

Appendix – Evidence Checking

Table A1: Search strategies by question. CINAHL = Cumulative Index to Nursing and Allied Health Literature.

	Question	Search Strategy: Cochrane, Embase, CINAHL and Medline.
1	How can care after an operation be optimised to minimise the use of resources and creation of waste whilst providing good care?	1 ((Postop* or "post op*" or periop* or "peri op*" or post-surgery) adj6 care).ti,ab. 2 Postoperative Care/ 3 1 or 2 4 (optimis* or optimiz* or enhance* or improve* or better or best).ti,ab. 5 3 and 4 6 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab. 7 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab. 8 Carbon Footprint/ or Environmental Pollution/ 9 6 or 7 or 8 10 5 and 9 11 limit 10 to (yr="2017 -Current" and (meta analysis or "systematic review")) 12 limit 11 to english language
2	Which aspects of care before and after an operation can be provided in the community in a more sustainable way?	1 ((Postop* or "post op*" or preop* or "pre op*" or periop* or "peri op*" or post-surgery) adj6 care).ti,ab. 2 ((before or prior) adj2 (surgery or operation)).ti,ab. 3 (after adj2 (surgery or operation)).ti,ab. 4 (following adj2 (surgery or operation)).ti,ab. 5 2 or 3 or 4 6 care.ti,ab. 7 5 and 6 8 Preoperative Care/ 9 Postoperative Care/ 10 ("pre-operative investigations" or pre-habilitation).ti,ab. 11 ("post operative" adj3 rehabilitation).ti,ab. 12 (postop adj3 rehabilitation).ti,ab. 13 1 or 7 or 8 or 9 or 10 or 11 or 12 14 exp Community Health Services/ 15 (community or "general practice" or GP or "district nurse*" or "remote clinic" or "remote clinics" or "one-stop clinic" or "one-stop clinics").ti,ab. 16 exp Community Health Nursing/ 17 14 or 15 or 16 18 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab. 19 Carbon Footprint/ or Environmental Pollution/ 20 (transport* or travel*).ti,ab. 21 18 or 19 or 20 22 13 and 17 and 21 23 limit 22 to (yr="2017 -Current" and (meta analysis or "systematic review"))

3	How can we increase the reuse and recycling of equipment used for rehabilitation in the recovery period after an operation?	<p>1 (Postop* or "post op*" or post-surgery).ti,ab. 2 (after adj2 (surgery or operation)).ti,ab. 3 (following adj2 (surgery or operation)).ti,ab. 4 Postoperative Care/ 5 ((surgery or operation) adj4 (recover* adj3 period*)).ti,ab. 6 Postoperative Period/ 7 1 or 2 or 3 or 4 or 5 or 6 8 Rehabilitation/ 9 exp Self-Help Devices/ 10 ((medical or therap* or rehabilitat* or mobility or mobile) adj5 (aid* or device* or equipment)).ti,ab. 11 8 or 9 or 10 12 (recycl* or reusable or reuse or reutilis* or reutiliz* or reusing or reused).ti,ab. 13 "repeated use".ti,ab. 14 "repeatedly using".ti,ab. 15 "using again".ti,ab. 16 "used again".ti,ab. 17 "use again".ti,ab. 18 "repeated utiliz*".ti,ab. 19 "repeated utilis*".ti,ab. 20 Recycling/ or Equipment reuse/ 21 12 or 13 or 14 or 15 or 18 or 19 or 20 22 7 and 11 and 21 23 limit 22 to (yr="2017 -Current" and (meta analysis or "systematic review"))</p>
4	Can the supply of medicines after an operation be optimised to minimise waste?	<p>1 (Postop* or "post op*" or post-surgery).ti,ab. 2 (after adj2 (surgery or operation)).ti,ab. 3 (following adj2 (surgery or operation)).ti,ab. 4 Postoperative Care/ 5 ((surgery or operation) adj4 (recover* adj3 period*)).ti,ab. 6 Postoperative Period/ 7 1 or 2 or 3 or 4 or 5 or 6 8 (medicine* or medication* or drug* or prescription*).ti,ab. 9 Medicine/mt, og [Methods, Organization & Administration] 10 exp Pharmaceutical Preparations/ 11 Self Medication/ 12 exp Prescriptions/ 13 8 or 9 or 10 or 11 or 12 14 7 and 13 15 (optimis* or optimiz* or enhance* or improve* or better or best).ti,ab. 16 14 and 15 17 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab. 18 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab. 19 Carbon Footprint/ or Environmental Pollution/</p>

		20	17 or 18 or 19
		21	16 and 20
		22	limit 21 to (yr="2017 -Current" and (meta analysis or "systematic review"))
5	How does living a 'greener' lifestyle affect recovery after an operation?	1	(Postop* or "post op*" or post-surgery).ti,ab.
		2	(after adj2 (surgery or operation)).ti,ab.
		3	Postoperative Period/
		4	(following adj2 (surgery or operation)).ti,ab.
		5	1 or 2 or 3 or 4
		6	((affect* or effect* quality or facilitate or aid or help* or assist* or benefit* or speed* or improve or advantag*) adj5 recover*).ti,ab.
		7	5 and 6
		8	(green* adj5 (life or "life style*" or lifestyle* or existence or living)).ti,ab.
		9	(vegan* or vegetarian* or vegetable*).ti,ab.
		10	diet, vegetarian/ or diet, vegan/
		11	((less or reduc* or limit* or omit* or exclud*) adj4 meat*).ti,ab.
		12	vegetarians/ or vegans/
		13	(exercis* or active or activit* or fit or fitness or walk* or running or swim* or gym or sport*).ti,ab.
		14	exp Exercise/
		15	8 or 9 or 10 or 11 or 12 or 13 or 14
		16	7 and 15
		17	(sustainab* or environment* or green* or "carbon footprint").ti,ab.
		18	Carbon Footprint/ or Environmental Pollution/
		19	((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.
		20	17 or 18 or 19
		21	16 and 20
		22	limit 21 to (yr="2017 -Current" and (meta analysis or "systematic review"))
6	What are the most sustainable forms of effective infection prevention and control used around the time of an operation (e.g. PPE, drapes, clean air ventilation)?	1	ipc.ti,ab.
		2	exp Infection Control/ or Surgical Wound Infection/
		3	(infection adj4 (rate* or incidenc* or occur* or reduc* or improv* or avoid* or prevent* or control*)).ti,ab.
		4	1 or 2 or 3
		5	exp Surgical Procedures, Operative/
		6	(Operation* or Surger* or Surgical or Procedure*).ti,ab.
		7	Operating Rooms/
		8	5 or 6 or 7
		9	(clean adj2 air).ti,ab.
		10	ventilat*.ti,ab.
		11	Ventilation/
		12	Surgical Drapes/
		13	Personal Protective Equipment/
		14	PPE.ti,ab.
		15	"personal protective equipment".ti,ab.
		16	(gloves or gown* or mask* or apron* or hat or hats* or "safety glasses" or goggles or shields).ti,ab.

		<p>17 exp Surgical Attire/ 18 ((eye or face or hand or respiratory or body or hearing) adj1 protection).ti,ab. 19 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 20 4 and 8 and 19 21 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab. 22 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab. 23 Carbon Footprint/ or Environmental Pollution/ 24 Product Packaging/ or Surgical Instruments/ or Recycling/ or Waste Management/ 25 ((recycl* or reusable or reuse or biodegradable or degradable or compostable or eco* or paper* or metal* or plastic* or single-use or "single use" or (individual* and wrap*)) adj4 (pack* or equipment* or item* or instrument*)).ti,ab. 26 21 or 22 or 23 or 24 or 25 27 20 and 26 28 limit 27 to (yr="2017 -Current" and (meta analysis or "systematic review")) 29 limit 28 to english language</p>
7	What effect does pre-habilitation (e.g., changes in physical activity, lifestyle and diet before an operation) have on the environmental impact of undergoing an operation?	<p>1 exp Preoperative Exercise/ or exp Preoperative Period/ 2 prehabilitation.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] 3 "preoperative exercise".mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] 4 life style/ or exp healthy lifestyle/ 5 "lifestyle intervention*".mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] 6 exp Diet, Healthy/ 7 "diet intervention*".mp. 8 1 or 2 or 3 or 4 or 5 or 6 or 7 9 sustainab*.ti,ab. 10 environment* impact.ti,ab. 11 carbon footprint*.ti,ab. 12 resource* reduc*.ti,ab. 13 "green* energy*".ab,ti. 14 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ab,ti. 15 ((recycl* or reusable or reuse or biodegradable or degradable or compostable or eco* or paper* or metal* or plastic* or single-use or "single use" or (individual* and wrap*)) adj4 (pack* or equipment* or item* or instrument*)).ti,ab. 16 exp Renewable Energy/ 17 exp Carbon Footprint/ 18 Product Packaging/ or Surgical Instruments/ or Recycling/ or Waste Management/ 19 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18</p>

		<p>20 (Operation* or Surger* or Surgical or Procedure*).ti,ab.</p> <p>21 Surgical Procedures, Operative/</p> <p>22 (Postop* or "post op*" or preop* or "pre op*" or periop* or "peri op*" or post-surgery).ti,ab.</p> <p>23 20 or 21 or 22</p> <p>24 8 and 19 and 23</p> <p>25 limit 24 to (yr="2017 -Current" and systematic reviews)</p>
8	What are the relative environmental impacts of the different elements of care delivered before an operation?	<p>1 exp Environment/</p> <p>2 "carbon footprint* ".ti,ab.</p> <p>3 "Environmental impact".ti,ab.</p> <p>4 1 or 2 or 3</p> <p>5 exp Preoperative care/</p> <p>6 (prehabilitation or pre-habilitation).ti,ab.</p> <p>7 (preoperative and (Clinic* or Scan* or investigat* or radiology)).ti,ab.</p> <p>8 5 or 6 or 7</p> <p>9 4 and 8</p> <p>10 limit 9 to yr="2017 -Current"</p> <p>11 limit 10 to "systematic review"</p>
9	How can investigations before an operation be used more efficiently?	<p>1 sustainab*.ti,ab.</p> <p>2 environment* impact.ti,ab.</p> <p>3 carbon footprint*.ti,ab.</p> <p>4 resource* reduc*.ti,ab.</p> <p>5 "green* energy*".ab,ti.</p> <p>6 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ab,ti.</p> <p>7 ((recycl* or reusable or reuse or biodegradable or degradable or compostable or eco* or paper* or metal* or plastic* or single-use or "single use" or (individual* and wrap*)) adj4 (pack* or equipment* or item* or instrument*)).ti,ab</p> <p>8 exp Renewable Energy/</p> <p>9 exp Carbon Footprint/</p> <p>10 Product Packaging/ or Surgical Instruments/ or Recycling/ or Waste Management/</p> <p>11 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10</p> <p>12 exp Preoperative Care/ or exp Preoperative Period/</p> <p>13 blood test.mp. or exp Hematologic Tests/</p> <p>14 exp Tomography, X-Ray Computed/ or exp Magnetic Resonance Imaging/</p> <p>15 exp X-Rays/</p> <p>16 exp Electrocardiography/</p> <p>17 exp Diagnostic Tests, Routine/</p> <p>18 "pre-operative test* ".ab,ti.</p> <p>19 "preoperative test* ".ab,ti.</p> <p>20 "Pre-operative scan* ".ab,ti.</p> <p>21 "preoperative scan* ".ab,ti.</p> <p>22 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21</p> <p>23 11 and 12 and 22 71</p>

		24 limit 23 to yr="2017 -Current"
		25 limit 24 to ("middle aged (45 plus years)" and "systematic review")
10	Can more efficient use of operating theatres and associated practices reduce the environmental impact of operations?	<p>1 operat*.mp. and (theatre* or theater*).ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>2 operat* suite*.ti,ab.</p> <p>3 patient pathway*.ti,ab.</p> <p>4 staffing level*.ti,ab.</p> <p>5 (theatre or theater).mp. and equipment*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>6 (operation* or surgical).mp. and equipment*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>7 (operation* or surgical).mp. and instrument*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>8 day surger*.ti,ab.</p> <p>9 Operating Rooms/</p> <p>10 Operating Rooms/mt, og [Methods, Organization & Administration] 3240</p> <p>11 "Personnel Staffing and Scheduling"/</p> <p>12 Surgical Equipment/</p> <p>13 Surgical Instruments/</p> <p>14 day surger*.mp.</p> <p>15 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14</p> <p>16 sustainab*.ti,ab.</p> <p>17 environment* impact.ti,ab.</p> <p>18 carbon footprint*.ti,ab.</p> <p>19 resource* reduc*.ti,ab.</p> <p>20 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ab,ti.</p> <p>21 ((recycl* or reusable or reuse or biodegradable or degradable or compostable or eco* or paper* or metal* or plastic* or single-use or "single use" or (individual* and wrap*)) adj4 (pack* or equipment* or item* or instrument*)).ti,ab.</p> <p>22 sustainability.mp.</p> <p>23 environment/ or carbon footprint/</p> <p>24 Environmental Pollution/ or Waste Management/</p> <p>25 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24</p> <p>26 operation*.ti,ab.</p> <p>27 surger*.ti,ab.</p> <p>28 General Surgery/</p> <p>29 operation.mp.</p> <p>30 26 or 27 or 28 or 29</p>

		<p>31 15 and 25 and 30</p> <p>32 limit 31 to (english language and "systematic review" and last 5 years) 22</p>
11	How can healthcare organisations more sustainably procure (obtain) medicines, equipment and items used during and around the time of an operation?	<p>1 (Operation* or Surger* or Surgical).mp. or Procedure*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>2 (Postop* or "post op*" or preop* or "pre op*" or periop* or "peri op*").mp. or post-surgery.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>3 Surgical Procedures, Operative/</p> <p>4 Postoperative Care/</p> <p>5 1 or 2 or 3 or 4</p> <p>6 (Sustainab* or (environment* and impact*) or "carbon footprint*").mp. or "green* energy".ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>7 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>8 Carbon Footprint/ or Environmental Pollution/</p> <p>9 Product Packaging/</p> <p>10 surgical Instruments/</p> <p>11 Recycling/</p> <p>12 Waste Management/</p> <p>13 ((recycl* or reusable or reuse or biodegradable or degradable or compostable or eco* or paper* or metal* or plastic* or single-use or "single use" or (individual* and wrap*)) adj4 (pack* or equipment* or item* or instrument*)).ti,ab.</p> <p>14 6 or 7 or 8</p> <p>15 9 or 10 or 11 or 12 or 13</p> <p>16 health* organi?ation*.ti,ab.</p> <p>17 Health Maintenance Organizations/ or Health Planning Organizations/</p> <p>18 16 or 17</p> <p>19 procur*.ti,ab.</p> <p>20 (purchas* or obtain*).ti,ab.</p> <p>21 "Equipment and Supplies, Hospital"/ or Durable Medical Equipment/</p> <p>22 (Equipment or Supplies or medicine*).ti,ab.</p> <p>23 19 or 20</p> <p>24 Pharmaceutical Preparations/</p> <p>25 21 or 22 or 24</p> <p>26 5 and 14 and 15 and 23 and 25</p>

		27 limit 26 to (english language and yr="2017 -Current")
12	What drives effective sustainable innovation in manufacturing of equipment and medical supplies used during and around the time of an operation?	<p>1 (Operation* or Surger* or Surgical).mp. or Procedure*.ti,ab. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word]</p> <p>2 (Postop* or "post op*" or preop* or "pre op*" or periop* or "peri op*").mp. or post-surgery.ti,ab. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word]</p> <p>3 Surgery/</p> <p>4 Postoperative care/</p> <p>5 1 or 2 or 3 or 4</p> <p>6 (Sustainab* or (environment* and impact*) or "carbon footprint*").mp. or "green* energy".ti,ab. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word]</p> <p>7 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>8 Carbon Footprint/ or Pollution/</p> <p>9 6 or 7 or 8</p> <p>10 ((recycl* or reusable or reuse or biodegradable or degradable or compostable or eco* or paper* or metal* or plastic* or single-use or "single use" or (individual* and wrap*)) adj4 (pack* or equipment* or item* or instrument*)).ti,ab.</p> <p>11 Packaging/ or Surgical equipment/ or Recycling/ or Waste Management/</p> <p>12 10 or 11</p> <p>13 (Equipment and Supplies, Hospital).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word] (10)</p> <p>14 devices/ or medical device/</p> <p>15 (Equipment or Supplies or medicine*).ti,ab.</p> <p>16 13 or 14 or 15</p> <p>17 manufacture.ti,ab.</p> <p>18 manufacture {Including Related Terms}</p> <p>19 manufacturing/</p> <p>20 16 or 17 or 19</p> <p>21 sustainable innovat*.ti,ab.</p> <p>22 9 or 21</p> <p>23 (preoperative or perioperative).ti,ab.</p> <p>24 preoperative evaluation/</p> <p>25 perioperative period/</p> <p>26 5 or 23 or 24 or 25</p> <p>27 12 and 20 and 22 and 26</p> <p>28 limit 27 to (english language and "systematic review" and yr="2017 -Current")</p>

13	What alternative, more sustainable, materials can replace plastic packaging and equipment used during and around the time of an operation?	<p>1 (Operation* or Surger* or Surgical or Procedure* or "operating room" or theatre).ab,ti.</p> <p>2 Surgery/ or Operating Rooms/</p> <p>3 1 or 2</p> <p>4 (Sustainab* or (environment* and impact*) or carbon footprint* or green* energy or ((wast* or resource*) and (minimiz* or minimis* or reduc*))).ab,ti.</p> <p>5 Carbon Footprint/</p> <p>6 Environmental Pollution/</p> <p>7 Recycling/ or Waste Management/</p> <p>8 ((recycl* or reusable or reuse or biodegradable or degradable or compostable or eco* or paper* or metal* or plastic* or single-use or "single use" or (individual* and wrap*)) adj4 (pack* or equipment* or item* or instrument*).ti,ab.</p> <p>9 Packaging/ or Surgical instruments/</p> <p>10 4 or 5 or 6</p> <p>11 7 or 8 or 9</p> <p>12 3 and 10 and 11</p> <p>13 limit 12 to (yr="2017 -Current" and english)</p> <p>14 limit 13 to "systematic review"</p>
14	How can the emission of greenhouse gases and air pollutants associated with an operation be reduced?	<p>1 (greenhouse gas* or air pollut* or greenhouse effect* or carbon footprint or (environment* and impact*).ti,ab.</p> <p>2 Greenhouse Effect/ or Air Pollution/ or Greenhouse Gas/ or Air Pollutant/</p> <p>3 1 or 2</p> <p>4 (Nitrous Oxide or Ethyl Chloride or Desflurane or Sevoflurane or Isoflurane or volatile ane?sthe*).ti,ab.</p> <p>5 ((low flow or minimal-flow) and ane?sthe*).ti,ab.</p> <p>6 Anesthetics, Inhalation/</p> <p>7 4 or 5 or 6</p> <p>8 (Operation* or Surger* or Surgical or Procedure*).ti,ab. or Surgery/</p> <p>9 3 and 7 and 8</p> <p>10 limit 9 to (yr="2017 -Current" and "systematic review")</p>
15	How and when is it appropriate to discuss the environmental impacts of care during and around the time of an operation with patients?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab.</p> <p>2 ((wast* or resource*) and (minimiz* or minimis* or reduc*))).ti,ab.</p> <p>3 Carbon Footprint/ or Environmental Pollution/</p> <p>4 1 or 2 or 3</p> <p>5 (Operation* or Surger* or Surgical or Procedure*).ti,ab.</p> <p>6 Surgical Procedures, Operative/</p> <p>7 5 or 6</p> <p>8 ((discuss* or inform* or educat* or consider* or talk* or conversation* or engag* or decid* or decision*) adj4 patient*).ti,ab.</p> <p>9 Patient Education as Topic/ or Decision Making, Shar</p> <p>10 8 or 9</p> <p>11 4 and 7 and 10</p> <p>12 limit 11 to (yr="2017 -Current" and "systematic review")</p>

16	How can more sustainable reusable equipment safely be used during and around the time of an operation?	<p>1 (Operation* or Surger* or Surgical or Procedure* or Postop* or "post op*" or preop* or "pre op*" or periop* or "peri op*" or post-surgery).ti,ab.</p> <p>2 Surgical Procedures, Operative/</p> <p>3 1 or 2</p> <p>4 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab.</p> <p>5 Carbon Footprint/ or Environmental Pollution/</p> <p>6 4 or 5</p> <p>7 ((recycl* or reusable or reuse*) adj4 (equipment* or item* or instrument*)).ti,ab.</p> <p>8 Surgical Instruments/ or Recycling/ or Waste Management/</p> <p>9 7 or 8</p> <p>10 3 and 6 and 9</p> <p>11 (safe* or steril* or infect* or contaminat* or uncontaminat* or decontaminat* or clean* or sanitary or hygiene* or aseptic or disinfect* or uninfected*).ti,ab.</p> <p>12 10 and 11</p> <p>13 limit 12 to (yr="2017 -Current" and "systematic review")</p>
17	How can we compare the environmental impacts of reusable and single-use equipment used during and around the time of an operation?	<p>1 (Sustainab* or "carbon footprint*" or "green* energy" or (environment* and impact*)).ti,ab.</p> <p>2 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>3 Carbon Footprint/ or Pollution/</p> <p>4 1 or 2 or 3</p> <p>5 (((recycl* or reusable or reuse or biodegradable or degradable or compostable or eco* or paper* or metal*) adj4 (pack* or equipment* or item* or instrument*)) and ((plastic* or single-use or "single use" or (individual* and wrap*)) adj4 (pack* or equipment* or item* or instrument*))).ti,ab.</p> <p>6 Packaging/ or Surgical equipment/ or Recycling/ or Waste Management/</p> <p>7 5 or 6</p> <p>8 (Operation* or Surger* or Surgical or Procedure*).ti,ab. or surgery/</p> <p>9 (compar* or collate* or contrast* or measure* or calculate* or evaluate*).ti,ab.</p> <p>10 4 and 7 and 8 and 9</p> <p>11 limit 10 to ("systematic review" and yr="2017 -Current")</p>
18	How can healthcare professionals who deliver care during and around the time of an operation be encouraged to adopt sustainable actions in practice?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab.</p> <p>2 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>3 Carbon Footprint/ or Pollution/</p> <p>4 1 or 2 or 3</p> <p>5 (Operation* or Surger* or Surgical or Procedure*).ti,ab.</p> <p>6 Surgery/</p> <p>7 5 or 6</p> <p>8 ((teach* or educat* or encourag* or inform*) adj4 (staff or doctor* or surgeon* or practitioner* or professional*)).ti,ab.</p> <p>9 4 and 7 and 8</p> <p>10 limit 9 to (yr="2017 -Current" and "systematic review")</p>
19	What is the most sustainable way of providing equipment packs for an operation?	<p>1 ((recycl* or reusable or reuse or biodegradable or degradable or compostable or eco* or equipment* or instrument*) adj4 (pack* or kit* or container*)).ti,ab.</p>

		<p>2 Packaging/ 3 1 or 2 4 (Operation* or Surger* or Surgical or Procedure*).ti,ab. 5 Surgery/ 6 4 or 5 7 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab. 8 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab. 9 Carbon Footprint/ or Pollution/ 10 7 or 8 or 9 11 3 and 6 and 10 12 limit 11 to (yr="2017 -Current" and "systematic review")</p>
20	What is the most sustainable way to sterilise equipment used during an operation?	<p>1 (Operation* or Surger* or Surgical or Procedure*).ti,ab. 2 exp Surgical Procedures, Operative/ 3 1 or 2 4 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab. 5 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab. 6 4 or 5 7 3 and 6 8 (sterilis* or steriliz* or disinfect* or decontam*).ti,ab. 9 exp Sterilization/ 10 8 or 9 11 ("surgical tool*" or "surgical equipment*" or surgical instrument*).ti,ab. 12 7 and 10 and 11</p>
21	How do we measure and compare the environmental impacts of the different ways of performing the same operation (e.g., keyhole and open surgery)?	<p>1 (Operation* or Surger* or Surgical or Procedure*).ti,ab. 2 exp Surgical Procedures, Operative/ 3 1 or 2 4 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab. 5 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab. 6 4 or 5 7 3 and 6 8 ("Laparoscopic surger*" or "Minimally Invasive" or keyhole or "key hole" or "micro surger*").ti,ab. 9 laparoscopic surgery/ 10 8 or 9 11 7 and 10 12 ("open surger*" or "aggressive surg*" or "invasive").ti,ab. 13 open surgery/ 14 12 or 13 15 11 and 14 16 (method* or approach* or version* or "different way").ti,ab. 17 15 and 16 18 limit 17 to (human and english language and "systematic review" and yr="2017 - 2022")</p>

22	How should the environmental impact of an operation be weighed against its clinical outcomes and financial costs?	<p>1 (Operation* or Surger* or Surgical or Procedure*).ti,ab.</p> <p>2 exp Surgical Procedures, Operative/</p> <p>3 1 or 2</p> <p>4 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab.</p> <p>5 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>6 4 or 5</p> <p>7 3 and 6</p> <p>8 "environmental impact*".ti,ab.</p> <p>9 7 and 8</p> <p>10 Postoperative Complications/</p> <p>11 Treatment Outcome/</p> <p>12 ("clinical outcome*" or "surg* outcome*" or "treatment outcome*").ti,ab.</p> <p>13 10 or 11 or 12</p> <p>14 ("financial cost" or "monetary cost" or "triple bottom line" or "financing cost*").ti,ab.</p> <p>15 "CO2 equivalent*".ti,ab.</p> <p>16 14 or 15</p> <p>17 9 and 13 and 16 (0)</p>
23	What is the role of virtual consultations in reducing the environmental impact associated with undergoing an operation?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab.</p> <p>2 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>3 1 or 2</p> <p>4 (Operation* or Surger* or Surgical or Procedure*).ti,ab.</p> <p>5 Surgical Procedures, Operative/</p> <p>6 4 or 5</p> <p>7 3 and 6</p> <p>8 ("virtual consultat*" or "online consult*" or "remote consult*").ti,ab.</p> <p>9 exp Telemedicine/ and exp "Referral and Consultation"/</p> <p>10 8 or 9</p> <p>11 7 and 10</p> <p>12 limit 11 to (english language and systematic reviews and last 5 years)</p> <p>13 "travel to".ti,ab.</p> <p>14 "remote attendance".ti,ab.</p> <p>15 13 or 14</p> <p>16 12 and 15</p>
24	How can the amount of waste generated during and around the time of an operation be minimised?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab.</p> <p>2 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>3 1 or 2</p> <p>4 (Operation* or Surger* or Surgical or Procedure*).ti,ab.</p> <p>5 Surgical Procedures, Operative/</p> <p>6 4 or 5</p> <p>7 3 and 6</p> <p>8 exp Medical Waste/</p> <p>9 waste*.ti,ab.</p>

		<p>10 8 or 9</p> <p>11 7 and 10</p> <p>12 ("Reduce*" or Reuse* or Recycle* or "re use*").ti,ab.</p> <p>13 exp Recycling/</p> <p>14 12 or 13</p> <p>15 11 and 14</p> <p>16 limit 15 to (english language and systematic reviews and last 5 years)</p>
25	Can alternative, more environmentally sustainable methods of disposal be used for waste that is generated during and around the time of an operation?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab.</p> <p>2 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>3 1 or 2</p> <p>4 (Operation* or Surger* or Surgical or Procedure*).ti,ab.</p> <p>5 Surgical Procedures, Operative/</p> <p>6 4 or 5</p> <p>7 3 and 6</p> <p>8 exp Medical Waste/</p> <p>9 waste*.ti,ab.</p> <p>10 8 or 9</p> <p>11 7 and 10</p> <p>12 (incinerat* or landfill or "land fill" or dispose*).ti,ab.</p> <p>13 11 and 12</p> <p>14 limit 13 to (english language and systematic reviews and last 5 years)</p>
26	How much recyclable waste generated during an operation is being appropriately recycled?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab.</p> <p>2 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>3 1 or 2</p> <p>4 (Operation* or Surger* or Surgical or Procedure*).ti,ab.</p> <p>5 Surgical Procedures, Operative/</p> <p>6 4 or 5</p> <p>7 3 and 6</p> <p>8 exp Medical Waste/</p> <p>9 waste*.ti,ab.</p> <p>10 8 or 9</p> <p>11 7 and 10</p> <p>12 ("Reduce*" or Reuse* or Recycle* or "re use*").ti,ab.</p> <p>13 exp Recycling/</p> <p>14 12 or 13</p> <p>15 11 and 14</p> <p>16 limit 15 to (english language and systematic reviews and last 5 years)</p> <p>17 (generat* or create* or make).ti,ab.</p> <p>18 16 and 17</p>
27	How do we minimize the amount of water used for 'scrubbing up' (handwashing) for an operation?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab.</p> <p>2 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>3 1 or 2</p>

		<p>4 (Operation* or Surger* or Surgical or Procedure*).ti,ab. 5 Surgical Procedures, Operative/ 7 3 and 6 8 ("scrubbing up" or handwashing or "hand disinfect*").ti,ab. 9 (hand* adj3 wash*).ti,ab. 10 exp Hand Disinfection/ 11 8 or 9 or 10 12 7 and 11 13 limit 12 to (english language and systematic reviews and last 5 years)</p>
28	What can healthcare organisations learn from healthcare systems in other countries about sustainable surgical pathways?	<p>1 ("healthcare organisation*" or "health care organisation*" or "healthcare organization*" or "health care organization*").ti,ab. 2 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab. 3 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab. 4 2 or 3 5 1 and 4 6 (Operation* or Surger* or Surgical or Procedure*).ti,ab. 7 (pathway* or "path way*").ti,ab. 8 6 and 7 9 5 and 8 10 limit 9 to (english language and humans and yr="2017 - 2022" and "systematic review")</p>
29	How can we reduce the environmental impact of nitrous oxide used in healthcare?	<p>1 ((Sustainab* or "environment* impact*" or "carbon footprint*" or "green* energy" or (waste or resource*)) and (minimiz* or reduc*)).ti,ab. 2 Carbon Footprint/ 3 Medical Waste/ or Waste Management/ 4 1 or 2 or 3 5 "nitrous oxide".ti,ab. 6 Nitrous Oxide/ 7 5 or 6 8 4 and 7 9 ("health care" or healthcare).ti,ab. 10 "Delivery of Health Care"/ 11 9 or 10 12 8 and 11 13 limit 12 to (english language and yr="2017 - 2022" and "systematic review")</p>
30	How do we define and avoid low-benefit or unnecessary operations?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab. 2 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab. 3 1 or 2 4 ("low benefit*" or "low benefit surger*" or "low benefit operat*").ti,ab. 5 ("Operative versus non operative*" or "non operative versus operative*" or "operative" or "non operative").ti,ab. 6 4 and 5 7 (Operation* or Surger* or Surgical or Procedure*).ti,ab. 8 Surgical Procedures, Operative/</p>

		<p>9 7 or 8</p> <p>10 ("non surg*" or "non operat*" or "conservative management").ti,ab.</p> <p>11 9 and 10</p> <p>12 ("shared decision making" or "shared-decision making").ti,ab.</p> <p>13 3 and 6 and 11 and 12</p> <p>14 limit 13 to (english language and humans and yr="2017 - 2022" and "systematic review")</p>
31	What is the environmental impact of different anaesthetic techniques (e.g., different types of general, regional and local anaesthesia) used for the same operation?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab.</p> <p>2 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>3 1 or 2</p> <p>4 ("anaesthe* technique*" or "anesthe* technique*" or "anaesthe* method*" or "anesthe* method*" or "method* of anaesth*" or "method* of anesthe*").ti,ab.</p> <p>5 3 and 4</p> <p>6 ("general anaesthe*" or "general anesthe*").ti,ab.</p> <p>7 ("regional anaesthe*" or "regional anesthe*").ti,ab.</p> <p>8 ("local anaesthe*" or "local anesthe*").ti,ab.</p> <p>9 6 or 7 or 8</p> <p>10 5 and 9</p> <p>11 ("volatile versus total intravenous anaesthe*" or "volatile versus total intravenous anesthe*").ti,ab.</p> <p>12 ("volatile anaesthe*" or "volatile anesthe*").ti,ab.</p> <p>13 ("total intravenous anaesthe*" or "total intravenous anesthe*").ti,ab.</p> <p>14 11 or 12 or 13</p> <p>15 10 and 14</p> <p>16 Surgical Procedures, Operative/</p> <p>17 15 and 16</p> <p>18 limit 17 to (english language and humans and yr="2017 - 2022" and "systematic review")</p>
32	What are the barriers to using more sustainable anaesthetic practices?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab.</p> <p>2 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>3 1 or 2</p> <p>4 ("Problem* with reduc*" or "barrier* with reduc*" or "barrier* to reduc*" or "aim to reduc*" or "need to reduc*").ti,ab.</p> <p>5 ("volatile anaesthe*" or "volatile anesthe*").ti,ab.</p> <p>6 4 and 5</p> <p>7 3 and 6</p>
33	What role does re-cycling inhaled anaesthetics have in reducing the environmental impact of inhaled anaesthesia?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab.</p> <p>2 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>3 1 or 2</p> <p>4 recycl*.ti,ab.</p> <p>5 ("anaesthe*" or "anesthe*").ti,ab.</p> <p>6 ("inhal*" or "gas*").ti,ab.</p> <p>7 5 and 6</p> <p>8 3 and 4 and 7</p> <p>9 Anesthesia/</p>

		10 8 and 9 11 limit 10 to (english language and humans and yr="2017 - 2022" and "systematic review")
34	What is the environmental impact of different forms of pain relief for an operation?	1 epidural analgesia/ 2 (epidural adj3 (Oral or intravenous or regional or neuraxial)).ab,ti. 3 carbon footprint/ 4 environmental impact/ 5 "Sustainab*".ab,ti. 6 (environment* adj3 impact*).ab,ti. 7 "carbon footprint* ".ab,ti. 8 "green energy".ab,ti. 9 (hospital adj3 (waste or resource*)).ab,ti. 10 (surg* adj3 (waste or resource*)).ab,ti. 11 (operative adj3 (waste or resource*)).ab,ti. 12 (Analgesi* adj3 (waste or resource*)).ab,ti. 13 ("pain relief" adj3 (waste or resource*)).ab,ti. 14 Medical Waste/ (1409) 15 Waste Management/ or Medical Waste Disposal/ 16 (minimiz* or minimis* or reduc*).ab,ti. 17 1 or 2 18 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 19 15 or 16 20 17 and 18 and 19 21 limit 20 to (yr="2016 - 2022" and "systematic review")
35	How do we measure and compare the short- and long-term environmental impacts of surgical and non-surgical treatments for the same condition?	1 exp Surgical Procedures, Operative/ 2 ((surg* or operat*) adj3 (procedure* or treatment*)).ab,ti. 3 1 or 2 4 exp Therapeutics/ 5 (non-surg* adj3 (therap* or treatment*)).ab,ti. 6 4 or 5 7 exp Environmental Monitoring/ 8 Carbon Footprint/ 9 "environment* adj3 sustainab*".ab,ti. 10 (environment* adj3 impact*).ab,ti. 11 "carbon footprint".ab,ti. 12 "green energy".ab,ti. 13 exp Renewable Energy/ 14 "renewable energy".ab,ti. 15 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 16 3 and 6 and 15 17 limit 16 to (yr="2017 - 2022" and "systematic review")
36	What is the environmental impact of using day case surgical pathways compared to inpatient pathways?	1 "Sustainab*".ab,ti. 2 "carbon footprint* ".ab,ti.

		<p>3 "green energy".ab,ti. 4 (waste adj3 (hospital or medical or surgical)).ab,ti. 5 (environment* adj3 (impact or management or protect*)).ab,ti. 6 "renewable energy".ab,ti. 7 "recycl*".ab,ti. 8 (waste adj3 (minimis* or minimiz* or reduc* or recycl*)).ab,ti. 9 (pollut* adj3 (minimis* or minimiz* or reduc*)).ab,ti. 10 "zero waste".ab,ti. 11 "Conservation of Natural Resources"/ 12 Carbon Footprint/ 13 exp Environmental Monitoring/ 14 environmental impact/ 15 exp Medical Waste Disposal/ 16 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 17 Ambulatory Surgical Procedures/ 18 (day adj3 surg*).ab,ti. 19 (ambulatory adj3 surg*).ab,ti. 20 (outpatient* adj3 surg*).ab,ti. 21 17 or 18 or 19 or 20 22 (inpatient adj3 surg*).ab,ti. 23 16 and 21 and 22 24 limit 23 to (yr="2017 -Current" and "systematic review")</p>
37	What is the role of community-based care in reducing the environmental impact of operations?	<p>1 "Sustainab*".ab,ti. 2 "carbon footprint* ".ab,ti. 3 "green energy".ab,ti. 4 (waste adj3 (hospital or medical or surgical)).ab,ti. 5 (minimiz* or minimis* or reduc*).ab,ti. 6 (environment* adj3 (impact or management or protect*)).ab,ti. 7 "renewable energy".ab,ti. 8 "recycl*".ab,ti. 9 (waste adj3 (minimis* or minimiz* or reduc* or recycl*)).ab,ti. 10 (pollut* adj3 (minimis* or minimiz* or reduc*)).ab,ti. (5521) 11 "zero waste".ab,ti. 12 "Conservation of Natural Resources"/ 13 Carbon Footprint/ 14 exp Environmental Monitoring/ 15 environmental impact/ 16 exp Medical Waste Disposal/ 17 exp Surgical Procedures, Operative/ 18 exp General Surgery/ 19 (surg* adj3 (procedure* or treatment* or therap*)).ab,ti. 20 18 or 19</p>

		<p>21 exp Community Health Services/ 22 (community adj3 (care or service*)).ab,ti. 23 21 or 22 24 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 25 20 and 23 and 24 26 limit 25 to (yr="2017 - 2022" and "systematic review")</p>
38	Is it more environmentally sustainable and safe for patients to have more of their early post-operative care at home compared to hospital?	<p>1 "Sustainab*".ab,ti. 2 "carbon footprint* ".ab,ti. 3 "green energy".ab,ti. 4 (waste adj3 (hospital or medical or surgical)).ab,ti. 5 (minimiz* or minimis* or reduc*).ab,ti. 6 (environment* adj3 (impact or management or protect*)).ab,ti. 7 "renewable energy".ab,ti. 8 "recycl*".ab,ti. 9 (waste adj3 (minimis* or minimiz* or reduc* or recycl*)).ab,ti. 10 (pollut* adj3 (minimis* or minimiz* or reduc*)).ab,ti. 11 "zero waste".ab,ti. 12 "Conservation of Natural Resources"/ 13 Carbon Footprint/ 14 exp Environmental Monitoring/ 15 environmental impact/ 16 exp Medical Waste Disposal/ 17 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 18 Postoperative Care/ 19 exp Hospitalization/ 20 18 and 19 21 (postoperat* adj3 "hospital care").ab,ti. 22 (post-operat* adj3 "hospital care").ab,ti. 23 (post-surg* adj3 "hospital care").ab,ti. 24 20 or 21 or 22 or 23 25 Postoperative Care/ 26 Home Care Services/ 27 (postoperat* adj3 home).ab,ti. 28 (post-operat* adj3 home).ab,ti. 29 (post-surg* adj3 home).ab,ti. (7) 30 (home adj3 (surg* adj3 recover*)).ab,ti. 31 25 and 26 32 27 or 28 or 29 or 30 or 31 33 exp Patient Safety/ 34 (patient* adj3 safety).ab,ti. 35 33 or 34 36 17 and 24 and 32 and 35</p>

39	How can the waste of drugs be avoided during and around the time of an operation?	<p>1 exp Perioperative Period/ 2 "perioperat*".ab,ti. 3 1 or 2 4 (waste adj3 (drug or anesthetic* or medic* or pharmac*)).ab,ti. 5 Medical Waste/ 6 4 or 5 7 exp Waste Management/ 8 Medical Waste Disposal/ 9 (waste adj3 (management or dispos* or reduc*)).ab,ti. 10 7 or 8 or 9 11 3 and 6 and 10 12 limit 11 to (yr="2017 - 2022" and "systematic review")</p>
40	How can drug syringes be used better to reduce their environmental impact?	<p>1 "Sustainab*".ab,ti. 2 "carbon footprint* ".ab,ti. 3 "green energy".ab,ti. 4 (waste adj3 (hospital or medical or surgical)).ab,ti. 5 (minimiz* or minimis* or reduc*).ab,ti. 6 (environment* adj3 (impact or management or protect*)).ab,ti. 7 "renewable energy".ab,ti. 8 "recycl*".ab,ti. 9 (waste adj3 (minimiz* or minimiz* or reduc* or recycl*)).ab,ti. 10 (pollut* adj3 (minimis* or minimiz* or reduc*)).ab,ti. 11 "zero waste".ab,ti. 12 "Conservation of Natural Resources"/ 13 Carbon Footprint/ 14 exp Environmental Monitoring/ 15 environmental impact/ 16 exp Medical Waste Disposal/ 17 Syringes/ 18 "syringe*".ab,ti. 19 17 or 18 20 1 or 2 or 3 or 4 or 6 or 7 or 12 or 13 or 14 or 15 21 5 or 9 or 10 or 11 or 16 22 19 and 20 and 21 23 limit 22 to (yr="2017 - 2022" and "systematic review")</p>
41	What is the most environmentally sustainable way to deliver oxygen in the post-operative period?	<p>1 sustainab*.ti,ab. 2 environment* impact*.ti,ab. 3 carbon footprint*.ti,ab. 4 ((waste or resource*) and (minimiz* or reduc*)).ti,ab. 5 environmental protection/ 6 carbon footprint/ 7 environmental impact/</p>

		<p>8 "human impact (environment)"/ or environment/ 9 waste management/ 10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 11 oxygen*.ti,ab. 12 oxygen deliver*.ti,ab. 13 oxygen admin*.ti,ab. 14 oxygen/ad [Drug Administration] 15 oxygen/ 16 oxygen delivery device/ 17 11 or 12 or 13 or 14 or 15 or 16 18 (post op* or postop*).ti,ab. 19 postop* period.ti,ab. 20 post op* period.ti,ab. 21 postoperative care/ 22 18 or 19 or 20 or 21 23 10 and 17 and 22 24 limit 23 to (english language and last 5 years)</p>
42	What are the most environmentally sustainable and effective methods of surgical wound care (e.g., dressings, wound cleaning)?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab. 2 (Operation* or Surger* or Surgical).mp. or Procedure*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] 3 (Postop* or "post op*" or preop* or "pre op*" or periop* or "peri op*").mp. or post-surgery.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] 4 2 or 3 5 1 and 4 6 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab. 7 1 or 6 8 4 and 7 9 ((recycl* or reusable or reuse or biodegradable or degradable or compostable or eco* or paper* or metal* or plastic* or single-use or "single use" or (individual* and wrap*)) adj4 (pack* or equipment* or item* or instrument*)).ti,ab. 10 exp Product Packaging/ 11 exp Wound Healing/ 12 exp Bandages/ 13 10 or 11 or 12 14 9 and 13 15 5 and 14 16 limit 15 to (yr="2017 -Current" and "systematic review")</p>

43	What are the sustainable and effective alternatives to carbon dioxide used in laparoscopic (keyhole surgery of the abdomen) surgery?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab.</p> <p>2 (Operation* or Surger* or Surgical).mp. or Procedure*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>3 (Postop* or "post op*" or preop* or "pre op*" or periop* or "peri op*").mp. or post-surgery.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>4 2 or 3</p> <p>5 1 and 4</p> <p>6 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>7 1 or 6</p> <p>8 4 and 7</p> <p>9 exp Laparoscopy/</p> <p>10 exp Minimally Invasive Surgical Procedures/</p> <p>11 exp Carbon Dioxide/</p> <p>12 gas* free*.ti,ab.</p> <p>13 9 or 10</p> <p>14 co2.ti,ab.</p> <p>15 11 or 12 or 14</p> <p>16 13 and 15</p> <p>17 8 and 16 (</p> <p>18 limit 17 to (yr="2017 -Current" and "systematic review")</p>
44	What is the most environmentally sustainable way to provide nutrition for patients undergoing operations?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab.</p> <p>2 (Operation* or Surger* or Surgical).mp. or Procedure*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>3 (Postop* or "post op*" or preop* or "pre op*" or periop* or "peri op*").mp. or post-surgery.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>4 2 or 3</p> <p>5 1 and 4</p> <p>6 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>7 1 or 6</p> <p>8 4 and 7</p> <p>9 Enteral Nutrition/ or Nutrition Assessment/ or Nutrition Therapy/ or Nutrition Policy/</p> <p>10 exp Food Service, Hospital/</p> <p>11 exp "Conservation of Natural Resources"/</p> <p>12 11 and food*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p>

		<p>13 exp Food/ 14 9 or 10 or 12 or 13 15 8 and 14 16 limit 15 to (yr="2017 -Current" and "systematic review")</p>
45	What is the most environmentally sustainable method of providing written information to patients?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab. 2 (Operation* or Surger* or Surgical).mp. or Procedure*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] 3 (Postop* or "post op*" or preop* or "pre op*" or periop* or "peri op*").mp. or post-surgery.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] 4 2 or 3 5 1 and 4 6 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab. 7 1 or 6 8 4 and 7 9 exp Communication/ 10 exp "Appointments and Schedules"/ 11 9 and 10 12 patient information*.ti,ab. 13 patient communication*.ti,ab. 14 email*.ti,ab. 15 paperwork*.ti,ab. 16 exp Letter/ 17 12 or 13 or 14 or 15 or 16 18 7 and 17 19 limit 18 to (yr="2017 -Current" and "systematic review") 20 3 and 18</p>
46	What are the best ways to educate healthcare professionals who provide care before, during and after operations, about sustainable healthcare?	<p>1 (Sustainab* or (environment* and impact*) or "carbon footprint*" or "green* energy").ti,ab. 2 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab. 3 1 or 2 4 "Educat*".ti,ab. 5 exp Health Knowledge, Attitudes, Practice/ 6 4 or 5 7 ("health* professional*" or "health* work*" or "health* provider*").ti,ab. 8 ("pre-operative care" or "post-operative care").ti,ab. 9 Surgical Procedures, Operative/ 10 8 or 9 11 3 and 6 and 7 and 10 12 limit 11 to (english language and humans and yr="2017 - 2022" and "systematic review")</p>

47	What are the best ways to educate patients, and their carers, about sustainable healthcare before an operation?	<ol style="list-style-type: none"> 1 Sustainab*.ti,ab. 2 environment* impact*.ti,ab. 3 carbon footprint*.ti,ab. 4 green* energy.ti,ab. 5 ((waste or resource*) and (minimiz* or reduc*)).ti,ab. 6 exp environmental sustainability/ 7 carbon footprint/ 8 renewable energy/ 9 pollution/ 10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 11 sustainable healthcare.ti,ab. 12 patient* education.ti,ab. 13 patient education/ or health education/ 14 caregiver/ 15 (carer* or caregiver*).ti,ab. 16 12 or 13 or 14 or 15 17 preop*.ti,ab. 18 (preop* and (care or period)).ti,ab. 19 (pre op* and (care or period)).ti,ab. 20 preoperative evaluation/ or preoperative period/ 21 17 or 18 or 19 or 20 22 10 and 11 and 16 and 21 23 10 or 11 24 16 and 21 and 23 25 limit 24 to (english language and "systematic review" and yr="2017 -Current")
48	What is the most sustainable way for healthcare professionals to store and (appropriately) share clinical information?	<ol style="list-style-type: none"> 1 sustainab*.ti,ab. 2 environment* impact*.ti,ab. 3 carbon footprint*.ti,ab. 4 green* energy.ti,ab. 5 resource* reduc*.ti,ab. 6 ((waste or resource*) and (minimiz* or reduc*)).ti,ab. 7 environmental pollut*.ti,ab. 8 (reuse or reusable).ti,ab. 9 environmental pollution/ or environmental monitoring/ 10 Renewable Energy/ 11 Carbon Footprint/ 12 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 13 clinical information.ti,ab. 14 ((clinical or operative or medical) and record*).ti,ab. 15 Medical Records/ 16 13 or 14 or 15 17 "Information Storage and Retrieval"/

		<p>18 (Information and (Store or storage or share or sharing or Retrieval*)).ti,ab.</p> <p>19 ((paper or physical) and record*).ti,ab.</p> <p>20 Medical Records Systems, Computerized/ or Electronic Health Records/</p> <p>21 electronic record*.ti,ab.</p> <p>22 17 or 18 or 19 or 20 or 21</p> <p>23 ((health or healthcare or health care) and (personnel or professional*)).ti,ab.</p> <p>24 (doctor* or surgeon* or nurs* or AHP* or allied health professional*).ti,ab.</p> <p>25 exp Health Personnel/</p> <p>26 23 or 24 or 25</p> <p>27 12 and 16 and 22 and 26</p> <p>28 limit 27 to (english language and yr="2017 -Current" and "systematic review")</p>
49	How can energy usage within an operating theatre be safely reduced?	<p>1 sustainab*.ti,ab.</p> <p>2 environment* impact*.ti,ab.</p> <p>3 carbon footprint*.ti,ab.</p> <p>4 green* energy.ti,ab.</p> <p>5 resource* reduc*.ti,ab.</p> <p>6 ((waste or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>7 environmental pollut*.ti,ab.</p> <p>8 (reuse or reusable).ti,ab.</p> <p>9 environmental pollution/ or environmental monitoring/ (144759)</p> <p>10 Renewable Energy/</p> <p>11 Carbon Footprint/</p> <p>12 environmental impact.ti,ab.</p> <p>13 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12</p> <p>14 energy usage.ti,ab.</p> <p>15 energy consumption.ti,ab.</p> <p>16 exp Energy-Generating Resources/</p> <p>17 14 or 15 or 16</p> <p>18 operat* theatre*.ti,ab.</p> <p>19 operat* theater*.ti,ab.</p> <p>20 Operating Rooms/</p> <p>21 Operat* Room*.ti,ab.</p> <p>22 operating theatre light*.ti,ab.</p> <p>23 operating theater light*.ti,ab.</p> <p>24 operating room* light*.ti,ab.</p> <p>25 operating theatre ventilat*.ti,ab.</p> <p>26 operating theater ventilat*.ti,ab.</p> <p>27 operating room ventilat*.ti,ab.</p> <p>28 air conditioning/ or heating/ or life support systems/ or lighting/ or temperature/ or ventilation/</p> <p>29 (air conditioning or heat* or life support system*).ti,ab.</p> <p>30 ((medical or operating) and equipment).ti,ab.</p> <p>31 exp "Equipment and Supplies, Hospital"/</p>

		<p>32 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31</p> <p>33 13 and 17 and 32</p> <p>34 limit 33 to (english language and yr="2017 -Current" and "systematic review")</p>
50	What is the most environmentally sustainable way to maintain a patient's body temperature during an operation?	<p>1 (Operation* or Surger* or Surgical).mp. or Procedure*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>2 (Postop* or "post op*" or preop* or "pre op*" or periop* or "peri op*").mp. or post-surgery.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>3 Surgical Procedures, Operative/</p> <p>4 Surgical Procedures, Operative/</p> <p>5 1 or 2 or 3 or 4</p> <p>6 1 or 2 or 3 or 4 or 5</p> <p>7 (Sustainab* or (environment* and impact*) or "carbon footprint*").mp. or "green* energy".ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>8 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>9 Carbon Footprint/ or Environmental Pollution/</p> <p>10 7 or 8 or 9</p> <p>11 patient* body temperature*.ti,ab.</p> <p>12 body temperature*.ti,ab.</p> <p>13 Body Temperature/</p> <p>14 11 or 12 or 13</p> <p>15 force* air warm* device*.ti,ab.</p> <p>16 Body Temperature Regulation/ or Intraoperative Complications/</p> <p>17 underbod* warmer*.ti,ab.</p> <p>18 fluid warmer*.ti,ab.</p> <p>19 patient* warmer*.ti,ab.</p> <p>20 reflective blanket*.ti,ab.</p> <p>21 15 or 16 or 18 or 19 or 20</p> <p>22 5 and 10 and 14 and 21</p> <p>23 limit 22 to (english language and yr="2017 -Current" and "systematic review")</p> <p>24 5 and 10 and 14</p> <p>25 limit 24 to (english language and yr="2017 -Current" and "systematic review")</p> <p>26 14 or 21</p> <p>27 5 and 10 and 26</p> <p>28 limit 27 to (english language and yr="2017 -Current" and "systematic review")</p>

51	Can equipment be recycled or repaired, instead of being disposed of, to reduce its environmental impact?	<p>1 (Operation* or Surger* or Surgical).mp. or Procedure*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>2 (Postop* or "post op*" or preop* or "pre op*" or periop* or "peri op*").mp. or post-surgery.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>3 Surgical Procedures, Operative/ 4 Postoperative care/ 5 1 or 2 or 3 or 4</p> <p>6 (Sustainab* or (environment* and impact*) or "carbon footprint*").mp. or "green* energy".ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>7 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>8 Carbon Footprint/ or Environmental Pollution/ 9 6 or 7 or 8</p> <p>10 ((recycl* or reusable or reuse or biodegradable or degradable or compostable or eco* or paper* or metal* or plastic* or single-use or "single use" or (individual* and wrap*)) adj4 (pack* or equipment* or item* or instrument*)).ti,ab.</p> <p>11 Product Packaging/ 12 Surgical Instruments/ 13 Recycling/ 14 Waste Management/ 15 10 or 11 or 12 or 13 or 14 16 repair*.ti,ab. 17 15 or 16 18 ((medical or surg*) and (equipment or device* or instrument*)).ti,ab. 19 disposable equipment/ or exp "equipment and supplies, hospital"/ 20 exp Surgical Instruments/ 21 exp Surgical Equipment/ 22 18 or 19 or 20 or 21 23 5 and 9 and 17 and 22 24 limit 23 to (english language and yr="2017 -Current" and "systematic review")</p>
52	How can care packages which aim to enable rapid recovery from surgery (e.g., ERAS) affect the environmental impact of an operation?	<p>1 (Operation* or Surger* or Surgical).mp. or Procedure*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>2 (Postop* or "post op*" or preop* or "pre op*" or periop* or "peri op*").mp. or post-surgery.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>3 Surgical Procedures, Operative/</p>

		<p>4 Surgical Procedures, Operative/ 5 1 or 2 or 3 or 4 6 1 or 2 or 3 or 4 or 5 7 (Sustainab* or (environment* and impact*) or "carbon footprint*").mp. or "green* energy".ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] 8 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab. 9 Carbon Footprint/ or Environmental Pollution/ 10 7 or 8 or 9 11 patient* body temperature*.ti,ab. 12 body temperature*.ti,ab. 13 Body Temperature/ 14 11 or 12 or 13 15 force* air warm* device*.ti,ab. 16 Body Temperature Regulation/ or Intraoperative Complications/ 17 underbod* warmer*.ti,ab. 18 fluid warmer*.ti,ab. (19 patient* warmer*.ti,ab. 20 reflective blanket*.ti,ab. 21 15 or 16 or 18 or 19 or 20 22 5 and 10 and 14 and 21 23 limit 22 to (english language and yr="2017 -Current" and "systematic review") 24 5 and 10 and 14 25 limit 24 to (english language and yr="2017 -Current" and "systematic review") 26 14 or 21 27 5 and 10 and 26 28 limit 27 to (english language and yr="2017 -Current" and "systematic review") 29 (Operation* or Surger* or Surgical).mp. or Procedure*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] 30 (Postop* or "post op*" or preop* or "pre op*" or periop* or "peri op*").mp. or post-surgery.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] 31 Surgical Procedures, Operative/ 32 Postoperative Care/ 33 29 or 30 or 31 or 32 34 (Sustainab* or (environment* and impact*) or "carbon footprint*").mp. or "green* energy".ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p>
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		<p>35 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>36 Carbon Footprint/ or Environmental Pollution/</p> <p>37 34 or 35 or 36</p> <p>38 rapid recover*.ti,ab.</p> <p>39 ((surg* or operat*) and recover*).ti,ab.</p> <p>40 38 or 39</p> <p>41 care package*.ti,ab.</p> <p>42 ERAS.ti,ab.</p> <p>43 Enhanced Recovery after Surgery.ti,ab.</p> <p>44 41 or 42 or 43</p> <p>45 33 and 37 and 40 and 44</p> <p>46 limit 45 to (english language and yr="2017 -Current" and "systematic review")</p> <p>47 postoperative recover*.ti,ab.</p> <p>48 post operative recover*.ti,ab.</p> <p>49 Postoperative Care/</p> <p>50 40 or 47 or 48 or 49</p> <p>51 33 and 37 and 44 and 50</p> <p>52 limit 51 to (english language and yr="2017 -Current" and "systematic review")</p>
53	How can waste from medical gas cylinders be reduced?	<p>1 (Operation* or Surger* or Surgical).mp. or Procedure*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>2 (Postop* or "post op*" or preop* or "pre op*" or periop* or "peri op*").mp. or post-surgery.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>3 Surgical Procedures, Operative/</p> <p>4 Carbon Footprint/ or Environmental Pollution/</p> <p>5 ((recycl* or reusable or reuse or biodegradable or degradable or compostable or eco* or paper* or metal* or plastic* or single-use or "single use" or (individual* and wrap*)) adj4 (pack* or equipment* or item* or instrument*)).ti,ab.</p> <p>6 Product Packaging/</p> <p>7 Surgical Instruments/ or Recycling/ or Waste Management/</p> <p>8 Postoperative Care/</p> <p>9 1 or 2 or 3 or 8</p> <p>10 (Sustainab* or (environment* and impact*) or "carbon footprint*").mp. or "green* energy".ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>11 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab.</p> <p>12 4 or 10 or 11</p> <p>13 5 or 6 or 7</p> <p>14 medical gas cylinder*.ti,ab.</p>

		<p>15 cylinder*.ti,ab. 16 gas cylinder*.ti,ab. 17 14 or 15 or 16 18 9 and 12 and 13 and 17</p>
54	What effect do standards, guidelines and quality improvement initiatives have on the environmental impact of operations?	<p>1 (Operation* or Surger* or Surgical).mp. or Procedure*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] 2 Surgical Procedures, Operative/ 3 (Postop* or "post op*" or preop* or "pre op*" or periop* or "peri op*").mp. or post-surgery.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] 4 Postoperative Care/ 5 1 or 2 or 3 or 4 6 (Sustainab* or (environment* and impact*) or "carbon footprint*").mp. or "green* energy".ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] 7 ((wast* or resource*) and (minimiz* or minimis* or reduc*)).ti,ab. 8 Carbon Footprint/ or Environmental Pollution/ (20296) 9 6 or 7 or 8 10 ((recycl* or reusable or reuse or biodegradable or degradable or compostable or eco* or paper* or metal* or plastic* or single-use or "single use" or (individual* and wrap*)) adj4 (pack* or equipment* or item* or instrument*)).ti,ab. (8527) 11 Product Packaging/ 12 Surgical Instruments/ 13 Recycling/ or Waste Management/ 14 10 or 11 or 12 or 13 15 (standard* or policy or policies or guideline*).ti,ab. 16 Reference Standards/ 17 policy/ 18 Practice Guideline/ or Guideline/ or Guideline Adherence/ 19 Quality Improvement/ 20 quality improve* initiative*.ti,ab. 21 15 or 16 or 17 or 18 or 19 or 20 22 5 and 9 and 14 and 21 23 limit 22 to (english language and yr="2017 -Current" and "systematic review")</p>
55	What is the most sustainable method to launder clothing worn when delivering care around an operation?	<p>1 sustainab*.ti,ab. 2 environment* impact*.ti,ab. 3 carbon footprint*.ti,ab. 4 green* energy.ti,ab. 5 ((waste or resource*) and (minimiz* or reduc*)).ti,ab.</p>

		6 environmental pollut*.ti,ab. 7 Health Services Accessibility/ 8 1 or 2 or 3 or 4 or 5 or 6 or 7 9 (laundry* or laundry).ti,ab. 10 (wash* and clothe*).ti,ab. 11 Surgical Attire/ or Clothing/ 12 (operation* and care).ti,ab. 13 (((postop* or post op* or preop*) and pre op*) or periop* or peri op*).ti,ab. 14 9 or 10 or 11 15 12 or 13 16 8 and 14 and 15 17 limit 16 to (english language and yr="2017 -Current" and "systematic review")
56	How do we measure the carbon footprint of an operation?	1 carbon footprint*.ti,ab. 2 environment* impact*.ti,ab. 3 sustainab*.ti,ab. 4 ((waste or resource*) and (minimiz* or reduc*)).ti,ab. 5 environmental pollut*.ti,ab. 6 Carbon Footprint/ 7 measur*.ti,ab. 8 calculat*.ti,ab. 9 operation*.ti,ab. 10 surger*.ti,ab. 11 Surgical Procedures, Operative/ec, es [Economics, Ethics] 12 Humans/su [Surgery] 13 1 or 2 or 3 or 4 or 5 or 6 14 7 or 8 15 9 or 10 or 11 or 12 16 13 and 14 and 15 17 limit 16 to (english language and systematic reviews and last 5 years) (1)
57	How can the different types of environmental impacts (e.g., global warming, waste, resource utilisation) associated with care during and around the time of an operation be prioritised and balanced against one another?	1 environment* impact*.ti,ab. 2 sustainab*.ti,ab. 3 carbon footprint*.ti,ab. 4 environmental pollut*.ti,ab. 5 ((waste or resource*) and (minimiz* or reduc*)).ti,ab. 6 global warming.ti,ab. 7 Environment/ 8 Global Warming/ or Environmental Pollution/ 9 Sustainable Development/ 10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 11 (operation* and care).ti,ab. 12 (((postop* or post op* or preop*) and pre op*) or periop* or peri op*).ti,ab. 13 patient care.ti,ab.

		<p>14 (operation* and care).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>15 Perioperative Care/ 16 Postoperative Care/ 17 11 or 12 or 13 or 14 or 15 or 16</p> <p>18 prioritiz*.mp. or balanc*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>19 prioritiz*.mp. or balanc*.ti,ab. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>20 rank*.ti,ab. 21 prioritise.mp. 22 prioritize*.mp. 23 18 or 19 or 20 or 21 or 22 24 10 and 17 and 23 25 limit 24 to (english language and systematic reviews and last 5 years)</p>
58	What is the most sustainable way to provide lighting in the operating theatre?	<p>1 sustainab*.ti,ab. 2 environment* impact*.ti,ab. 3 carbon footprint*.ti,ab. 4 ((waste or resource*) and (minimiz* or reduc*)).ti,ab. 5 green* energy.ti,ab. 6 Sustainable Development/ or Global Health/ 7 Carbon Footprint/ or Greenhouse Effect/ 8 1 or 2 or 3 or 4 or 5 or 6 or 7 9 light*.ti,ab. 10 light* source*.ti,ab. 11 Light/ 12 Lighting/ 13 9 or 10 or 11 or 12 14 operating theatre*.ti,ab. 15 operating theater*.ti,ab. 16 operating room*.ti,ab. 17 operating suite*.ti,ab. 18 Operating Rooms/ 19 14 or 15 or 16 or 17 or 18 20 8 and 13 and 19 21 limit 20 to (english language and systematic reviews and last 5 years)</p>
59	How can environmental sustainability be incorporated into the organisational management of operating theatres?	<p>1 sustainab*.ti,ab. 2 environment* impact*.ti,ab. 3 carbon footprint*.ti,ab.</p>

		<p>4 ((waste or resource*) and (minimiz* or reduc*)).ti,ab. 5 green* energy.ti,ab. 6 Sustainable Development/ 7 environment/ or carbon footprint/ 8 Environmental Pollution/ 9 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 10 organi?ation* manag*.ti,ab. 11 organi?ation* admin*.ti,ab. 12 organisational management.mp. 13 organizational management.mp. 14 organisation* admin*.mp. 15 10 or 11 or 12 or 13 or 14 16 operating theatre*.ti,ab. 17 operating theater*.ti,ab. 18 operating room*.ti,ab. 19 operating suite*.ti,ab. 20 Operating Rooms/ 21 16 or 17 or 18 or 19 or 20 22 9 and 15 and 21 23 limit 22 to (english language and yr="2017 -Current" and systematic reviews</p>
60	How can the provision and administration of medicines to patients undergoing operations be made more environmentally sustainable?	<p>1 ((provision or adminis*) and medicine*).ti,ab. 2 ((manufactur* or deliver* or stor*) and medicine*).ti,ab. 3 medicine*.mp. and prescri*.ti,ab. 4 prescription drug/ or prescription/ 5 1 or 2 or 3 or 4 6 operation*.ti,ab. 7 surger*.ti,ab. 8 (((postop* or post op* or preop*) and pre op*) or periop* or peri op*).ti,ab. 9 perioperative medicine/ or perioperative period/ 10 surgery/ 11 6 or 7 or 8 or 9 or 10 12 sustainab*.ti,ab. 13 environment* impact*.ti,ab. 14 ((waste or resource*) and (minimiz* or reduc*)).ti,ab. 15 carbon footprint*.ti,ab. 16 environment/ or environmental impact/ 17 carbon footprint/ 18 12 or 13 or 14 or 15 or 16 or 17 19 5 and 11 and 18 20 limit 19 to (english language and "systematic review" and last 5 years)</p>

Table A2: Results of the literature review of indicative questions. NICE = National Institute for Health and Care Excellence; SIGN = Scottish Intercollegiate Guidelines Network; CINAHL = Cumulative Index to Nursing and Allied Health Literature.

	Indicative Question	National Professional Guideline?	Related NICE/SIGN guideline in area?	Sustainability mentioned in NICE/SIGN guideline?	Cochrane / Embase / CINAHL / Medline	Completely Answered	Partially Answered	Unanswered
1	How can care after an operation be optimised to minimise the use of resources and creation of waste whilst providing good care?	No	NG180 - perioperative care	No	<ul style="list-style-type: none"> • https://dx.doi.org/10.37757/MR2021.V23.N3.9 • http://dx.doi.org/10.1016/j.ijso.2020.11.016 • http://dx.doi.org/10.1136/bmjopen-2021-050806 • http://dx.doi.org/10.1055/s-0040-1708834 • http://dx.doi.org/10.1213/ANE.0000000000003942 • https://dx.doi.org/10.1016/j.jcin.2018.04.042 • https://dx.doi.org/10.21614/chirurgia.112.5.546 		X	
2	Which aspects of care before and after an operation can be provided in the community in a more sustainable way?	No	No					X
3	How can we increase the reuse and recycling of equipment used for rehabilitation in the recovery period after an operation?	No	No					X
4	Can the supply of medicines after an operation be optimised to minimise waste?	No	No					X

5	How does living a 'greener' lifestyle affect recovery after an operation?	No	<ul style="list-style-type: none"> • NG70 - Air pollution • NG90 – Physical Activity and the Environment • PH41 – Walking and Cycling • QS183 – Encouraging Physical Activity in the community • PH54 – Exercise and referral schemes • PH13 – Physical Activity in the Workplace 	No				X
6	What are the most sustainable forms of effective infection prevention and control used around the time of an operation (e.g. PPE, drapes, clean air ventilation)?	No	No		<ul style="list-style-type: none"> • https://dx.doi.org/10.1097/TA.0000000000003073 • https://dx.doi.org/10.1017/ice.2020.379 			X
7	What effect does pre-habilitation (e.g., changes in physical activity, lifestyle and diet before an operation) have on the environmental impact of undergoing an operation?	No	No		<ul style="list-style-type: none"> • https://dx.doi.org/10.1513/AnnalsATS.202002-183OC • https://dx.doi.org/10.1136/bmjopen-2021-050806 • https://dx.doi.org/10.1097/CIN.0000000000000708 			X
8	What are the relative environmental impacts of the different elements of care delivered before an operation?	No	No					X

9	How can investigations before an operation be used more efficiently?	No	NG45 – Routine preoperative tests for elective surgery	No	<ul style="list-style-type: none"> • https://doi.org/10.37757/MR2021.V23.N3.9 		X	
10	Can more efficient use of operating theatres and associated practices reduce the environmental impact of operations?	No	No		<ul style="list-style-type: none"> • https://doi.org/10.1093/bjs/znab362.049 • https://doi.org/10.1016/j.jamcollsurg.2021.07.258 • https://doi.org/10.1289/EHP8666 • https://doi.org/10.1016/j.amjsurg.2018.07.021 • https://dx.doi.org/10.1097/SLA.0000000000003951 		X	
11	How can healthcare organisations more sustainably procure (obtain) medicines, equipment and items used during and around the time of an operation?	NHS Supply Chain Strategy - https://www.supplychain.nhs.uk/sustainability/climate-change-energy-and-ghg-emissions/			<ul style="list-style-type: none"> • https://doi.org/10.1016/S0140-6736(20)31142-9 • https://dx.doi.org/10.1017/dmp.2020.283 		X	
12	What drives effective sustainable innovation in manufacturing of equipment and medical supplies used during and around the time of an operation?	NHS Supply Chain Strategy - https://www.supplychain.nhs.uk/sustainability/climate-change-energy-and-ghg-emissions/			<ul style="list-style-type: none"> • https://dx.doi.org/10.1016/j.scitotenv.2021.151128 • https://doi.org/10.1289/EHP8666 • https://dx.doi.org/10.1016/j.jcjq.2021.06.010 • https://dx.doi.org/10.1136/neurintsurg-2020-SNIS.56 • https://dx.doi.org/10.1016/j.ejvs.2017.03.014 		X	

13	What alternative, more sustainable, materials can replace plastic packaging and equipment used during and around the time of an operation?	No	No		<ul style="list-style-type: none"> • http://dx.doi.org/10.1093/ndt/gfab113.008 • http://dx.doi.org/10.1289/EHP8666 • http://dx.doi.org/10.1016/j.jamcollsurg.2021.07.258 • http://dx.doi.org/10.1016/j.icjq.2021.06.010 • http://dx.doi.org/10.1016/j.amjoto.2020.102719 • http://dx.doi.org/10.1136/neurintsurg-2020-SNIS.56 • https://dx.doi.org/10.1016/j.amjsurg.2018.07.021 • https://dx.doi.org/10.1111/ans.13856 • https://dx.doi.org/10.1093/bjs/znab362.049 	X	
14	How can the emission of greenhouse gases and air pollutants associated with an operation be reduced?	No	No		<ul style="list-style-type: none"> • https://dx.doi.org/10.1289/EHP8666 • https://doi.org/10.1016/j.icjq.2021.06.010 	X	
15	How and when is it appropriate to discuss the environmental impacts of care during and around the time of an operation with patients?	No	No		<ul style="list-style-type: none"> • http://dx.doi.org/10.1016/j.resconrec.2019.104560 		X
16	How can more sustainable reusable equipment safely be used during and around the time of an operation?	No	No		<ul style="list-style-type: none"> • https://dx.doi.org/10.1016/j.eururo.2022.01.027 • http://dx.doi.org/10.1093/ndt/gfab113.008 • http://dx.doi.org/10.1016/j.jamcollsurg.2021.07.258 • http://dx.doi.org/10.1136/neurintsurg-2020-SNIS.56 • https://dx.doi.org/10.1111/ans.13856 	X	
17	How can we compare the environmental impacts of reusable and single-use equipment used during and around	No	No		<ul style="list-style-type: none"> • http://dx.doi.org/10.1289/EHP8666 • http://dx.doi.org/10.1016/j.jamcollsurg.2021.07.258 • https://dx.doi.org/10.1111/ans.13856 • https://doi.org/10.1101/2021.03.10.21253268 	X	

	the time of an operation?							
18	How can healthcare professionals who deliver care during and around the time of an operation be encouraged to adopt sustainable actions in practice?	No	No					X
19	What is the most sustainable way of providing equipment packs for an operation?	No	No		• http://dx.doi.org/10.1016/j.icig.2021.06.010		X	
20	What is the most sustainable way to sterilise equipment used during an operation?	No	No		• https://doi.org/10.1093/bja/aex098		X	
21	How do we measure and compare the environmental impacts of the different ways of performing the same operation (e.g., keyhole and open surgery)?	No	No					X
22	How should the environmental impact of an operation be weighed against	No	No					X

	its clinical outcomes and financial costs?							
23	What is the role of virtual consultations in reducing the environmental impact associated with undergoing an operation?	No	No		<ul style="list-style-type: none"> • https://dx.doi.org/10.7861/fhj.2020-0080 		X	
24	How can the amount of waste generated during and around the time of an operation be minimised?	Association of Anaesthetists - Anaesthetic waste: safe and sustainable disposal	No		<ul style="list-style-type: none"> • https://dx.doi.org/10.1016/j.jcjq.2021.06.010 • https://dx.doi.org/10.1016/j.eururo.2022.01.027 • https://dx.doi.org/10.1016/j.scitotenv.2021.151128 • https://dx.doi.org/10.1097/SLA.0000000000003951 		X	
25	Can alternative, more environmentally sustainable methods of disposal be used for waste that is generated during and around the time of an operation?	No	No		<ul style="list-style-type: none"> • https://dx.doi.org/10.1007/s10163-020-01123-1 			X
26	How much recyclable waste generated during an operation is being appropriately recycled?	No	No		<ul style="list-style-type: none"> • https://dx.doi.org/10.1186/s13063-017-2034-0 			X
27	How do we minimize the amount of water used for 'scrubbing up'?	No	No		<ul style="list-style-type: none"> • https://dx.doi.org/10.1016/j.wneu.2020.12.137 			X

	(handwashing) for an operation?							
28	What can healthcare organisations learn from healthcare systems in other countries about sustainable surgical pathways?	No	No		<ul style="list-style-type: none"> • https://dx.doi.org/10.12968/bjon.2017.26.22.1230 			X
29	How can we reduce the environmental impact of nitrous oxide used in healthcare?	No	No		<ul style="list-style-type: none"> • https://dx.doi.org/10.1002/14651858.CD013441.pub2 			X
30	How do we define and avoid low-benefit or unnecessary operations?	No	No		<ul style="list-style-type: none"> • https://dx.doi.org/http://dx.doi.org/10.1136/bmj.k5120 			X
31	What is the environmental impact of different anaesthetic techniques (e.g., different types of general, regional and local anaesthesia) used for the same operation?	No	No					X
32	What are the barriers to using more sustainable anaesthetic practices?	No	No					X
33	What role does re-cycling inhaled anaesthetics have in reducing the	No	No					X

	environmental impact of inhaled anaesthesia?							
34	What is the environmental impact of different forms of pain relief for an operation?	No	NG180 - perioperative care	No				X
35	How do we measure and compare the short- and long-term environmental impacts of surgical and non-surgical treatments for the same condition?	No	No					X
36	What is the environmental impact of using day case surgical pathways compared to inpatient pathways?	No	No		<ul style="list-style-type: none"> • https://dx.doi.org/10.1053/j.jfas.2020.08.007 • https://dx.doi.org/10.1097/NUR.0b013e31824590e6 • https://doi.org/10.1016/j.jcjq.2021.06.010 		X	
37	What is the role of community-based care in reducing the environmental impact of operations?	No	No					X
38	Is it more environmentally sustainable and safe for patients to have more of their early post-operative care at home compared to hospital?	No	No					X

39	How can the waste of drugs be avoided during and around the time of an operation?	No	No					X
40	How can drug syringes be used better to reduce their environmental impact?	No	No		<ul style="list-style-type: none"> • https://dx.doi.org/10.3390/ijerph19031381 			X
41	What is the most environmentally sustainable way to deliver oxygen in the post-operative period?	No	No					X
42	What are the most environmentally sustainable and effective methods of surgical wound care (e.g., dressings, wound cleaning)?	No	MTG59 – Plus Sutures for preventing surgical site infection	No				X
43	What are the sustainable and effective alternatives to carbon dioxide used in laparoscopic (keyhole surgery of the abdomen) surgery?	No	No		<ul style="list-style-type: none"> • https://dx.doi.org/10.4103/jmas.JMAS_130_20 • https://dx.doi.org/10.1002/14651858.CD009569.pub3 • https://doi.org/10.1289/EHP8666 		X	
44	What is the most environmentally sustainable way to provide nutrition for patients	No	NG180 - Perioperative care	No				X

	undergoing operations?							
45	What is the most environmentally sustainable method of providing written information to patients?	No	No					X
46	What are the best ways to educate healthcare professionals who provide care before, during and after operations, about sustainable healthcare?	No	PH6 – Behavioural Change – general approaches	No			X	
47	What are the best ways to educate patients, and their carers, about sustainable healthcare before an operation?	No	PH6 – Behavioural Change – general approaches	No			X	
48	What is the most sustainable way for healthcare professionals to store and (appropriately) share clinical information?	No	NG94 - Emergency and acute medical care in over 16s: service delivery and organisation	No	<ul style="list-style-type: none"> • https://dx.doi.org/10.1016/j.jdent.2021.103737 			X
49	How can energy usage within an operating theatre be safely reduced?	No	No		<ul style="list-style-type: none"> • https://dx.doi.org/10.1016/j.amjsurg.2018.07.021 • https://doi.org/10.1016/j.accpm.2021.100907 • https://doi.org/10.1016/j.icjq.2021.06.010 		X	

50	What is the most environmentally sustainable way to maintain a patient's body temperature during an operation?	No	<ul style="list-style-type: none"> • CG65 – Hypothermia, prevention and management in adults undergoing surgery 2016 • Medical Technologies guidance 31 – Humiguard 	No			X	
51	Can equipment be recycled or repaired, instead of being disposed of, to reduce its environmental impact?	No	No		<ul style="list-style-type: none"> • https://doi.org/10.1289/EHP8666. • https://doi.org/10.1016/j.icjq.2021.06.010 • https://dx.doi.org/10.1097/SLA.0000000000002712 		X	
52	How can care packages which aim to enable rapid recovery from surgery (e.g., ERAS) affect the environmental impact of an operation?	No	NG180 - perioperative care	No	<ul style="list-style-type: none"> • https://dx.doi.org/10.1097/SLA.0000000000003878 		X	
53	How can waste from medical gas cylinders be reduced?	No	No					X
54	What effect do standards, guidelines and quality improvement initiatives have on the environmental impact of operations?	No	No		<ul style="list-style-type: none"> • https://doi.org/10.1016/j.eururo.2022.01.027 • https://dx.doi.org/10.1097/SLA.0000000000002712 • https://doi.org/10.1289/EHP8666. • https://dx.doi.org/10.1097/SLA.0000000000003951 		X	
55	What is the most sustainable method to launder clothing worn when delivering	No	No					X

	care around an operation?							
56	How do we measure the carbon footprint of an operation?	No	No		<ul style="list-style-type: none"> https://dx.doi.org/10.1097/SLA.0000000000003951 		X	
57	How can the different types of environmental impacts (e.g., global warming, waste, resource utilisation) associated with care during and around the time of an operation be prioritised and balanced against one another?	No	No					X
58	What is the most sustainable way to provide lighting in the operating theatre?	No	No					X
59	How can environmental sustainability be incorporated into the organisational management of operating theatres?	No	No					X
60	How can the provision and administration of medicines to patients undergoing operations be made more	No	No					X

	environmentally sustainable?							
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