**Supplementary Material.** Search Strategy

**Ovid**

Database(s): Embase 1988 to 2014 Week 01, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present, EBM Reviews - Cochrane Central Register of Controlled Trials November 2013, EBM Reviews - Cochrane Database of Systematic Reviews 2005 to November 2013

Search Strategy:

<table>
<thead>
<tr>
<th>#</th>
<th>Searches</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>exp Extracorporeal Membrane Oxygenation/</td>
<td>14652</td>
</tr>
<tr>
<td>2</td>
<td>exp Extracorporeal Circulation/</td>
<td>108694</td>
</tr>
<tr>
<td>3</td>
<td>exp Oxygenators, Membrane/</td>
<td>1751</td>
</tr>
<tr>
<td>4</td>
<td>exp Heart-Lung Machine/</td>
<td>2418</td>
</tr>
<tr>
<td>5</td>
<td>(2 or 4) and oxygen*.mp.</td>
<td>27255</td>
</tr>
<tr>
<td>6</td>
<td>3 and (extracorporeal or “extra corporeal”).mp.</td>
<td>921</td>
</tr>
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<td></td>
<td>((extracorporeal adj3 oxygenation) or (“extra corporeal” adj3 oxygenation) or (extrapulmonary adj3 oxygenation) or (“extra pulmonary” adj3 oxygenation) or ECMO).mp.</td>
<td>18733</td>
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<td>7</td>
<td>1 or 5 or 6 or 7</td>
<td>30773</td>
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<td>9</td>
<td>exp infection/dt</td>
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<td>10</td>
<td>exp antibiotic agent/</td>
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<tr>
<td>11</td>
<td>exp antiinfective agent/</td>
<td>1752699</td>
</tr>
<tr>
<td>12</td>
<td>exp Anti-Bacterial Agents/</td>
<td>2311782</td>
</tr>
<tr>
<td>13</td>
<td>exp Anti-Infective Agents/</td>
<td>3104888</td>
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exp Antibiotic Prophylaxis/ (antibiotic* or “anti-biotic*” or antimicrobial* or “anti-microbial*” or prophylaxis or antibacterial* or “anti-bacterial*” or antiinfectiv* or “anti-infectiv*” or bacteriocid* or antimycobacterial* or “anti-mycobacterial*” or prophyla*).mp.

or/9-15

8 and 16

exp controlled study/

exp evidence based medicine/

evidence-based.mp.

meta analysis/

meta-analys$.mp.

exp “systematic review”/

(systematic* adj3 review*).mp.

exp Guideline/ or exp Practice Guideline/

guideline$.ti.

exp case study/

follow up studies/

exp Cohort Studies/

exp longitudinal study/

exp retrospective study/

exp prospective study/

exp observational study/
exp comparative study/ 2534807
exp clinical trial/ 1765413
exp evaluation/ 1298598
exp validation study/ 44181
exp experimental study/ or exp field study/ or in vivo study/ or
exp panel study/ or exp pilot study/ or exp prevention study/ or
exp quasi experimental study/ or exp replication study/ or exp
theoretical study/ or exp trend study/ or clinical study/
((evidence adj based) or (meta adj analys*) or (systematic* adj3
review*) or guideline* or “latin square” or crossover or “cross-
over” or placebo* or (doubl* adj5 blind*) or (doubl* adj5
mask*) or (singl* adj5 blind*) or (singl* adj5 mask*) or (tripl*
adj5 blind*) or (tripl* adj5 mask*) or (trebl* adj5 blind*) or
(trebl* adj5 mask*) or multivariate or random* or control* or
“comparative study” or “comparative survey” or “comparative
analysis” or “cohort study” or “cohort survey” or “cohort
analysis” or “longitudinal study” or “longitudinal survey” or
“longitudinal analysis” or retrospectiv* or prospectiv* or
“population study” or “population survey” or “population
analysis” or “concurrent study” or “concurrent survey” or
“concurrent analysis” or “incidence study” or “incidence
survey” or “incidence analysis” or “follow-up study” or
“follow-up survey” or “follow-up analysis” or “observational
study” or “observational survey” or “observational analysis” or
“case study” or “case series” or “clinical series” or “case
studies” or “clinical study” or “clinical trial” or “evaluation study” or “evaluation survey” or “evaluation analysis” or “validation study” or “validation survey” or “validation analysis” or “experimental study” or “experimental analysis” or “field study” or “field survey” or “field analysis” or “in vivo study” or “in vivo analysis” or “panel study” or “panel survey” or “panel analysis” or “pilot study” or “pilot survey” or “pilot analysis” or “prevention study” or “prevention survey” or “prevention analysis” or “replication study” or “replication analysis” or “theoretical study” or “theoretical analysis” or “trend study” or “trend survey” or “trend analysis” or “case control stud*” or “case base stud*” or “case referent stud*” or “case referent stud*” or “case compeer stud*” or “case comparison stud*” or “odds ratio” or “confidence interval” or study or pilot or trial or cohort* or “regression analysis” or “hazards model*” or “multivariate analysis”).mp.

40 or/18-39 22803928

41 17 and 40 1513

42 from 17 keep 1911-2400 490

limit 42 to (short survey or clinical trial, all or clinical trial, phase i or clinical trial, phase ii or clinical trial, phase iii or clinical trial, phase iv or clinical trial or comparative study or controlled clinical trial or evaluation studies or guideline or meta analysis or multicenter study or practice guideline or randomized controlled trial or systematic reviews or validation
studies) [Limit not valid in Embase, Ovid MEDLINE(R), Ovid MEDLINE(R) In-Process, CCTR, CDSR; records were retained]

44 41 or 43

limit 44 to (book or book series or editorial or erratum or letter or addresses or autobiography or bibliography or biography or comment or dictionary or directory or interactive tutorial or interview or lectures or legislation or news or newspaper article or patient education handout or periodical index or portraits or published erratum or video-audio media or webcasts) [Limit not valid in Embase, Ovid MEDLINE(R), Ovid MEDLINE(R) In-Process, CCTR, CDSR; records were retained]

45 44 not 45

46 44 not 45

47 from 17 keep 2401-2437

48 46 or 47
Scopus

1 TITLE-ABS-KEY((extracorporeal W/3 oxygenation) or (“extra
corporeal” W/3 oxygenation) or (extrapulmonary W/3 oxygenation)
or (“extra pulmonary” W/3 oxygenation) or ECMO)

2 TITLE-ABS-KEY(antibiotic* or “anti-biotic*” or antimicrobial* or
“anti-microbial*” or prophylaxis or antibacterial* or “anti-bacterial*”
or antiinfectiv* or “anti-infectiv*” or bacteriocid* or
antimycobacterial* or “anti-mycobacterial*” or prophyla*)

3 TITLE-ABS-KEY( (evidence W/1 based) OR (meta W/1 analys*) OR
(systematic* W/3 review*) OR guideline* OR “latin square” or
crossover or “cross-over” or placebo* or (doubl* N5 blind*) or
doubl* N5 mask*) or (singl* N5 blind*) or (singl* N5 mask*) or
(tripl* N5 blind*) or (tripl* N5 mask*) or (trebl* N5 blind*) or (trebl*
N5 mask*) or multivariate or random* or control* or “comparative
study” OR “comparative survey” OR “comparative analysis” OR
“cohort study” OR “cohort survey” OR “cohort analysis” OR
“longitudinal study” OR “longitudinal survey” OR “longitudinal
analysis” OR “retrospective study” OR “retrospective survey” or
“retrospective analysis” OR “prospective study” OR “prospective
survey” OR “prospective analysis” OR “population study” OR
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OR “concurrent survey” OR “concurrent analysis” or “incidence
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up study” OR “follow-up survey” OR “follow-up analysis”
OR”observational study” OR “observational survey” OR
“observational analysis” OR “case study” OR “case series” OR “clinical series” OR “case studies” OR “clinical study” OR “clinical trial” OR “evaluation study” OR “evaluation survey” OR “evaluation analysis” OR “validation study” OR “validation survey” OR “validation analysis” OR “experimental study” OR “experimental analysis” OR “field study” OR “field survey” OR “field analysis” OR “in vivo study” OR “in vivo analysis” OR “panel study” OR “panel survey” OR “panel analysis” OR “pilot study” OR “pilot survey” OR “pilot analysis” OR “prevention study” OR “prevention survey” OR “prevention analysis” OR “replication study” OR “replication analysis” OR “theoretical study” OR “theoretical analysis” OR “trend study” OR “trend survey” OR “trend analysis” OR “case control stud*” OR “case base stud*” OR “case referent stud*” OR “case referent stud*” OR “case compeer stud*” OR “case comparison stud*” OR “odds ratio” OR “confidence interval” OR “study or pilot or trial or cohort*” OR “regression analysis” OR “hazards model*” OR “multivariate analysis”)

4 1 and 2 and 3

5 PMID(0*) OR PMID(1*) OR PMID(2*) OR PMID(3*) OR PMID(4*) OR PMID(5*) OR PMID(6*) OR PMID(7*) OR PMID(8*) OR PMID(9*)

6 4 and not 5

7 DOICTYPE(le) OR DOICTYPE(ed) OR DOICTYPE(bk) OR DOICTYPE(er) OR DOICTYPE(no) OR DOICTYPE(sh)

8 6 and not 7