**Additional File 1.** Search strings for respective databases

PUBMED (MEDLINE)

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| --- | --- | --- |
| 1. | Extracorporeal Membrane Oxygenation[MeSH] | 11,578 |
| 2. | Extracorporeal Membrane Oxygenat\*[Title/Abstract] OR Extracorporeal Membrane Oxygenation[Title/Abstract] OR Extracorporeal Life Support[Title/Abstract] OR Extracorporeal Circulation[Title/Abstract] | 21,559 |
| 3. | #1 OR #2 | 24,622 |
| 4. | Shock, Septic[MeSH] | 23,067 |
| 5. | Sepsis[Title/Abstract] OR Septic Shock[Title/Abstract] OR Septicemia[Title/Abstract] OR Toxic Shock Syndrome[Title/Abstract] OR pyemia[Title/Abstract] OR blood poisoning[Title/Abstract] OR septic poisoning[Title/Abstract] OR severe sepsis[Title/Abstract] | 133,287 |
| 6. | #4 OR #5 | 141,593 |
| 7. | Children[Title/Abstract] OR neonate[Title/Abstract] OR adolescent[Title/Abstract] OR infant[Title/Abstract] OR pediatric[Title/Abstract] | 1,555,151 |
| 8. | #3 AND #6 NOT #7 | 702 |

COCHRANE

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| 1. | MeSH descriptor: [Extracorporeal Membrane Oxygenation] explode all trees | 180 |
| 2. | ((Extracorporeal OR extra-corporeal) AND ((Membrane AND Oxygena\*) OR (Life Support) OR Circulation OR Oxygenation)):ti,ab,kw | 2,034 |
| 3. | #1 OR #2 | 2,034 |
| 4. | MeSH descriptor: [Shock, Septic] explode all trees | 989 |
| 5. | (Sepsis OR Septic Shock OR Septicemia OR Toxic Shock Syndrome OR pyemia OR blood poisoning OR septic poisoning OR severe sepsis):ti,ab,kw | 14,321 |
| 6. | #4 OR #5 | 14,321 |
| 7. | (Children OR neonate OR adolescent OR infant OR pediatric):ti,ab,kw | 265,766 |
| 8. | #3 AND #6 NOT #7 | 72 |

EMBASE

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| 1. | ‘Extracorporeal oxygenation’/exp | 28,249 |
| 2. | 'extracorporeal membrane oxygenation':ti,ab OR 'extra-corporeal membrane oxygenation':ti,ab OR 'extracoporeal membrane oxygenat\*':ti,ab OR  'extracorporeal life support':ti,ab OR 'extracorporeal circulation':ti,ab | 30,023 |
| 3. | #1 OR #2 | 40,705 |
| 4. | ‘septic shock’/exp | 60,545 |
| 5. | 'sepsis':ti,ab OR 'septic shock':ti,ab OR  'septicemia':ti,ab OR 'toxic shock syndrome':ti,ab OR 'pyemia':ti,ab OR 'blood poisoning':ti,ab OR 'septic poisoning':ti,ab OR 'severe sepsis':ti,ab | 196,865 |
| 6. | #4 OR #5 | 218,502 |
| 7. | 'children':ti,ab OR 'neonate':ti,ab OR 'adolescent':ti,ab OR 'infant':ti,ab OR 'pediatric':ti,ab | 1,988,953 |
| 8. | #3 AND #6 NOT #7 | 1,716 |

SCOPUS

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| 1. | TITLE-ABS-KEY((({extracorporeal} OR {extra-corporeal} OR {extra corporeal}) AND {membrane} AND {oxygenation}) OR {extracorporeal membrane oxygenation} OR {extra-corporeal membrane oxygenation} OR {extra corporeal membrane oxygenation} OR {ECMO} OR {extracorporeal oxygenation} OR {extra-corporeal oxygenation} OR {extra corporeal oxygenation} OR {extracorporeal life support} OR {extra-corporeal life support} OR {extra corporeal life support} OR {ECLS} OR {extrapulmonary oxygenation} OR {extracorporeal membrane oxygenation device}) | 27,500 |
| 2. | TITLE-ABS-KEY ( sepsis  OR septic OR septicaemia  OR {septic shock} OR {toxic shock}  OR {Blood poisoning} OR pyohemia OR  pyemia OR {severe sepsis} ) | 254,006 |
| 3. | TITLE-ABS-KEY (child\*  OR adolescent OR infant  OR neonate OR neonatal OR p\*ediatric OR teen) | 5,231,472 |
| 4. | #1 AND #2 AND NOT #3 | 1,353 |