH descriptor: [Water Deprivation] this term only
#141.	MeSH descriptor: [Hunger] this term only
#142.	MeSH descriptor: [Thirst] this term only
#143.	(meal* or solid or solids or drink* or water or liquid* or milk or beverage* or hydrat* or eat* or ate or food* or feed* or carbohydrate* or fasting or fasted or starv* or hung* or thirst*):ti,ab
#144.	((fluid* or oral* or consume or consumption) near/4 (restrict* or limit* or stop* or abstinence or abstain* or deprive* or deprivation or lack* or fast* or starve* or hung* or thirst* or intake or intaking or ingest*)):ti,ab
#145.	("nil by mouth" or "nothing by mouth" or NBM or "nil per os" or "nihil per os" or "nulla per os" or "non per os" or NPO):ti,ab
#146.	(or #7-#14)
#147.	#6 and #15

Epistemonikos (Epistemonikos Foundation) search terms

1.	(pre-operative* OR preoperative* OR preop* OR pre-op* OR pre-surg* OR presurg*) AND (fasting OR fasted OR starv* OR hung* OR thirst* OR "nil by mouth" OR "nothing by mouth" OR NBM OR "nil per os" OR "nihil per os" OR "nulla per os" OR "non per os" OR NPO) [Filters: protocol=no, classification=systematic-review]
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H.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to the perioperative care population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional health economics searches were run on Medline and Embase.

Table 15: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 30 May 2019	Exclusions Health economics studies
Embase	2014 – 30 May 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - Inception – 02 May 2019 NHSEED - Inception to 02 May 2019	None

Medline (Ovid) search terms

355.	exp Preoperative Care/ or exp Perioperative Care/ or exp Perioperative Period/ or exp Perioperative Nursing/
356.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
357.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
358.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
359.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
360.	1 or 2 or 3 or 4 or 5
361.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
362.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
363.	7 or 8
364.	postoperative care/ or exp Postoperative Period/ or exp Perioperative nursing/
365.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
366.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
367.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
368.	10 or 11 or 12 or 13
369.	exp Preoperative Care/ or Preoperative Period/
370.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
371.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or

	anesthes*).ti,ab.
372.	15 or 16 or 17
373.	6 or 9 or 14 or 18
374.	letter/
375.	editorial/
376.	news/
377.	exp historical article/
378.	Anecdotes as Topic/
379.	comment/
380.	case report/
381.	(letter or comment*).ti.
382.	or/20-27
383.	randomized controlled trial/ or random*.ti,ab.
384.	28 not 29
385.	animals/ not humans/
386.	exp Animals, Laboratory/
387.	exp Animal Experimentation/
388.	exp Models, Animal/
389.	exp Rodentia/
390.	(rat or rats or mouse or mice).ti.
391.	or/30-36
392.	19 not 37
393.	limit 38 to English language
394.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
395.	39 not 40
396.	economics/
397.	value of life/
398.	exp "costs and cost analysis"/
399.	exp Economics, Hospital/
400.	exp Economics, medical/
401.	Economics, nursing/
402.	economics, pharmaceutical/
403.	exp "Fees and Charges"/
404.	exp budgets/
405.	budget*.ti,ab.
406.	cost*.ti.
407.	(economic* or pharmaco?economic*).ti.
408.	(price* or pricing*).ti,ab.
409.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
410.	(financ* or fee or fees).ti,ab.
411.	(value adj2 (money or monetary)).ti,ab.
412.	or/42-57
413.	41 and 58

Embase (Ovid) search terms

325.	*preoperative period/ or *intraoperative period/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
326.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
327.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
328.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
329.	1 or 2 or 3 or 4
330.	peroperative care/ or exp peroperative care/ or exp perioperative nursing/
331.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
332.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
333.	6 or 7 or 8
334.	postoperative care/ or exp postoperative period/ or perioperative nursing/
335.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
336.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
337.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
338.	10 or 11 or 12 or 13
339.	exp preoperative care/ or preoperative period/
340.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
341.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
342.	15 or 16 or 17
343.	5 or 9 or 14 or 18
344.	letter.pt. or letter/
345.	note.pt.
346.	editorial.pt.
347.	case report/ or case study/
348.	(letter or comment*).ti.
349.	or/20-24
350.	randomized controlled trial/ or random*.ti,ab.
351.	25 not 26
352.	animal/ not human/
353.	nonhuman/
354.	exp Animal Experiment/
355.	exp Experimental Animal/
356.	animal model/
357.	exp Rodent/
358.	(rat or rats or mouse or mice).ti.
359.	or/27-34
360.	19 not 35

361.	limit 36 to English language
362.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
363.	37 not 38
364.	health economics/
365.	exp economic evaluation/
366.	exp health care cost/
367.	exp fee/
368.	budget/
369.	funding/
370.	budget*.ti,ab.
371.	cost*.ti.
372.	(economic* or pharmaco?economic*).ti.
373.	(price* or pricing*).ti,ab.
374.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
375.	(financ* or fee or fees).ti,ab.
376.	(value adj2 (money or monetary)).ti,ab.
377.	or/40-52
378.	39 and 53

NHS EED and HTA (CRD) search terms

#157.	MeSH DESCRIPTOR Preoperative Care EXPLODE ALL TREES
#158.	MeSH DESCRIPTOR Perioperative Care EXPLODE ALL TREES
#159.	MeSH DESCRIPTOR Perioperative Period EXPLODE ALL TREES
#160.	MeSH DESCRIPTOR Perioperative Nursing EXPLODE ALL TREES
#161.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#162.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*))
#163.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#164.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#165.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#166.	(* IN HTA)
#167.	(* IN NHSEED)
#168.	#9 AND #10
#169.	#9 AND #11
#170.	MeSH DESCRIPTOR Intraoperative Care EXPLODE ALL TREES
#171.	#1 OR #2 OR #3 OR #4 OR #14
#172.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*))
#173.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*))
#174.	((postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*))
#175.	((after adj3 (surg* or operat* or anaesthes* or anesthes*))

#176.	((post adj3 (operat* or anaesthes* or anesthes*)))
#177.	((pre-operat* or preoperat* or pre-surg* or presurg*))
#178.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*))
#179.	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22
#180.	#10 AND #23
#181.	#11 AND #23
#182.	#12 OR #13 OR #24 OR #25

Appendix I: Intravenous fluids

Perioperative Care IV Fluids search strategy I

This literature search strategy was used for the following reviews;

- **What is the most clinically and cost-effective type of intraoperative intravenous fluid for adults undergoing surgery?**

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018.{NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

I.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 16: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies
Embase (OVID)	1974 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 5 of 12 CENTRAL to 2019 Issue 5 of 12 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 4 of 4	None

Medline (Ovid) search terms

392.	Intraoperative Care/ or exp Intraoperative Period/ or exp Perioperative Nursing/
393.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
394.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 during adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
395.	or/1-3
396.	limit 4 to English language
397.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
398.	5 not 6
399.	letter/
400.	editorial/

401.	news/
402.	exp historical article/
403.	Anecdotes as Topic/
404.	comment/
405.	case report/
406.	(letter or comment*).ti.
407.	or/8-15
408.	randomized controlled trial/ or random*.ti,ab.
409.	16 not 17
410.	animals/ not humans/
411.	exp Animals, Laboratory/
412.	exp Animal Experimentation/
413.	exp Models, Animal/
414.	exp Rodentia/
415.	(rat or rats or mouse or mice).ti.
416.	or/18-24
417.	7 not 25
418.	Fluid Therapy/
419.	((fluid* or volum*) adj3 (restor* or resuscita* or replac* or deplet* or deficient*).ti,ab.
420.	(fluid* adj3 (challenge or bolus)).ti,ab.
421.	Colloids/
422.	exp Plasma Substitutes/
423.	albumins/ or serum albumin/
424.	Dextrans/
425.	Hydroxyethyl Starch Derivatives/
426.	exp hypertonic solutions/ or exp isotonic solutions/
427.	Gelatin/
428.	(crystalloid* or colloid* or isotonic).ti,ab.
429.	(albumin* or albumex or Alburnorm or Octalbin or Zenalb or Flexbumin).ti,ab.
430.	(dextran or RescueFlow).ti,ab.
431.	(Gelatin or gelospan or Gelofusine or Geloplasma or Isoplex or Volplex).ti,ab.
432.	(starch* or hetastarch* or Pentastarch* or pentaspan* or haemaccel or HAES-steril or Hemohees or Tetrastarch* or Tetraspan or Venofundin or Volulyte or Voluven).ti,ab.
433.	(hypertonic or HyperHAES or hypotonic).ti,ab.
434.	potassium chloride/ or sodium chloride/
435.	Sodium Bicarbonate/
436.	(sodium or salin* or hartman* or ringer* or glucose or lactate* or acetate*).ti,ab.
437.	(dextrose or potassium or bicarbonate).ti,ab.
438.	(goal adj1 (direct* or orient*) adj1 therap*).ti,ab.
439.	(plasmalyte or plasma-lyte).ti,ab.
440.	or/27-48
441.	randomized controlled trial.pt.
442.	controlled clinical trial.pt.
443.	randomi#ed.ab.
444.	placebo.ab.

445.	randomly.ab.
446.	clinical trials as topic.sh.
447.	trial.ti.
448.	or/50-56
449.	Meta-Analysis/
450.	Meta-Analysis as Topic/
451.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
452.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
453.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
454.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
455.	(search* adj4 literature).ab.
456.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
457.	cochrane.jw.
458.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
459.	or/58-67
460.	26 and 49 and (57 or 68)

Embase (Ovid) search terms

382.	*peroperative care/ or *intraoperative period/ or *perioperative nursing/ or *surgical patient/
383.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
384.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 during adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
385.	or/1-3
386.	limit 4 to English language
387.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
388.	5 not 6
389.	letter.pt. or letter/
390.	note.pt.
391.	editorial.pt.
392.	case report/ or case study/
393.	(letter or comment*).ti.
394.	or/8-12
395.	randomized controlled trial/ or random*.ti,ab.
396.	13 not 14
397.	animal/ not human/
398.	nonhuman/
399.	exp Animal Experiment/
400.	exp Experimental Animal/
401.	animal model/
402.	exp Rodent/
403.	(rat or rats or mouse or mice).ti.
404.	or/15-22

405.	7 not 23
406.	fluid therapy/
407.	((fluid* or volum*) adj3 (restor* or resuscita* or replac* or deplet* or deficien*)).ti,ab.
408.	(fluid* adj3 (challenge or bolus)).ti,ab.
409.	Hartmann solution/
410.	Ringer lactate solution/ or Ringer solution/
411.	acetic acid plus gluconate sodium plus magnesium chloride plus potassium chloride plus sodium chloride/
412.	polygeline/
413.	crystalloid/
414.	gelatin succinate/
415.	human serum albumin/
416.	human albumin/
417.	colloid/
418.	exp plasma substitute/
419.	albuminoid/ or serum albumin/
420.	dextran/
421.	hetastarch derivative/
422.	hypertonic solution/ or isotonic solution/
423.	gelatin/
424.	potassium chloride/ or sodium chloride/
425.	bicarbonate/
426.	(crystalloid* or colloid* or isotonic).ti,ab.
427.	(albumin* or albumex or Alburnorm or Octalbin or Zenalb or Flexbumin).ti,ab.
428.	(dextran or RescueFlow).ti,ab.
429.	(Gelatin or gelospan or Gelofusine or Geloplasma or Isoplex or Volplex).ti,ab.
430.	(starch* or hetastarch* or Pentastarch* or pentaspan* or haemaccel or HAES-steril or Hemohees or Tetrastarch* or Tetraspan or Venofundin or Volulyte or Voluven).ti,ab.
431.	(hypertonic or HyperHAES or hypotonic).ti,ab.
432.	(sodium or salin* or hartman* or ringer* or glucose or lactate* or acetate*).ti,ab.
433.	(dextrose or potassium or bicarbonate).ti,ab.
434.	(goal adj1 (direct* or orient*) adj1 therap*).ti,ab.
435.	(plasmalyte or plasma-lyte).ti,ab.
436.	((plasma or blood) adj (substitute* or expand*)).ti,ab.
437.	or/25-55
438.	random*.ti,ab.
439.	factorial*.ti,ab.
440.	(crossover* or cross over*).ti,ab.
441.	((doubl* or singl*) adj blind*).ti,ab.
442.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
443.	crossover procedure/
444.	single blind procedure/
445.	randomized controlled trial/
446.	double blind procedure/
447.	or/57-65
448.	systematic review/

449.	Meta-Analysis/
450.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
451.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
452.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
453.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
454.	(search* adj4 literature).ab.
455.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
456.	cochrane.jw.
457.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
458.	or/67-76
459.	24 and 56
460.	78 and (66 or 77)

Cochrane Library (Wiley) search terms

#148.	MeSH descriptor: [Intraoperative Care] this term only
#149.	MeSH descriptor: [Intraoperative Period] this term only
#150.	MeSH descriptor: [Perioperative Nursing] this term only
#151.	(or #1-#3)
#152.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) near/3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)):ti,ab
#153.	((care* or caring or treat* or nurs* or recover* or monitor*) near/3 during near/3 (surg* or operat* or anaesthes* or anesthes*)):ti,ab
#154.	(or #4-#6)
#155.	MeSH descriptor: [Fluid Therapy] explode all trees
#156.	((fluid* or volum*) near/3 (restor* or resuscita* or replac* or deplet* or deficien*)):ti,ab
#157.	(fluid* near/3 (challenge or bolus)):ti,ab
#158.	MeSH descriptor: [Colloids] explode all trees
#159.	MeSH descriptor: [Plasma Substitutes] explode all trees
#160.	MeSH descriptor: [Albumins] explode all trees
#161.	MeSH descriptor: [Serum Albumin] explode all trees
#162.	MeSH descriptor: [Dextrans] explode all trees
#163.	MeSH descriptor: [Hydroxyethyl Starch Derivatives] explode all trees
#164.	MeSH descriptor: [Hypertonic Solutions] explode all trees
#165.	MeSH descriptor: [Gelatin] explode all trees
#166.	(crystalloid* or colloid* or isotonic):ti,ab
#167.	(albumin* or albumex or Alburnorm or Octalbin or Zenalb or Flexbumin):ti,ab
#168.	(dextran or RescueFlow):ti,ab
#169.	(Gelatin or gelospan or Gelofusine or Geloplasma or Isoplex or Volplex):ti,ab
#170.	(starch* or hetastarch* or Pentastarch* or pentaspan* or haemaccel or HAES-steril or Hemothes or Tetrastarch* or Tetraspan or Venofundin or Volulyte or Voluven):ti,ab
#171.	(hypertonic or HyperHAES or hypotonic):ti,ab
#172.	MeSH descriptor: [Potassium Chloride] explode all trees
#173.	MeSH descriptor: [Sodium Chloride] explode all trees
#174.	MeSH descriptor: [Sodium Bicarbonate] explode all trees

#175.	(sodium or salin* or hartman* or ringer* or glucose or lactate* or acetate*):ti,ab
#176.	(dextrose or potassium or bicarbonate):ti,ab
#177.	(goal near/1 (direct* or orient*) near/1 therap*):ti,ab
#178.	(plasmalyte or plasma-lyte):ti,ab
#179.	((plasma or blood) near/1 (substitute* or expand*)):ti,ab
#180.	(or #8-#32)
#181.	#7 and #33

I.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to the perioperative care population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional health economics searches were run on Medline and Embase.

Table 17: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 30 May 2019	Exclusions Health economics studies
Embase	2014 – 30 May 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - Inception – 02 May 2019 NHSEED - Inception to 02 May 2019	None

Medline (Ovid) search terms

414.	exp Preoperative Care/ or exp Perioperative Care/ or exp Perioperative Period/ or exp Perioperative Nursing/
415.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
416.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
417.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
418.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
419.	1 or 2 or 3 or 4 or 5
420.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
421.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
422.	7 or 8
423.	postoperative care/ or exp Postoperative Period/ or exp Perioperative nursing/
424.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.

425.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
426.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
427.	10 or 11 or 12 or 13
428.	exp Preoperative Care/ or Preoperative Period/
429.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
430.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
431.	15 or 16 or 17
432.	6 or 9 or 14 or 18
433.	letter/
434.	editorial/
435.	news/
436.	exp historical article/
437.	Anecdotes as Topic/
438.	comment/
439.	case report/
440.	(letter or comment*).ti.
441.	or/20-27
442.	randomized controlled trial/ or random*.ti,ab.
443.	28 not 29
444.	animals/ not humans/
445.	exp Animals, Laboratory/
446.	exp Animal Experimentation/
447.	exp Models, Animal/
448.	exp Rodentia/
449.	(rat or rats or mouse or mice).ti.
450.	or/30-36
451.	19 not 37
452.	limit 38 to English language
453.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
454.	39 not 40
455.	economics/
456.	value of life/
457.	exp "costs and cost analysis"/
458.	exp Economics, Hospital/
459.	exp Economics, medical/
460.	Economics, nursing/
461.	economics, pharmaceutical/
462.	exp "Fees and Charges"/
463.	exp budgets/
464.	budget.ti,ab.
465.	cost*.ti.
466.	(economic* or pharmaco?economic*).ti.
467.	(price* or pricing*).ti,ab.
468.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.

469.	(financ* or fee or fees).ti,ab.
470.	(value adj2 (money or monetary)).ti,ab.
471.	or/42-57
472.	41 and 58

Embase (Ovid) search terms

379.	*preoperative period/ or *intraoperative period/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
380.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
381.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
382.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
383.	1 or 2 or 3 or 4
384.	peroperative care/ or exp peroperative care/ or exp perioperative nursing/
385.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
386.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
387.	6 or 7 or 8
388.	postoperative care/ or exp postoperative period/ or perioperative nursing/
389.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
390.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
391.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
392.	10 or 11 or 12 or 13
393.	exp preoperative care/ or preoperative period/
394.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
395.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
396.	15 or 16 or 17
397.	5 or 9 or 14 or 18
398.	letter.pt. or letter/
399.	note.pt.
400.	editorial.pt.
401.	case report/ or case study/
402.	(letter or comment*).ti.
403.	or/20-24
404.	randomized controlled trial/ or random*.ti,ab.
405.	25 not 26
406.	animal/ not human/
407.	nonhuman/
408.	exp Animal Experiment/
409.	exp Experimental Animal/
410.	animal model/

411.	exp Rodent/
412.	(rat or rats or mouse or mice).ti.
413.	or/27-34
414.	19 not 35
415.	limit 36 to English language
416.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
417.	37 not 38
418.	health economics/
419.	exp economic evaluation/
420.	exp health care cost/
421.	exp fee/
422.	budget/
423.	funding/
424.	budget*.ti,ab.
425.	cost*.ti.
426.	(economic* or pharmaco?economic*).ti.
427.	(price* or pricing*).ti,ab.
428.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
429.	(financ* or fee or fees).ti,ab.
430.	(value adj2 (money or monetary)).ti,ab.
431.	or/40-52
432.	39 and 53

NHS EED and HTA (CRD) search terms

#183.	MeSH DESCRIPTOR Preoperative Care EXPLODE ALL TREES
#184.	MeSH DESCRIPTOR Perioperative Care EXPLODE ALL TREES
#185.	MeSH DESCRIPTOR Perioperative Period EXPLODE ALL TREES
#186.	MeSH DESCRIPTOR Perioperative Nursing EXPLODE ALL TREES
#187.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#188.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*))
#189.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#190.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#191.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#192.	(* IN HTA)
#193.	(* IN NHSEED)
#194.	#9 AND #10
#195.	#9 AND #11
#196.	MeSH DESCRIPTOR Intraoperative Care EXPLODE ALL TREES
#197.	#1 OR #2 OR #3 OR #4 OR #14

#198.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*))
#199.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*))
#200.	((postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*))
#201.	((after adj3 (surg* or operat* or anaesthes* or anesthes*))
#202.	((post adj3 (operat* or anaesthes* or anesthes*))
#203.	((pre-operat* or preoperat* or pre-surg* or presurg*))
#204.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*))
#205.	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22
#206.	#10 AND #23
#207.	#11 AND #23
#208.	#12 OR #13 OR #24 OR #25

Appendix J: Cardiac output monitoring

Perioperative Care Cardiac Monitoring search strategy J

This literature search strategy was used for the following reviews;

- **What is the clinical and cost effectiveness of non-invasive cardiac output monitoring during major, complex or high risk surgery in adults?**

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018.^{NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

J.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 18: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies
Embase (OVID)	1974 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 5 of 12 CENTRAL to 2019 Issue 5 of 12 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 4 of 4	None

Medline (Ovid) search terms

461.	Intraoperative Care/ or exp Intraoperative Period/ or exp Perioperative Nursing/ or exp Monitoring, Intraoperative/
462.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
463.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 during adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
464.	or/1-3
465.	limit 4 to English language
466.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
467.	5 not 6
468.	letter/

469.	editorial/
470.	news/
471.	exp historical article/
472.	Anecdotes as Topic/
473.	comment/
474.	case report/
475.	(letter or comment*).ti.
476.	or/8-15
477.	randomized controlled trial/ or random*.ti,ab.
478.	16 not 17
479.	animals/ not humans/
480.	exp Animals, Laboratory/
481.	exp Animal Experimentation/
482.	exp Models, Animal/
483.	exp Rodentia/
484.	(rat or rats or mouse or mice).ti.
485.	or/18-24
486.	7 not 25
487.	exp Echocardiography/
488.	Cardiography, Impedance/
489.	((oesophageal or esophageal or intra?esophageal or trans?esophageal) adj5 (echocardiogra* or doppler)).ti,ab.
490.	TEE.ti,ab.
491.	Plethysmography, Impedance/
492.	((bioimpedance* or impedance*) adj (cardiogr* or plethysmogra* or phlebogra*)).ti,ab.
493.	((thoracic or transthoracic) adj electric* bioimpedance*).ti,ab.
494.	Pulse Wave Analysis/
495.	((pulse* or arterial) adj3 (contour or power or wave*)).ti,ab.
496.	Dye Dilution Technique/
497.	((dye or indicator or lithium) adj3 dilut*).ti,ab.
498.	(electric* adj (cardiometry or velocimetry)).ti,ab.
499.	Pressure recording analy*.ti,ab.
500.	bioreactance*.ti,ab.
501.	Hemodynamic Monitoring/
502.	(h?emodynamic adj3 (output* or index or monitor* or measur* or record* or reading* or track* or assess*)).ti,ab.
503.	exp Cardiac Output/
504.	(cardiac adj3 (output* or index or monitor* or measur* or record* or reading* or track* or assess*)).ti,ab.
505.	or/27-44
506.	26 and 45
507.	randomized controlled trial.pt.
508.	controlled clinical trial.pt.
509.	randomi#ed.ab.
510.	placebo.ab.

511.	randomly.ab.
512.	clinical trials as topic.sh.
513.	trial.ti.
514.	or/47-53
515.	Meta-Analysis/
516.	Meta-Analysis as Topic/
517.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
518.	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
519.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
520.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
521.	(search* adj4 literature).ab.
522.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
523.	cochrane.jw.
524.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
525.	or/55-64
526.	46 and (54 or 65)

Embase (Ovid) search terms

461.	*peroperative care/ or *intraoperative period/ or *perioperative nursing/ or *surgical patient/ or *intraoperative monitoring/
462.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
463.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 during adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
464.	or/1-3
465.	limit 4 to English language
466.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
467.	5 not 6
468.	letter.pt. or letter/
469.	note.pt.
470.	editorial.pt.
471.	case report/ or case study/
472.	(letter or comment*).ti.
473.	or/8-12
474.	randomized controlled trial/ or random*.ti,ab.
475.	13 not 14
476.	animal/ not human/
477.	nonhuman/
478.	exp Animal Experiment/
479.	exp Experimental Animal/
480.	animal model/
481.	exp Rodent/
482.	(rat or rats or mouse or mice).ti.
483.	or/15-22

484.	7 not 23
485.	exp echocardiography/
486.	impedance cardiography/
487.	((oesophageal or esophageal or intra?esophageal or trans?esophageal) adj5 (echocardiogra* or doppler)).ti,ab.
488.	TEE.ti,ab.
489.	impedance plethysmography/
490.	((bioimpedance* or impedance*) adj (cardiogr* or plethysmogra* or phlebogra*)).ti,ab.
491.	((thoracic or transthoracic) adj electric* bioimpedance*).ti,ab.
492.	pulse wave/
493.	((pulse* or arterial) adj3 (contour or power or wave*)).ti,ab.
494.	dye dilution curve/
495.	((dye or indicator or lithium) adj3 dilut*).ti,ab.
496.	(electric* adj (cardiometry or velocimetry)).ti,ab.
497.	Pressure recording analy*.ti,ab.
498.	bioreactance*.ti,ab.
499.	hemodynamic monitoring/
500.	(h?emodynamic adj3 (output* or index or monitor* or measur* or record* or reading* or track* or assess*)).ti,ab.
501.	heart output/
502.	(cardiac adj3 (output* or index or monitor* or measur* or record* or reading* or track* or assess*)).ti,ab.
503.	or/25-42
504.	24 and 43
505.	random*.ti,ab.
506.	factorial*.ti,ab.
507.	(crossover* or cross over*).ti,ab.
508.	((doubl* or singl*) adj blind*).ti,ab.
509.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
510.	crossover procedure/
511.	single blind procedure/
512.	randomized controlled trial/
513.	double blind procedure/
514.	or/45-53
515.	systematic review/
516.	Meta-Analysis/
517.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
518.	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
519.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
520.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
521.	(search* adj4 literature).ab.
522.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
523.	cochrane.jw.

524.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
525.	or/55-64
526.	44 and (54 or 65)

Cochrane Library (Wiley) search terms

#182.	MeSH descriptor: [Intraoperative Care] this term only
#183.	MeSH descriptor: [Intraoperative Period] this term only
#184.	MeSH descriptor: [Perioperative Nursing] this term only
#185.	(or #1-#3)
#186.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) near/3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)):ti,ab
#187.	((care* or caring or treat* or nurs* or recover* or monitor*) near/3 (during) near/3 (surg* or operat* or anaesthes* or anesthes*)):ti,ab
#188.	(or #4-#6)
#189.	MeSH descriptor: [Echocardiography] explode all trees
#190.	MeSH descriptor: [Cardiography, Impedance] explode all trees
#191.	((oesophageal or esophageal or intra*esophageal or trans*esophageal) near/5 (echocardiogra* or doppler)):ti,ab
#192.	TEE:ti,ab
#193.	MeSH descriptor: [Plethysmography, Impedance] explode all trees
#194.	((bioimpedance* or impedance*) near/1 (cardiogram* or plethysmograp* or phlebogram*)):ti,ab
#195.	((thoracic or transthoracic) near/1 electric* bioimpedance*):ti,ab
#196.	MeSH descriptor: [Pulse Wave Analysis] explode all trees
#197.	((pulse* or arterial) near/3 (contour or power or wave*)):ti,ab
#198.	MeSH descriptor: [Dye Dilution Technique] explode all trees
#199.	((dye or indicator or lithium) near/3 dilut*):ti,ab
#200.	(electric* near/1 (cardiometry or velocimetry)):ti,ab
#201.	(Pressure recording analy*):ti,ab
#202.	bioreactance*:ti,ab
#203.	MeSH descriptor: [Hemodynamic Monitoring] explode all trees
#204.	(h*emodynamic near/3 (output* or index or monitor* or measur* or record* or reading* or track* or assess*)):ti,ab
#205.	MeSH descriptor: [Cardiac Output] explode all trees
#206.	(cardiac near/3 (output* or index or monitor* or measur* or record* or reading* or track* or assess*)):ti,ab
#207.	(or #8-#25)
#208.	#7 and #26

J.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to the perioperative care population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional health economics searches were run on Medline and Embase.

Table 19: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 30 May 2019	Exclusions Health economics studies
Embase	2014 – 30 May 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - Inception – 02 May 2019 NHSEED - Inception to 02 May 2019	None

Medline (Ovid) search terms

473.	exp Preoperative Care/ or exp Perioperative Care/ or exp Perioperative Period/ or exp Perioperative Nursing/
474.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
475.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
476.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
477.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
478.	1 or 2 or 3 or 4 or 5
479.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
480.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
481.	7 or 8
482.	postoperative care/ or exp Postoperative Period/ or exp Perioperative nursing/
483.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
484.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
485.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
486.	10 or 11 or 12 or 13
487.	exp Preoperative Care/ or Preoperative Period/
488.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
489.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
490.	15 or 16 or 17
491.	6 or 9 or 14 or 18
492.	letter/
493.	editorial/
494.	news/
495.	exp historical article/
496.	Anecdotes as Topic/
497.	comment/
498.	case report/
499.	(letter or comment*).ti.

500.	or/20-27
501.	randomized controlled trial/ or random*.ti,ab.
502.	28 not 29
503.	animals/ not humans/
504.	exp Animals, Laboratory/
505.	exp Animal Experimentation/
506.	exp Models, Animal/
507.	exp Rodentia/
508.	(rat or rats or mouse or mice).ti.
509.	or/30-36
510.	19 not 37
511.	limit 38 to English language
512.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
513.	39 not 40
514.	economics/
515.	value of life/
516.	exp "costs and cost analysis"/
517.	exp Economics, Hospital/
518.	exp Economics, medical/
519.	Economics, nursing/
520.	economics, pharmaceutical/
521.	exp "Fees and Charges"/
522.	exp budgets/
523.	budget*.ti,ab.
524.	cost*.ti.
525.	(economic* or pharmaco?economic*).ti.
526.	(price* or pricing*).ti,ab.
527.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
528.	(financ* or fee or fees).ti,ab.
529.	(value adj2 (money or monetary)).ti,ab.
530.	or/42-57
531.	41 and 58

Embase (Ovid) search terms

433.	*preoperative period/ or *intraoperative period/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
434.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
435.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
436.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
437.	1 or 2 or 3 or 4
438.	peroperative care/ or exp peroperative care/ or exp perioperative nursing/
439.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-

	operat* or perioperat* or peri-operat*).ti,ab.
440.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
441.	6 or 7 or 8
442.	postoperative care/ or exp postoperative period/ or perioperative nursing/
443.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
444.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
445.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
446.	10 or 11 or 12 or 13
447.	exp preoperative care/ or preoperative period/
448.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
449.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
450.	15 or 16 or 17
451.	5 or 9 or 14 or 18
452.	letter.pt. or letter/
453.	note.pt.
454.	editorial.pt.
455.	case report/ or case study/
456.	(letter or comment*).ti.
457.	or/20-24
458.	randomized controlled trial/ or random*.ti,ab.
459.	25 not 26
460.	animal/ not human/
461.	nonhuman/
462.	exp Animal Experiment/
463.	exp Experimental Animal/
464.	animal model/
465.	exp Rodent/
466.	(rat or rats or mouse or mice).ti.
467.	or/27-34
468.	19 not 35
469.	limit 36 to English language
470.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
471.	37 not 38
472.	health economics/
473.	exp economic evaluation/
474.	exp health care cost/
475.	exp fee/
476.	budget/
477.	funding/
478.	budget*.ti,ab.

479.	cost*.ti.
480.	(economic* or pharmaco?economic*).ti.
481.	(price* or pricing*).ti,ab.
482.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
483.	(financ* or fee or fees).ti,ab.
484.	(value adj2 (money or monetary)).ti,ab.
485.	or/40-52
486.	39 and 53

NHS EED and HTA (CRD) search terms

#209.	MeSH DESCRIPTOR Preoperative Care EXPLODE ALL TREES
#210.	MeSH DESCRIPTOR Perioperative Care EXPLODE ALL TREES
#211.	MeSH DESCRIPTOR Perioperative Period EXPLODE ALL TREES
#212.	MeSH DESCRIPTOR Perioperative Nursing EXPLODE ALL TREES
#213.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#214.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*))
#215.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#216.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#217.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#218.	(* IN HTA)
#219.	(* IN NHSEED)
#220.	#9 AND #10
#221.	#9 AND #11
#222.	MeSH DESCRIPTOR Intraoperative Care EXPLODE ALL TREES
#223.	#1 OR #2 OR #3 OR #4 OR #14
#224.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*))
#225.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*))
#226.	((postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*))
#227.	((after adj3 (surg* or operat* or anaesthes* or anesthes*))
#228.	((post adj3 (operat* or anaesthes* or anesthes*))
#229.	((pre-operat* or preoperat* or pre-surg* or presurg*))
#230.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*))
#231.	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22
#232.	#10 AND #23
#233.	#11 AND #23
#234.	#12 OR #13 OR #24 OR #25

Appendix K: Blood glucose

Perioperative Care Glucose search strategy K

This literature search strategy was used for the following reviews;

- **What is the clinical and cost effectiveness of blood glucose control management in adults undergoing surgery?**

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018.{NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

K.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 20: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies
Embase (OVID)	1974 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 5 of 12 CENTRAL to 2019 Issue 5 of 12 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 4 of 4	None
Epistemonikos (Epistemonikos Foundation)	Inception - 10 May 2019	Systematic review studies

Medline (Ovid) search terms

527.	exp Preoperative Care/ or exp Perioperative Care/ or exp Perioperative Period/ or exp Perioperative Nursing/
528.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
529.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
530.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine or complicat*)).ti,ab.
531.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
532.	*Postoperative Complications/

533.	or/1-6
534.	limit 7 to English language
535.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
536.	8 not 9
537.	letter/
538.	editorial/
539.	news/
540.	exp historical article/
541.	Anecdotes as Topic/
542.	comment/
543.	case report/
544.	(letter or comment*).ti.
545.	or/11-18
546.	randomized controlled trial/ or random*.ti,ab.
547.	19 not 20
548.	animals/ not humans/
549.	exp Animals, Laboratory/
550.	exp Animal Experimentation/
551.	exp Models, Animal/
552.	exp Rodentia/
553.	(rat or rats or mouse or mice).ti.
554.	or/21-27
555.	10 not 28
556.	Blood Glucose/
557.	(glucose adj2 (monitor* or measur* or control* or level* or regulat* or manag*)).ti,ab.
558.	(blood sugar* adj2 (monitor* or measur* or control* or level* or regulat* or manag*)).ti,ab.
559.	((glycaemic or glycemic or glycaemia or glycemia or hyperglycemia or hyperglycaemia or dysglycaemia or dysglycemia or hypoglycaemia or hypoglycemia) adj2 (monitor* or measur* or control* or level* or regulat* or manag*)).ti,ab.
560.	(insulin adj2 (therap* or infusion* or intravenous* or IV)).ti,ab.
561.	exp Diabetes Mellitus/
562.	(diabet* adj2 (mellitus or type 1 or type1 or type I or type one)).ti,ab.
563.	(diabet* adj2 (type 2 or type2 or type II or type two)).ti,ab.
564.	Hemoglobin A, Glycosylated/
565.	((glycosylated or glycated) adj2 (hemoglobin or haemoglobin)).ti,ab.
566.	(Hb A1* or HbA1*).ti,ab.
567.	(glycohemoglobin A or glycohaemoglobin A).ti,ab.
568.	or/30-41
569.	29 and 42
570.	randomized controlled trial.pt.
571.	controlled clinical trial.pt.
572.	randomi#ed.ab.
573.	placebo.ab.
574.	randomly.ab.

575.	clinical trials as topic.sh.
576.	trial.ti.
577.	or/44-50
578.	Meta-Analysis/
579.	Meta-Analysis as Topic/
580.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
581.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
582.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
583.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
584.	(search* adj4 literature).ab.
585.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
586.	cochrane.jw.
587.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
588.	or/52-61
589.	43 and (51 or 62)

Embase (Ovid) search terms

527.	*preoperative period/ or *intraoperative period/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
528.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
529.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
530.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine or complicat*)).ti,ab.
531.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
532.	*Postoperative complication/
533.	or/1-6
534.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
535.	7 not 8
536.	limit 9 to English language
537.	letter.pt. or letter/
538.	note.pt.
539.	editorial.pt.
540.	case report/ or case study/
541.	(letter or comment*).ti.
542.	or/11-15
543.	randomized controlled trial/ or random*.ti,ab.
544.	16 not 17
545.	animal/ not human/
546.	nonhuman/
547.	exp Animal Experiment/
548.	exp Experimental Animal/

549.	animal model/
550.	exp Rodent/
551.	(rat or rats or mouse or mice).ti.
552.	or/18-25
553.	10 not 26
554.	Glucose blood level/
555.	(glucose adj2 (monitor* or measur* or control* or level* or regulat* or manag*)).ti,ab.
556.	(blood sugar* adj2 (monitor* or measur* or control* or level* or regulat* or manag*)).ti,ab.
557.	((glycaemic or glyceic or glycaemia or glycemia or hyperglycemia or hyperglycaemia or dysglycaemia or dysglycemia or hypoglycaemia or hypoglycemia) adj2 (monitor* or measur* or control* or level* or regulat* or manag*)).ti,ab.
558.	(insulin adj2 (therap* or infusion* or intravenous* or IV)).ti,ab.
559.	exp Diabetes Mellitus/
560.	(diabet* adj2 (mellitus or type 1 or type1 or type I or type one)).ti,ab.
561.	(diabet* adj2 (type 2 or type2 or type II or type two)).ti,ab.
562.	Hemoglobin A, Glycosylated/
563.	((glycosylated or glycated) adj2 (hemoglobin or haemoglobin)).ti,ab.
564.	(Hb A1* or HbA1*).ti,ab.
565.	(glycohemoglobin A or glycohaemoglobin A).ti,ab.
566.	or/28-39
567.	27 and 40
568.	random*.ti,ab.
569.	factorial*.ti,ab.
570.	(crossover* or cross over*).ti,ab.
571.	((doubl* or singl*) adj blind*).ti,ab.
572.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
573.	crossover procedure/
574.	single blind procedure/
575.	randomized controlled trial/
576.	double blind procedure/
577.	or/42-50
578.	systematic review/
579.	Meta-Analysis/
580.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
581.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
582.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
583.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
584.	(search* adj4 literature).ab.
585.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
586.	cochrane.jw.
587.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
588.	or/52-61
589.	51 or 62

590.	41 and 63
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Cochrane Library (Wiley) search terms

#209.	MeSH descriptor: [Preoperative Care] explode all trees
#210.	MeSH descriptor: [Perioperative Care] explode all trees
#211.	MeSH descriptor: [Perioperative Period] explode all trees
#212.	MeSH descriptor: [Perioperative Nursing] explode all trees
#213.	(or #1-#4)
#214.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) near/3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)):ti,ab
#215.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) near/3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)):ti,ab
#216.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) near/3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine or complicat*)):ti,ab
#217.	((care* or caring or treat* or nurs* or recover* or monitor*) near/3 (before or prior or advance or during or after) near/3 (surg* or operat* or anaesthes* or anesthes*)):ti,ab
#218.	MeSH descriptor: [Postoperative Complications] this term only
#219.	(or #5-#10)
#220.	MeSH descriptor: [Blood Glucose] explode all trees
#221.	(glucose near/2 (monitor* or measur* or control* or level* or regulat* or manag*)):ti,ab
#222.	(blood sugar* near/2 (monitor* or measur* or control* or level* or regulat* or manag*)):ti,ab
#223.	((glycaemic or glycemic or glycaemia or glycemia or hyperglycemia or hyperglycaemia or dysglycaemia or dysglycemia or hypoglycaemia or hypoglycemia) near/2 (monitor* or measur* or control* or level* or regulat* or manag*)):ti,ab
#224.	(insulin near/2 (therap* or infusion* or intravenous* or IV)):ti,ab
#225.	MeSH descriptor: [Diabetes Mellitus] explode all trees
#226.	(diabet* near/2 (mellitus or type 1 or type1 or type I or type one)):ti,ab
#227.	(diabet* near/2 (type 2 or type2 or type II or type two)):ti,ab
#228.	MeSH descriptor: [Glycated Hemoglobin A] explode all trees
#229.	((glycosylated or glycated) near/2 (hemoglobin or haemoglobin)):ti,ab
#230.	(Hb A1* or HbA1*):ti,ab
#231.	(glycohemoglobin A or glycohaemoglobin A):ti,ab
#232.	(or #12-#23)
#233.	#11 and #24

Epistemonikos (Epistemonikos Foundation) search terms

2.	(title:(pre-operative* OR preoperative* OR preop* OR pre-op* OR pre-surg* OR presurg* OR perioperative* OR peri-operative* OR intraoperative* OR intra-operative* OR intrasurg* OR intra-surg* OR peroperat* OR per-operat* OR postoperative* OR postop* OR post-op* OR post-surg* OR postsurg*) OR abstract:(pre-operative* OR preoperative* OR preop* OR pre-op* OR pre-surg* OR presurg* OR perioperative* OR peri-operative* OR intraoperative* OR intra-operative* OR intrasurg* OR intra-surg* OR peroperat* OR per-operat* OR postoperative* OR postop* OR post-op* OR post-surg* OR postsurg*)) AND (title:(glucose OR sugar OR diabet*) OR abstract:(glucose OR sugar OR diabet*))
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K.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to the perioperative care population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional health economics searches were run on Medline and Embase.

Table 21: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 30 May 2019	Exclusions Health economics studies
Embase	2014 – 30 May 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - Inception – 02 May 2019 NHSEED - Inception to 02 May 2019	None

Medline (Ovid) search terms

532.	exp Preoperative Care/ or exp Perioperative Care/ or exp Perioperative Period/ or exp Perioperative Nursing/
533.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
534.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
535.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
536.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
537.	1 or 2 or 3 or 4 or 5
538.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
539.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
540.	7 or 8
541.	postoperative care/ or exp Postoperative Period/ or exp Perioperative nursing/
542.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
543.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
544.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
545.	10 or 11 or 12 or 13
546.	exp Preoperative Care/ or Preoperative Period/
547.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
548.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
549.	15 or 16 or 17
550.	6 or 9 or 14 or 18
551.	letter/

552.	editorial/
553.	news/
554.	exp historical article/
555.	Anecdotes as Topic/
556.	comment/
557.	case report/
558.	(letter or comment*).ti.
559.	or/20-27
560.	randomized controlled trial/ or random*.ti,ab.
561.	28 not 29
562.	animals/ not humans/
563.	exp Animals, Laboratory/
564.	exp Animal Experimentation/
565.	exp Models, Animal/
566.	exp Rodentia/
567.	(rat or rats or mouse or mice).ti.
568.	or/30-36
569.	19 not 37
570.	limit 38 to English language
571.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
572.	39 not 40
573.	economics/
574.	value of life/
575.	exp "costs and cost analysis"/
576.	exp Economics, Hospital/
577.	exp Economics, medical/
578.	Economics, nursing/
579.	economics, pharmaceutical/
580.	exp "Fees and Charges"/
581.	exp budgets/
582.	budget*.ti,ab.
583.	cost*.ti.
584.	(economic* or pharmaco?economic*).ti.
585.	(price* or pricing*).ti,ab.
586.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
587.	(financ* or fee or fees).ti,ab.
588.	(value adj2 (money or monetary)).ti,ab.
589.	or/42-57
590.	41 and 58

Embase (Ovid) search terms

487.	*preoperative period/ or *intraoperative period/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
488.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.

489.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
490.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
491.	1 or 2 or 3 or 4
492.	peroperative care/ or exp peroperative care/ or exp perioperative nursing/
493.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
494.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
495.	6 or 7 or 8
496.	postoperative care/ or exp postoperative period/ or perioperative nursing/
497.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
498.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
499.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
500.	10 or 11 or 12 or 13
501.	exp preoperative care/ or preoperative period/
502.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
503.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
504.	15 or 16 or 17
505.	5 or 9 or 14 or 18
506.	letter.pt. or letter/
507.	note.pt.
508.	editorial.pt.
509.	case report/ or case study/
510.	(letter or comment*).ti.
511.	or/20-24
512.	randomized controlled trial/ or random*.ti,ab.
513.	25 not 26
514.	animal/ not human/
515.	nonhuman/
516.	exp Animal Experiment/
517.	exp Experimental Animal/
518.	animal model/
519.	exp Rodent/
520.	(rat or rats or mouse or mice).ti.
521.	or/27-34
522.	19 not 35
523.	limit 36 to English language
524.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
525.	37 not 38
526.	health economics/

527.	exp economic evaluation/
528.	exp health care cost/
529.	exp fee/
530.	budget/
531.	funding/
532.	budget*.ti,ab.
533.	cost*.ti.
534.	(economic* or pharmaco?economic*).ti.
535.	(price* or pricing*).ti,ab.
536.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
537.	(financ* or fee or fees).ti,ab.
538.	(value adj2 (money or monetary)).ti,ab.
539.	or/40-52
540.	39 and 53

NHS EED and HTA (CRD) search terms

#235.	MeSH DESCRIPTOR Preoperative Care EXPLODE ALL TREES
#236.	MeSH DESCRIPTOR Perioperative Care EXPLODE ALL TREES
#237.	MeSH DESCRIPTOR Perioperative Period EXPLODE ALL TREES
#238.	MeSH DESCRIPTOR Perioperative Nursing EXPLODE ALL TREES
#239.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#240.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*))
#241.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#242.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#243.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#244.	(* IN HTA)
#245.	(* IN NHSEED)
#246.	#9 AND #10
#247.	#9 AND #11
#248.	MeSH DESCRIPTOR Intraoperative Care EXPLODE ALL TREES
#249.	#1 OR #2 OR #3 OR #4 OR #14
#250.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*))
#251.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*))
#252.	((postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*))
#253.	((after adj3 (surg* or operat* or anaesthes* or anesthes*))
#254.	((post adj3 (operat* or anaesthes* or anesthes*))
#255.	((pre-operat* or preoperat* or pre-surg* or presurg*))
#256.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*))
#257.	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22

#258.	#10 AND #23
#259.	#11 AND #23
#260.	#12 OR #13 OR #24 OR #25

Appendix L: Safety management systems

Perioperative Care Safety Management Systems search strategy L

This literature search strategy was used for the following reviews;

- **What is the clinical and cost effectiveness of management systems to promote safety in operating theatres?**

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018. {NICE2014}

L.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 22: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies Observational studies
Embase (OVID)	1974 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies Observational studies
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 5 of 12 CENTRAL to 2019 Issue 5 of 12 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 4 of 4	None

Medline (Ovid) search terms

590.	Operating Rooms/
591.	(operat* adj2 (theatre* or theater* or room* or suite* or facility or facilities or environment* or space*)).ti,ab.
592.	exp Specialties, Surgical/
593.	or/1-3
594.	letter/
595.	editorial/
596.	news/
597.	exp historical article/
598.	Anecdotes as Topic/
599.	comment/
600.	case report/
601.	(letter or comment*).ti.

602.	or/5-12
603.	randomized controlled trial/ or random*.ti,ab.
604.	13 not 14
605.	animals/ not humans/
606.	exp Animals, Laboratory/
607.	exp Animal Experimentation/
608.	exp Models, Animal/
609.	exp Rodentia/
610.	(rat or rats or mouse or mice).ti.
611.	or/15-21
612.	4 not 22
613.	limit 23 to English language
614.	exp Safety management/
615.	Checklist/
616.	Equipment safety/
617.	Patient safety/
618.	Patient Harm/
619.	Containment of Biohazards/
620.	((surg* or manage*) adj3 (check* or safe* or procedure* or standard* or protocol* or brief* or debrief* or system* or equipment*)).ti,ab.
621.	(equipment* adj3 (check* or safe* or procedure* or standard* or protocol*)).ti,ab.
622.	(patient* adj2 (harm* or check* or safe* or procedure* or standard* or protocol* or verif* or verificat*)).ti,ab.
623.	(quality adj2 (assurance or care or caring or check* or safe* or procedure* or standard* or protocol*)).ti,ab.
624.	or/25-34
625.	24 and 35
626.	randomized controlled trial.pt.
627.	controlled clinical trial.pt.
628.	randomi#ed.ab.
629.	placebo.ab.
630.	randomly.ab.
631.	clinical trials as topic.sh.
632.	trial.ti.
633.	or/37-43
634.	Meta-Analysis/
635.	Meta-Analysis as Topic/
636.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
637.	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
638.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
639.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
640.	(search* adj4 literature).ab.
641.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
642.	cochrane.jw.

643.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
644.	or/45-54
645.	Epidemiologic studies/
646.	Observational study/
647.	exp Cohort studies/
648.	(cohort adj (study or studies or analys* or data)).ti,ab.
649.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.
650.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
651.	Controlled Before-After Studies/
652.	Historically Controlled Study/
653.	Interrupted Time Series Analysis/
654.	(before adj2 after adj2 (study or studies or data)).ti,ab.
655.	or/56-65
656.	exp case control study/
657.	case control*.ti,ab.
658.	or/67-68
659.	66 or 69
660.	Cross-sectional studies/
661.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
662.	or/71-72
663.	66 or 73
664.	66 or 69 or 73
665.	36 and (44 or 55 or 75)
666.	WHO Surgical Safety Checklist.ti,ab.
667.	National Safety Standards for Invasive Procedures.ti,ab.
668.	76 or 77 or 78

Embase (Ovid) search terms

591.	operating room/
592.	(operat* adj2 (theatre* or theater* or room* or suite* or facility or facilities or environment* or space*)).ti,ab.
593.	*surgery/ or cancer surgery/ or general surgery/ or orthopedic surgery/ or plastic surgery/ or thorax surgery/ or urologic surgery/
594.	or/1-3
595.	letter.pt. or letter/
596.	note.pt.
597.	editorial.pt.
598.	case report/ or case study/
599.	(letter or comment*).ti.
600.	or/5-9
601.	randomized controlled trial/ or random*.ti,ab.
602.	10 not 11
603.	animal/ not human/
604.	nonhuman/
605.	exp Animal Experiment/

606.	exp Experimental Animal/
607.	animal model/
608.	exp Rodent/
609.	(rat or rats or mouse or mice).ti.
610.	or/12-19
611.	4 not 20
612.	limit 21 to English language
613.	safety/ or material safety data sheet/
614.	checklist/
615.	device safety/
616.	patient safety/
617.	patient harm/
618.	hazardous waste/
619.	((surg* or manage*) adj3 (check* or safe* or procedure* or standard* or protocol* or brief* or debrief* or system* or equipment*)).ti,ab.
620.	(equipment* adj3 (check* or safe* or procedure* or standard* or protocol*)).ti,ab.
621.	(patient* adj2 (harm* or check* or safe* or procedure* or standard* or protocol* or verif* or verificat*)).ti,ab.
622.	(quality adj2 (assurance or care or caring or check* or safe* or procedure* or standard* or protocol*)).ti,ab.
623.	or/23-32
624.	22 and 33
625.	random*.ti,ab.
626.	factorial*.ti,ab.
627.	(crossover* or cross over*).ti,ab.
628.	((doubl* or singl*) adj blind*).ti,ab.
629.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
630.	crossover procedure/
631.	single blind procedure/
632.	randomized controlled trial/
633.	double blind procedure/
634.	or/35-43
635.	systematic review/
636.	Meta-Analysis/
637.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
638.	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
639.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
640.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
641.	(search* adj4 literature).ab.
642.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
643.	cochrane.jw.
644.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
645.	or/45-54
646.	Epidemiologic studies/

647.	Observational study/
648.	exp Cohort studies/
649.	(cohort adj (study or studies or analys* or data)).ti,ab.
650.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.
651.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
652.	Controlled Before-After Studies/
653.	Historically Controlled Study/
654.	Interrupted Time Series Analysis/
655.	(before adj2 after adj2 (study or studies or data)).ti,ab.
656.	or/56-65
657.	exp case control study/
658.	case control*.ti,ab.
659.	or/67-68
660.	66 or 69
661.	Cross-sectional studies/
662.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
663.	or/71-72
664.	66 or 73
665.	66 or 69 or 73
666.	34 and (44 or 55)
667.	WHO Surgical Safety Checklist.ti,ab.
668.	National Safety Standards for Invasive Procedures.ti,ab.
669.	76 or 77 or 78

Cochrane Library (Wiley) search terms

#234.	MeSH descriptor: [Operating Rooms] this term only
#235.	(operat* near/2 (theatre* or theater* or room* or suite* or facility or facilities or environment* or space*)):ti,ab
#236.	MeSH descriptor: [Specialties, Surgical] explode all trees
#237.	(OR #1-#3)
#238.	MeSH descriptor: [Safety Management] explode all trees
#239.	MeSH descriptor: [Checklist] this term only
#240.	MeSH descriptor: [Equipment Safety] this term only
#241.	MeSH descriptor: [Patient Safety] this term only
#242.	MeSH descriptor: [Patient Harm] this term only
#243.	MeSH descriptor: [Containment of Biohazards] this term only
#244.	((surg* or manage*) near/3 (check* or safe* or procedure* or standard* or protocol* or brief* or debrief* or system* or equipment*)):ti,ab
#245.	(equipment* near/3 (check* or safe* or procedure* or standard* or protocol*)):ti,ab
#246.	(patient* near/2 (harm* or check* or safe* or procedure* or standard* or protocol* or verif* or verificat*)):ti,ab
#247.	(quality near/2 (assurance or care or caring or check* or safe* or procedure* or standard* or protocol*)):ti,ab
#248.	(OR #5-#14)
#249.	WHO Surgical Safety Checklist:ti,ab

#250.	National Safety Standards for Invasive Procedures:ti,ab
#251.	#4 AND #15
#252.	#16 OR #17 OR #18

L.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to the perioperative care population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional health economics searches were run on Medline and Embase.

Table 23: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 30 May 2019	Exclusions Health economics studies
Embase	2014 – 30 May 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - Inception – 02 May 2019 NHSEED - Inception to 02 May 2019	None

Medline (Ovid) search terms

591.	exp Preoperative Care/ or exp Perioperative Care/ or exp Perioperative Period/ or exp Perioperative Nursing/
592.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
593.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
594.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
595.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
596.	1 or 2 or 3 or 4 or 5
597.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
598.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
599.	7 or 8
600.	postoperative care/ or exp Postoperative Period/ or exp Perioperative nursing/
601.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
602.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
603.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
604.	10 or 11 or 12 or 13
605.	exp Preoperative Care/ or Preoperative Period/
606.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
607.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.

608.	15 or 16 or 17
609.	6 or 9 or 14 or 18
610.	letter/
611.	editorial/
612.	news/
613.	exp historical article/
614.	Anecdotes as Topic/
615.	comment/
616.	case report/
617.	(letter or comment*).ti.
618.	or/20-27
619.	randomized controlled trial/ or random*.ti,ab.
620.	28 not 29
621.	animals/ not humans/
622.	exp Animals, Laboratory/
623.	exp Animal Experimentation/
624.	exp Models, Animal/
625.	exp Rodentia/
626.	(rat or rats or mouse or mice).ti.
627.	or/30-36
628.	19 not 37
629.	limit 38 to English language
630.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
631.	39 not 40
632.	economics/
633.	value of life/
634.	exp "costs and cost analysis"/
635.	exp Economics, Hospital/
636.	exp Economics, medical/
637.	Economics, nursing/
638.	economics, pharmaceutical/
639.	exp "Fees and Charges"/
640.	exp budgets/
641.	budget*.ti,ab.
642.	cost*.ti.
643.	(economic* or pharmaco?economic*).ti.
644.	(price* or pricing*).ti,ab.
645.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
646.	(financ* or fee or fees).ti,ab.
647.	(value adj2 (money or monetary)).ti,ab.
648.	or/42-57
649.	41 and 58

Embase (Ovid) search terms

541.	*preoperative period/ or *intraoperative period/ or *postoperative period/ or
------	---

	*perioperative nursing/ or *surgical patient/
542.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
543.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
544.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
545.	1 or 2 or 3 or 4
546.	peroperative care/ or exp peroperative care/ or exp perioperative nursing/
547.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
548.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
549.	6 or 7 or 8
550.	postoperative care/ or exp postoperative period/ or perioperative nursing/
551.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
552.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
553.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
554.	10 or 11 or 12 or 13
555.	exp preoperative care/ or preoperative period/
556.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
557.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
558.	15 or 16 or 17
559.	5 or 9 or 14 or 18
560.	letter.pt. or letter/
561.	note.pt.
562.	editorial.pt.
563.	case report/ or case study/
564.	(letter or comment*).ti.
565.	or/20-24
566.	randomized controlled trial/ or random*.ti,ab.
567.	25 not 26
568.	animal/ not human/
569.	nonhuman/
570.	exp Animal Experiment/
571.	exp Experimental Animal/
572.	animal model/
573.	exp Rodent/
574.	(rat or rats or mouse or mice).ti.
575.	or/27-34
576.	19 not 35
577.	limit 36 to English language

578.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
579.	37 not 38
580.	health economics/
581.	exp economic evaluation/
582.	exp health care cost/
583.	exp fee/
584.	budget/
585.	funding/
586.	budget*.ti,ab.
587.	cost*.ti.
588.	(economic* or pharmaco?economic*).ti.
589.	(price* or pricing*).ti,ab.
590.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)),ab.
591.	(financ* or fee or fees).ti,ab.
592.	(value adj2 (money or monetary)).ti,ab.
593.	or/40-52
594.	39 and 53

NHS EED and HTA (CRD) search terms

#261.	MeSH DESCRIPTOR Preoperative Care EXPLODE ALL TREES
#262.	MeSH DESCRIPTOR Perioperative Care EXPLODE ALL TREES
#263.	MeSH DESCRIPTOR Perioperative Period EXPLODE ALL TREES
#264.	MeSH DESCRIPTOR Perioperative Nursing EXPLODE ALL TREES
#265.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#266.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*))
#267.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#268.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#269.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#270.	(* IN HTA)
#271.	(* IN NHSEED)
#272.	#9 AND #10
#273.	#9 AND #11
#274.	MeSH DESCRIPTOR Intraoperative Care EXPLODE ALL TREES
#275.	#1 OR #2 OR #3 OR #4 OR #14
#276.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*))
#277.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*))
#278.	((postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*))
#279.	((after adj3 (surg* or operat* or anaesthes* or anesthes*))
#280.	((post adj3 (operat* or anaesthes* or anesthes*))

#281.	((pre-operat* or preoperat* or pre-surg* or presurg*))
#282.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*))
#283.	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22
#284.	#10 AND #23
#285.	#11 AND #23
#286.	#12 OR #13 OR #24 OR #25

Appendix M: Specialist recovery areas

Perioperative Care Specialist Recovery Areas search strategy M

This literature search strategy was used for the following reviews;

- **What is the clinical and cost effectiveness of postoperative recovery in specialist areas, including intensive care, for adults?**

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018. {NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

M.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 24: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	[All years] 1946 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies Observational studies
Embase (OVID)	[All years] 1974 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies Observational studies
The Cochrane Library (Wiley)	[All years] Cochrane Reviews to 2019 Issue 5 of 12 CENTRAL to 2019 Issue 5 of 12 DARE, and NHSEED to 2015 Issue 2 of 4 HTA to 2016 Issue 4 of 4	None

Medline (Ovid) search terms

669.	postoperative care/ or exp Postoperative Period/ or exp perioperative nursing/
670.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
671.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
672.	or/1-3
673.	limit 4 to English language
674.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
675.	5 not 6

676.	letter/
677.	editorial/
678.	news/
679.	exp historical article/
680.	Anecdotes as Topic/
681.	comment/
682.	case report/
683.	(letter or comment*).ti.
684.	or/8-15
685.	randomized controlled trial/ or random*.ti,ab.
686.	16 not 17
687.	animals/ not humans/
688.	exp Animals, Laboratory/
689.	exp Animal Experimentation/
690.	exp Models, Animal/
691.	exp Rodentia/
692.	(rat or rats or mouse or mice).ti.
693.	or/18-24
694.	7 not 25
695.	Intensive care units/
696.	Coronary care units/
697.	Recovery room/
698.	Respiratory care units/
699.	((intensive or depend*) adj3 (care or caring or unit*)).ti,ab.
700.	(ICU* or SICU* or MICU* or ITU* or CCU* or CICU* or CVICU* or PACU*).ti,ab.
701.	((care or caring or coronary or respiratory) adj3 unit*).ti,ab.
702.	(outreach or out reach).ti,ab.
703.	(recover* adj2 (ward* or room*)).ti,ab.
704.	(surg* adj2 ward*).ti,ab.
705.	(anesthesia or anaesthesia or postanesthesia or postanaesthesia).ti,ab.
706.	or/27-37
707.	26 and 38
708.	randomized controlled trial.pt.
709.	controlled clinical trial.pt.
710.	randomi#ed.ab.
711.	placebo.ab.
712.	randomly.ab.
713.	clinical trials as topic.sh.
714.	trial.ti.
715.	or/40-46
716.	Meta-Analysis/
717.	Meta-Analysis as Topic/
718.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
719.	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
720.	(reference list* or bibliograph* or hand search* or manual search* or relevant

	journals).ab.
721.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
722.	(search* adj4 literature).ab.
723.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
724.	cochrane.jw.
725.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
726.	or/48-57
727.	Epidemiologic studies/
728.	Observational study/
729.	exp Cohort studies/
730.	(cohort adj (study or studies or analys* or data)).ti,ab.
731.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.
732.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
733.	Controlled Before-After Studies/
734.	Historically Controlled Study/
735.	Interrupted Time Series Analysis/
736.	(before adj2 after adj2 (study or studies or data)).ti,ab.
737.	or/59-68
738.	exp case control study/
739.	case control*.ti,ab.
740.	or/70-71
741.	69 or 72
742.	Cross-sectional studies/
743.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
744.	or/74-75
745.	69 or 76
746.	69 or 72 or 76
747.	39 and (47 or 58 or 78)

Embase (Ovid) search terms

670.	*postoperative care/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
671.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
672.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
673.	or/1-3
674.	limit 4 to English language
675.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
676.	5 not 6
677.	letter.pt. or letter/
678.	note.pt.
679.	editorial.pt.
680.	case report/ or case study/

681.	(letter or comment*).ti.
682.	or/8-12
683.	randomized controlled trial/ or random*.ti,ab.
684.	13 not 14
685.	animal/ not human/
686.	nonhuman/
687.	exp Animal Experiment/
688.	exp Experimental Animal/
689.	animal model/
690.	exp Rodent/
691.	(rat or rats or mouse or mice).ti.
692.	or/15-22
693.	7 not 23
694.	*intensive care unit/ or exp coronary care unit/ or *medical intensive care unit/ or *neurological intensive care unit/ or *surgical intensive care unit/
695.	((intensive or depend*) adj3 (care or caring or unit*)).ti,ab.
696.	(ICU* or SICU* or MICU* or ITU* or CCU* or CICU* or CVICU*).ti,ab.
697.	((care or caring or coronary or respiratory) adj3 unit*).ti,ab.
698.	(outreach or out reach).ti,ab.
699.	(recover* adj2 (ward* or room*)).ti,ab.
700.	(surg* adj2 ward*).ti,ab.
701.	(anesthesia or anaesthesia or postanesthesia or postanaesthesia).ti,ab.
702.	or/25-32
703.	24 and 33
704.	random*.ti,ab.
705.	factorial*.ti,ab.
706.	(crossover* or cross over*).ti,ab.
707.	((doubl* or singl*) adj blind*).ti,ab.
708.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
709.	crossover procedure/
710.	single blind procedure/
711.	randomized controlled trial/
712.	double blind procedure/
713.	or/35-43
714.	systematic review/
715.	Meta-Analysis/
716.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
717.	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
718.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
719.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
720.	(search* adj4 literature).ab.
721.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
722.	cochrane.jw.

723.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
724.	or/45-54
725.	Epidemiologic studies/
726.	Observational study/
727.	exp Cohort studies/
728.	(cohort adj (study or studies or analys* or data)).ti,ab.
729.	((follow up or observational or uncontrolled or non randomi#ed or epidemiologic*) adj (study or studies or data)).ti,ab.
730.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort* or data)).ti,ab.
731.	Controlled Before-After Studies/
732.	Historically Controlled Study/
733.	Interrupted Time Series Analysis/
734.	(before adj2 after adj2 (study or studies or data)).ti,ab.
735.	or/56-65
736.	exp case control study/
737.	case control*.ti,ab.
738.	or/67-68
739.	66 or 69
740.	Cross-sectional studies/
741.	(cross sectional and (study or studies or review or analys* or cohort* or data)).ti,ab.
742.	or/71-72
743.	66 or 73
744.	66 or 69 or 73
745.	34 and (44 or 55 or 75)

Cochrane Library (Wiley) search terms

#253.	MeSH descriptor: [Postoperative Care] this term only
#254.	MeSH descriptor: [Postoperative Period] this term only
#255.	MeSH descriptor: [Perioperative Nursing] this term only
#256.	(or #1-#3)
#257.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) near/3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab
#258.	((care* or caring or treat* or nurs* or recover* or monitor*) near/3 (after) near/3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab
#259.	(or #4-#6)
#260.	MeSH descriptor: [Intensive Care Units] this term only
#261.	MeSH descriptor: [Coronary Care Units] this term only
#262.	MeSH descriptor: [Recovery Room] this term only
#263.	MeSH descriptor: [Respiratory Care Units] this term only
#264.	((intensive or depend*) near/3 (care or caring or unit*)):ti,ab
#265.	(ICU* or SICU* or MICU* or ITU* or CCU* or CICU* or CVICU* or PACU*):ti,ab
#266.	((care or caring or coronary or respiratory) near/3 unit*):ti,ab
#267.	(outreach or out reach):ti,ab
#268.	(recover* near/2 (ward* or room* or unit*)):ti,ab
#269.	(surg* near/2 ward*):ti,ab
#270.	(anesthesia or anaesthesia or postanesthesia or postanaesthesia):ti,ab

#271.	(or #8-#18)
#272.	#7 and #19

M.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to the perioperative care population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional health economics searches were run on Medline and Embase.

Table 25: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 30 May 2019	Exclusions Health economics studies
Embase	2014 – 30 May 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - Inception – 02 May 2019 NHSEED - Inception to 02 May 2019	None

Medline (Ovid) search terms

650.	exp Preoperative Care/ or exp Perioperative Care/ or exp Perioperative Period/ or exp Perioperative Nursing/
651.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
652.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
653.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
654.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
655.	1 or 2 or 3 or 4 or 5
656.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
657.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
658.	7 or 8
659.	postoperative care/ or exp Postoperative Period/ or exp Perioperative nursing/
660.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
661.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
662.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
663.	10 or 11 or 12 or 13
664.	exp Preoperative Care/ or Preoperative Period/
665.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
666.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
667.	15 or 16 or 17

668.	6 or 9 or 14 or 18
669.	letter/
670.	editorial/
671.	news/
672.	exp historical article/
673.	Anecdotes as Topic/
674.	comment/
675.	case report/
676.	(letter or comment*).ti.
677.	or/20-27
678.	randomized controlled trial/ or random*.ti,ab.
679.	28 not 29
680.	animals/ not humans/
681.	exp Animals, Laboratory/
682.	exp Animal Experimentation/
683.	exp Models, Animal/
684.	exp Rodentia/
685.	(rat or rats or mouse or mice).ti.
686.	or/30-36
687.	19 not 37
688.	limit 38 to English language
689.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
690.	39 not 40
691.	economics/
692.	value of life/
693.	exp "costs and cost analysis"/
694.	exp Economics, Hospital/
695.	exp Economics, medical/
696.	Economics, nursing/
697.	economics, pharmaceutical/
698.	exp "Fees and Charges"/
699.	exp budgets/
700.	budget*.ti,ab.
701.	cost*.ti.
702.	(economic* or pharmaco?economic*).ti.
703.	(price* or pricing*).ti,ab.
704.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
705.	(financ* or fee or fees).ti,ab.
706.	(value adj2 (money or monetary)).ti,ab.
707.	or/42-57
708.	41 and 58

Embase (Ovid) search terms

595.	*preoperative period/ or *intraoperative period/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
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596.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
597.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
598.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
599.	1 or 2 or 3 or 4
600.	peroperative care/ or exp peroperative care/ or exp perioperative nursing/
601.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
602.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
603.	6 or 7 or 8
604.	postoperative care/ or exp postoperative period/ or perioperative nursing/
605.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
606.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
607.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
608.	10 or 11 or 12 or 13
609.	exp preoperative care/ or preoperative period/
610.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
611.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
612.	15 or 16 or 17
613.	5 or 9 or 14 or 18
614.	letter.pt. or letter/
615.	note.pt.
616.	editorial.pt.
617.	case report/ or case study/
618.	(letter or comment*).ti.
619.	or/20-24
620.	randomized controlled trial/ or random*.ti,ab.
621.	25 not 26
622.	animal/ not human/
623.	nonhuman/
624.	exp Animal Experiment/
625.	exp Experimental Animal/
626.	animal model/
627.	exp Rodent/
628.	(rat or rats or mouse or mice).ti.
629.	or/27-34
630.	19 not 35
631.	limit 36 to English language
632.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)

633.	37 not 38
634.	health economics/
635.	exp economic evaluation/
636.	exp health care cost/
637.	exp fee/
638.	budget/
639.	funding/
640.	budget*.ti,ab.
641.	cost*.ti.
642.	(economic* or pharmaco?economic*).ti.
643.	(price* or pricing*).ti,ab.
644.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
645.	(financ* or fee or fees).ti,ab.
646.	(value adj2 (money or monetary)).ti,ab.
647.	or/40-52
648.	39 and 53

NHS EED and HTA (CRD) search terms

#287.	MeSH DESCRIPTOR Preoperative Care EXPLODE ALL TREES
#288.	MeSH DESCRIPTOR Perioperative Care EXPLODE ALL TREES
#289.	MeSH DESCRIPTOR Perioperative Period EXPLODE ALL TREES
#290.	MeSH DESCRIPTOR Perioperative Nursing EXPLODE ALL TREES
#291.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#292.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*))
#293.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#294.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine))
#295.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#296.	(* IN HTA)
#297.	(* IN NHSEED)
#298.	#9 AND #10
#299.	#9 AND #11
#300.	MeSH DESCRIPTOR Intraoperative Care EXPLODE ALL TREES
#301.	#1 OR #2 OR #3 OR #4 OR #14
#302.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*))
#303.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*))
#304.	((postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*))
#305.	((after adj3 (surg* or operat* or anaesthes* or anesthes*))
#306.	((post adj3 (operat* or anaesthes* or anesthes*))
#307.	((pre-operat* or preoperat* or pre-surg* or presurg*))
#308.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or

	anesthes*))
#309.	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22
#310.	#10 AND #23
#311.	#11 AND #23
#312.	#12 OR #13 OR #24 OR #25

Appendix N: Management of pain

Perioperative Care Pain search strategy N

This literature search strategy was used for the following review questions:

- **What is the clinical and cost effectiveness of IV paracetamol compared to oral paracetamol given post operatively in managing acute post-operative pain?**
- **What is the clinical and cost effectiveness of adding IV paracetamol to IV opioids given intraoperatively in managing acute post-operative pain?**
- **What is the clinical and cost effectiveness of NSAIDs for managing acute postoperative pain?**
- **What is the clinical and cost effectiveness of IV opioid compared to oral opioid given post operatively in managing acute post-operative pain?**
- **What is the most clinically and cost effective opioid administration strategy?**
- **What is the clinical and cost effectiveness of adding IV ketamine to iv opioids in managing acute post-operative pain?**
- **What is the clinical and cost effectiveness of neuropathic nerve stabilisers in managing acute post-operative pain?**

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual 2014, updated 2018.{NICE2014}

For more information, please see the Methods Report published as part of the accompanying documents for this guideline.

N.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 26: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1946 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies
Embase (OVID)	1974 – 30 May 2019	Exclusions Randomised controlled trials Systematic review studies
The Cochrane Library (Wiley)	Cochrane Reviews to 2019 Issue 5 of 12 CENTRAL to 2019 Issue 5 of 12 DARE, and NHSEED to 2015 Issue 2 of 4	None

Database	Dates searched	Search filter used
	HTA to 2016 Issue 4 of 4	

Medline (Ovid) search terms

748.	postoperative care/ or exp Postoperative Period/ or exp perioperative nursing/
749.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine or pain)).ti,ab.
750.	((care* or caring or treat* or nurs* or recover* or monitor* or pain) adj3 after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
751.	Pain, Postoperative/
752.	Intraoperative Care/ or exp Intraoperative Period/
753.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
754.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 during adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
755.	or/1-7
756.	limit 8 to English language
757.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
758.	9 not 10
759.	letter/
760.	editorial/
761.	news/
762.	exp historical article/
763.	Anecdotes as Topic/
764.	comment/
765.	case report/
766.	(letter or comment*).ti.
767.	or/12-19
768.	randomized controlled trial/ or random*.ti,ab.
769.	20 not 21
770.	animals/ not humans/
771.	exp Animals, Laboratory/
772.	exp Animal Experimentation/
773.	exp Models, Animal/
774.	exp Rodentia/
775.	(rat or rats or mouse or mice).ti.
776.	or/22-28
777.	11 not 29
778.	Acetaminophen/
779.	(acetaminophen or paracetamol).ti,ab.
780.	analgesics, opioid/
781.	(Opioid* or Opiate*).ti,ab.
782.	(morphine or morphia or msir).ti,ab.
783.	exp morphinans/
784.	(opium or omnopon or pantopon or papaveretum).ti,ab.

785.	(dihydromorphinone or hydromorph*).ti,ab.
786.	(oxycodone or dihydrohydroxycodone or dihydron or oxycodone or oxycontin).ti,ab.
787.	(Dihydrocodeine or dihydcdn).ti,ab.
788.	(Diamorphine or acetomorphine or diacetylmorphine or heroin).ti,ab.
789.	(Codeine or ardinex or galcodeine or isocodeine or methyl morphine).ti,ab.
790.	(Pethidine or isonipeccain or isonipeccaine hydrochloride or meperidine).ti,ab.
791.	Meperidine/
792.	(Fentanyl or fentanil or fentyl or phentanyl).ti,ab.
793.	Fentanyl/
794.	Dextromoramide.ti,ab.
795.	Dextromoramide/
796.	(Piritramide or Dipidolor or dipydolor or Piridolan or Pirium).ti,ab.
797.	Pirinitramide/
798.	(Dextropropoxyphene or levopropoxyphene or propoxyphene or proxyphen).ti,ab.
799.	Dextropropoxyphene/
800.	exp Methadone/
801.	(methadone or amidone).ti,ab.
802.	Pentazocine.ti,ab.
803.	Phenazocine.ti,ab.
804.	Oripavine.ti,ab.
805.	Buprenorphine.ti,ab.
806.	Butorphanol/
807.	Butorphanol.ti,ab.
808.	(tilid* or valoron).ti,ab.
809.	Tramadol/
810.	Tilidine/
811.	(Tramadol or tramal*).ti,ab.
812.	Dezocine.ti,ab.
813.	meptazinol/
814.	Meptazinol.ti,ab.
815.	(Tapentadol or cg5503).ti,ab.
816.	(Remifentanil or 'gi 87084b' or remifentanyl).ti,ab.
817.	(alfentanil or alfentanyl).ti,ab.
818.	(gabapentin* or pregabalin*).ti,ab.
819.	Alfentanil/
820.	Pregabalin/
821.	(neuropathic adj3 analges*).ti,ab.
822.	(nortriptyline or amitriptyline).ti,ab.
823.	Amitriptyline/
824.	Nortriptyline/
825.	Ketamine/
826.	(ketamine or keta).ti,ab.
827.	exp anti-inflammatory agents, non-steroidal/
828.	(nsaid* or ((non-steroid* or nonsteroid*) adj (antiinflammatory or anti-inflammatory))).ti,ab.

829.	(cox adj2 inhibitor*).ti,ab.
830.	coxibs.ti,ab.
831.	((cyclooxygenase or cyclo oxygenase) adj2 inhibitor*).ti,ab.
832.	exp Prostaglandin-Endoperoxide Synthases/
833.	(prostaglandin* adj2 (synthase* or synthesis or cyclooxygenase or cyclo oxygenase)).ti,ab.
834.	(ibuprofen or naproxen or fenoprofen or flurbiprofen or ketoprofen or dexketoprofen or dexibuprofen or tiaprofenic acid or diclofenac or dichlofenal or aceclofenac or indometacin or indomethacin or mefenamic acid or meloxicam or nabumetone or phenylbutazone or piroxicam or sulindac or tenoxicam or tolfenamic acid or ketorolac or celecoxib or etoricoxib or aceclofenac or acemetacin or etodolac or rofecoxib).ti,ab.
835.	or/31-87
836.	30 and 88
837.	randomized controlled trial.pt.
838.	controlled clinical trial.pt.
839.	randomi#ed.ab.
840.	placebo.ab.
841.	randomly.ab.
842.	clinical trials as topic.sh.
843.	trial.ti.
844.	or/90-96
845.	Meta-Analysis/
846.	Meta-Analysis as Topic/
847.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
848.	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
849.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
850.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
851.	(search* adj4 literature).ab.
852.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
853.	cochrane.jw.
854.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
855.	or/98-107
856.	89 and (97 or 108)

Embase (Ovid) search terms

746.	*postoperative care/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
747.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine or pain)).ti,ab.
748.	((care* or caring or treat* or nurs* or recover* or monitor* or pain) adj3 after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
749.	*Postoperative Pain/
750.	*peroperative care/ or *intraoperative period/ or *surgical patient/
751.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.

752.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 during adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
753.	or/1-7
754.	limit 8 to English language
755.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
756.	9 not 10
757.	letter.pt. or letter/
758.	note.pt.
759.	editorial.pt.
760.	case report/ or case study/
761.	(letter or comment*).ti.
762.	or/12-16
763.	randomized controlled trial/ or random*.ti,ab.
764.	17 not 18
765.	animal/ not human/
766.	nonhuman/
767.	exp Animal Experiment/
768.	exp Experimental Animal/
769.	animal model/
770.	exp Rodent/
771.	(rat or rats or mouse or mice).ti.
772.	or/19-26
773.	11 not 27
774.	*paracetamol/
775.	(acetaminophen or paracetamol).ti,ab.
776.	*opiate/
777.	(Opioid* or Opiate*).ti,ab.
778.	(morphine or morphia or msir).ti,ab.
779.	exp *morphinan derivative/
780.	(opium or omnopon or pantopon or papaveretum).ti,ab.
781.	(dihydromorphinone or hydromorph*).ti,ab.
782.	(oxycodone or dihydrohydroxycodone or dihydrone or oxycodone or oxycontin).ti,ab.
783.	exp *morphine derivative/
784.	(Dihydrocodeine or dihydcdn).ti,ab.
785.	(Diamorphine or acetomorphine or diacetylmorphine or heroin).ti,ab.
786.	(Codeine or ardinex or galcodine or isocodeine or methyl morphine).ti,ab.
787.	(Pethidine or isonipeccain or isonipeccaine hydrochloride or meperidine).ti,ab.
788.	*pethidine/
789.	(Fentanyl or fentanil or fentyl or phentanyl).ti,ab.
790.	*fentanyl/
791.	Dextromoramide.ti,ab.
792.	*dextromoramide/
793.	(Piritramide or Dipidolor or dipydolor or Piridolan or Pirium).ti,ab.
794.	*piritramide/
795.	(Dextropropoxyphene or levopropoxyphene or propoxyphene or proxyphen).ti,ab.

796.	(methadone or amidone).ti,ab.
797.	*methadone/
798.	Pentazocine.ti,ab.
799.	*pentazocine/
800.	Phenazocine.ti,ab.
801.	*Phenazocine/
802.	Oripavine.ti,ab.
803.	Buprenorphine.ti,ab.
804.	Butorphanol.ti,ab.
805.	(tilid* or valoron).ti,ab.
806.	*tilidine/
807.	(Tramadol or tramal*).ti,ab.
808.	*tramadol/
809.	Dezocine.ti,ab.
810.	*dezocine/
811.	Meptazinol.ti,ab.
812.	*meptazinol/
813.	(Tapentadol or cg5503).ti,ab.
814.	*tapentadol/
815.	(Remifentanil or 'gi 87084b' or remifentanyl).ti,ab.
816.	*remifentanil/
817.	(alfentanil or alfentanyl).ti,ab.
818.	alfentanil/
819.	(gabapentin* or pregabalin*).ti,ab.
820.	*pregabalin/
821.	(neuropathic adj3 analges*).ti,ab.
822.	(nortriptyline or amitriptyline).ti,ab.
823.	*amitriptyline/
824.	*nortriptyline/
825.	(ketamine or keta).ti,ab.
826.	ketamine/
827.	*ketamine/
828.	exp *narcotic analgesic agent/
829.	*nonsteroid antiinflammatory agent/ or aceclofenac/ or acemetacin/ or alclofenac/ or celecoxib/ or dexibuprofen/ or dexketoprofen/ or diclofenac/ or etodolac/ or etoricoxib/ or fenoprofen/ or flurbiprofen/ or ibuprofen/ or indometacin/ or ketoprofen/ or ketorolac/ or mefenamic acid/ or meloxicam/ or nabumetone/ or naproxen/ or phenylbutazone/ or piroxicam/ or rofecoxib/ or sulindac/ or tenoxicam/ or tiaprofenic acid/ or tolfenamic acid/
830.	(nsaid* or ((non-steroid* or nonsteroid*) adj (antiinflammatory or anti-inflammatory))).ti,ab.
831.	(cox adj2 inhibitor*).ti,ab.
832.	coxibs.ti,ab.
833.	((cyclooxygenase or cyclo oxygenase) adj2 inhibitor*).ti,ab.
834.	(prostaglandin* adj2 (synthase* or synthesis or cyclooxygenase or cyclo oxygenase)).ti,ab.
835.	*prostaglandin synthase/

836.	(ibuprofen or naproxen or fenoprofen or flurbiprofen or ketoprofen or dexketoprofen or dexibuprofen or tiaprofenic acid or diclofenac or dichlofenal or aceclofenac or indometacin or indomethacin or mefenamic acid or meloxicam or nabumetone or phenylbutazone or piroxicam or sulindac or tenoxicam or tolfenamic acid or ketorolac or celecoxib or etoricoxib or aceclofenac or acemetacin or etodolac or rofecoxib).ti,ab.
837.	or/29-91
838.	random*.ti,ab.
839.	factorial*.ti,ab.
840.	(crossover* or cross over*).ti,ab.
841.	((doubl* or singl*) adj blind*).ti,ab.
842.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
843.	crossover procedure/
844.	single blind procedure/
845.	randomized controlled trial/
846.	double blind procedure/
847.	or/93-101
848.	systematic review/
849.	Meta-Analysis/
850.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
851.	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
852.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
853.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
854.	(search* adj4 literature).ab.
855.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
856.	cochrane.jw.
857.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
858.	or/103-112
859.	28 and 92
860.	114 and (102 or 113)

Cochrane Library (Wiley) search terms

#273.	MeSH descriptor: [Postoperative Care] this term only
#274.	MeSH descriptor: [Postoperative Period] this term only
#275.	MeSH descriptor: [Perioperative Nursing] this term only
#276.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) near/3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine or pain)):ti,ab
#277.	((care* or caring or treat* or nurs* or recover* or monitor* or pain) near/3 after near/3 (surg* or operat* or anaesthes* or anesthes*)):ti,ab
#278.	MeSH descriptor: [Pain, Postoperative] this term only
#279.	MeSH descriptor: [Intraoperative Care] this term only
#280.	MeSH descriptor: [Intraoperative Period] explode all trees
#281.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) near/3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)):ti,ab
#282.	((care* or caring or treat* or nurs* or recover* or monitor*) near/3 (during) near/3 (surg* or operat* or anaesthes* or anesthes*)):ti,ab

#283.	(or #1-#10)
#284.	MeSH descriptor: [Acetaminophen] this term only
#285.	(acetaminophen or paracetamol):ti,ab
#286.	MeSH descriptor: [Analgesics, Opioid] this term only
#287.	(Opioid* or Opiate*):ti,ab
#288.	(morphine or morphia or msir):ti,ab
#289.	MeSH descriptor: [Morphinans] explode all trees
#290.	(opium or omnopon or pantopon or papaveretum):ti,ab
#291.	(dihydromorphinone or hydromorph*):ti,ab
#292.	(oxycodone or dihydrohydroxycodone or dihydrone or oxycodone or oxycontin):ti,ab
#293.	(Dihydrocodeine or dihydcdn):ti,ab
#294.	(Diamorphine or acetomorphine or diacetylmorphine or heroin):ti,ab
#295.	(Codeine or ardinex or galcodeine or isocodeine or methyl morphine):ti,ab
#296.	(Pethidine or isonipecain or isonipecaine hydrochloride or meperidine):ti,ab
#297.	MeSH descriptor: [Meperidine] explode all trees
#298.	(Fentanyl or fentanil or fentyl or phentanyl):ti,ab
#299.	MeSH descriptor: [Fentanyl] this term only
#300.	Dextromoramide:ti,ab
#301.	MeSH descriptor: [Dextromoramide] this term only
#302.	(Piritramide or Dipidolor or dipydolor or Piridolan or Pirium):ti,ab
#303.	MeSH descriptor: [Pirinitramide] this term only
#304.	(Dextropropoxyphene or levopropoxyphene or propoxyphene or proxyphen):ti,ab
#305.	MeSH descriptor: [Dextropropoxyphene] this term only
#306.	(methadone or amidone):ti,ab
#307.	MeSH descriptor: [Methadone] explode all trees
#308.	Pentazocine:ti,ab
#309.	Phenazocine:ti,ab
#310.	Oripavine:ti,ab
#311.	Buprenorphine:ti,ab
#312.	MeSH descriptor: [Butorphanol] this term only
#313.	Butorphanol:ti,ab
#314.	(tilid* or valoron):ti,ab
#315.	MeSH descriptor: [Tilidine] this term only
#316.	(Tramadol or tramal*):ti,ab
#317.	MeSH descriptor: [Tramadol] explode all trees
#318.	Dezocine:ti,ab
#319.	MeSH descriptor: [Meptazinol] this term only
#320.	Meptazinol:ti,ab
#321.	(Tapentadol or cg5503):ti,ab
#322.	(Remifentanil or gi 87084b or remifentanyl):ti,ab
#323.	(alfentanil or alfentanyl):ti,ab
#324.	MeSH descriptor: [Alfentanil] this term only
#325.	(gabapentin* or pregabalin*):ti,ab
#326.	MeSH descriptor: [Pregabalin] this term only
#327.	(neuropathic near/3 analges*):ti,ab

#328.	(nortriptyline or amitriptyline):ti,ab
#329.	MeSH descriptor: [Nortriptyline] this term only
#330.	MeSH descriptor: [Amitriptyline] this term only
#331.	MeSH descriptor: [Ketamine] this term only
#332.	(ketamine or keta):ti,ab
#333.	MeSH descriptor: [Anti-Inflammatory Agents, Non-Steroidal] explode all trees
#334.	(nsaid* or ((non-steroid* or nonsteroid*) near/1 (antiinflammatory or anti-inflammatory))):ti,ab
#335.	(cox near/2 inhibitor*):ti,ab
#336.	coxibs:ti,ab
#337.	((cyclooxygenase or cyclo oxygenase) near/2 inhibitor*):ti,ab
#338.	MeSH descriptor: [Prostaglandin-Endoperoxide Synthases] explode all trees
#339.	(prostaglandin* near/2 (synthase* or synthesis or cyclooxygenase or cyclo oxygenase)):ti,ab
#340.	(ibuprofen or naproxen or fenoprofen or flurbiprofen or ketoprofen or dexketoprofen or dexibuprofen or tiaprofenic acid or diclofenac or dichlofenal or aceclofenac or indometacin or indomethacin or mefenamic acid or meloxicam or nabumetone or phenylbutazone or piroxicam or sulindac or tenoxicam or tolfenamic acid or ketorolac or celecoxib or etoricoxib or aceclofenac or acemetacin or etodolac or rofecoxib):ti,ab
#341.	(or #12-#68)
#342.	#11 and #69

N.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to the perioperative care population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional health economics searches were run on Medline and Embase.

Table 27: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 30 May 2019	Exclusions Health economics studies
Embase	2014 – 30 May 2019	Exclusions Health economics studies
Centre for Research and Dissemination (CRD)	HTA - Inception – 02 May 2019 NHSEED - Inception to 02 May 2019	None

Medline (Ovid) search terms

709.	exp Preoperative Care/ or exp Perioperative Care/ or exp Perioperative Period/ or exp Perioperative Nursing/
710.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
711.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
712.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.

713.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
714.	1 or 2 or 3 or 4 or 5
715.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
716.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
717.	7 or 8
718.	postoperative care/ or exp Postoperative Period/ or exp Perioperative nursing/
719.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
720.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
721.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
722.	10 or 11 or 12 or 13
723.	exp Preoperative Care/ or Preoperative Period/
724.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
725.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
726.	15 or 16 or 17
727.	6 or 9 or 14 or 18
728.	letter/
729.	editorial/
730.	news/
731.	exp historical article/
732.	Anecdotes as Topic/
733.	comment/
734.	case report/
735.	(letter or comment*).ti.
736.	or/20-27
737.	randomized controlled trial/ or random*.ti,ab.
738.	28 not 29
739.	animals/ not humans/
740.	exp Animals, Laboratory/
741.	exp Animal Experimentation/
742.	exp Models, Animal/
743.	exp Rodentia/
744.	(rat or rats or mouse or mice).ti.
745.	or/30-36
746.	19 not 37
747.	limit 38 to English language
748.	(exp child/ or exp pediatrics/ or exp infant/) not (exp adolescent/ or exp adult/ or exp middle age/ or exp aged/)
749.	39 not 40
750.	economics/
751.	value of life/
752.	exp "costs and cost analysis"/
753.	exp Economics, Hospital/
754.	exp Economics, medical/

755.	Economics, nursing/
756.	economics, pharmaceutical/
757.	exp "Fees and Charges"/
758.	exp budgets/
759.	budget*.ti,ab.
760.	cost*.ti.
761.	(economic* or pharmaco?economic*).ti.
762.	(price* or pricing*).ti,ab.
763.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
764.	(financ* or fee or fees).ti,ab.
765.	(value adj2 (money or monetary)).ti,ab.
766.	or/42-57
767.	41 and 58

Embase (Ovid) search terms

649.	*preoperative period/ or *intraoperative period/ or *postoperative period/ or *perioperative nursing/ or *surgical patient/
650.	((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
651.	((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)).ti,ab.
652.	((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
653.	1 or 2 or 3 or 4
654.	peroperative care/ or exp peroperative care/ or exp perioperative nursing/
655.	(intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*).ti,ab.
656.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
657.	6 or 7 or 8
658.	postoperative care/ or exp postoperative period/ or perioperative nursing/
659.	(postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*).ti,ab.
660.	(after adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
661.	(post adj3 (operat* or anaesthes* or anesthes*)).ti,ab.
662.	10 or 11 or 12 or 13
663.	exp preoperative care/ or preoperative period/
664.	(pre-operat* or preoperat* or pre-surg* or presurg*).ti,ab.
665.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*)).ti,ab.
666.	15 or 16 or 17
667.	5 or 9 or 14 or 18
668.	letter.pt. or letter/
669.	note.pt.
670.	editorial.pt.
671.	case report/ or case study/
672.	(letter or comment*).ti.

673.	or/20-24
674.	randomized controlled trial/ or random*.ti,ab.
675.	25 not 26
676.	animal/ not human/
677.	nonhuman/
678.	exp Animal Experiment/
679.	exp Experimental Animal/
680.	animal model/
681.	exp Rodent/
682.	(rat or rats or mouse or mice).ti.
683.	or/27-34
684.	19 not 35
685.	limit 36 to English language
686.	(exp child/ or exp pediatrics/) not (exp adult/ or exp adolescent/)
687.	37 not 38
688.	health economics/
689.	exp economic evaluation/
690.	exp health care cost/
691.	exp fee/
692.	budget/
693.	funding/
694.	budget*.ti,ab.
695.	cost*.ti.
696.	(economic* or pharmaco?economic*).ti.
697.	(price* or pricing*).ti,ab.
698.	(cost* adj2 (effectiv* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
699.	(financ* or fee or fees).ti,ab.
700.	(value adj2 (money or monetary)).ti,ab.
701.	or/40-52
702.	39 and 53

NHS EED and HTA (CRD) search terms

#313.	MeSH DESCRIPTOR Preoperative Care EXPLODE ALL TREES
#314.	MeSH DESCRIPTOR Perioperative Care EXPLODE ALL TREES
#315.	MeSH DESCRIPTOR Perioperative Period EXPLODE ALL TREES
#316.	MeSH DESCRIPTOR Perioperative Nursing EXPLODE ALL TREES
#317.	(((perioperative* or peri-operative* or intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#318.	(((care* or caring or treat* or nurs* or recover* or monitor*) adj3 (before or prior or advance or during or after) adj3 (surg* or operat* or anaesthes* or anesthes*)))
#319.	(((pre-operative* or preoperative* or preop* or pre-op* or pre-surg* or presurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))

#320.	((postoperative* or postop* or post-op* or post-surg* or postsurg*) adj3 (care* or caring or treat* or nurs* or monitor* or recover* or medicine)))
#321.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#322.	(* IN HTA)
#323.	(* IN NHSEED)
#324.	#9 AND #10
#325.	#9 AND #11
#326.	MeSH DESCRIPTOR Intraoperative Care EXPLODE ALL TREES
#327.	#1 OR #2 OR #3 OR #4 OR #14
#328.	((intraoperative* or intra-operative* or intrasurg* or intra-surg* or peroperat* or per-operat* or perioperat* or peri-operat*))
#329.	((during or duration) adj3 (surg* or operat* or anaesthes* or anesthes*))
#330.	((postop* or post-op* or post-surg* or postsurg* or perioperat* or peri-operat*))
#331.	((after adj3 (surg* or operat* or anaesthes* or anesthes*))
#332.	((post adj3 (operat* or anaesthes* or anesthes*))
#333.	((pre-operat* or preoperat* or pre-surg* or presurg*))
#334.	((before or prior or advance or pre or prepar*) adj3 (surg* or operat* or anaesthes* or anesthes*))
#335.	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22
#336.	#10 AND #23
#337.	#11 AND #23
#338.	#12 OR #13 OR #24 OR #25