# Additional file 1 – Litterature Search Protokol

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| --- | --- |
| **Title** | ***The effect of simulation-based neonatal emergency team training on clinical performance and patient outcome: A Systematic Review*** |
| **Subject specialist** | Morten Søndergaard Lindhard, MD, PHD, Associate professor |
| **Search specialist** | Henrik Laursen, Medical Librarian, Regional Hospital Central Jutland |

**Search strategy**

|  |  |  |  |
| --- | --- | --- | --- |
| **Databases** | **INTERFACE** | **Results** | **DATE OF SEARCH** |
| **Medline** | Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) <1946 to March 01, 2019 > | 718 | 04.03.2019 |
| **EMBASE** | OVID Embase 1974 to 2019 March 01 | 573 | 04.03.2019 |
| **The Cochrane library** | https://www.cochranelibrary.com/advanced-search | 164 | 04.03.2019 |
| **CINAHL** | EBSCO CINAHL with Full Text | 860 | 06.03.2019 |

**Deduplication**

Number of references: 2315

After deduplication in Covidence: 1433

**MEDLINE**

|  |  |  |
| --- | --- | --- |
| 1 | exp Pediatrics/ | 54784 |
| 2 | Pediatric Nurse Practitioners/ | 115 |
| 3 | exp Pediatricians/ | 595 |
| 4 | "pediatric\*".ab,kf,ti. | 268609 |
| 5 | "paediatric\*".ab,kf,ti. | 60099 |
| 6 | "neonatal\*".ab,kf,ti. | 194462 |
| 7 | "adolescent\*".ab,kf,ti. | 231807 |
| 8 | "teenager\*".ab,kf,ti. | 13437 |
| 9 | (child or children).ab,kf,ti. | 1160454 |
| 10 | "newborn\*".ab,kf,ti. | 166690 |
| 11 | (infant or infants).ab,kf,ti. | 89857 |
| 12 | or/1-11 | 1898258 |
| 13 | exp Simulation Training/ | 7127 |
| 14 | (simulation\* adj5 (train\* or medical or scenario\* or team\*)).ab,kf,ti. | 8466 |
| 15 | 13 or 14 | 13683 |
| 16 | exp Patient Care Team/ | 64967 |
| 17 | (team\* or group\* or unit\* or crew or high-fidelity or hi-fidelity or in-situ).ab,kf,ti. | 4430118 |
| 18 | (professionals or clinicians or providers or participants or trainees or doctors or physicians or residents or nurses or midwifes or midwives).ab,kf,ti. | 1425567 |
| 19 | or/16-18 | 5403537 |
| 20 | exp Intensive Care Units/ or Delivery Rooms/ | 77301 |
| 21 | exp Critical Care/ | 53639 |
| 22 | (NICU or ICU or intensive or delivery room\* or transport).ab,kf,ti. | 600535 |
| 23 | (emergen\* or code or crisis or critical\* or high-risk or acute or disaster or life\* or mortality or death or rapid response or deteriorat\* or unstable or compromise).ab,kf,ti. | 4344665 |
| 24 | (cardiac or resuscitation or CPR or chest compression\* or defibrillat\* or cardiopulmonary or ECMO).ab,kf,ti. | 651624 |
| 25 | (airway or respiratory or intubat\* or tube or ventilat\*).ab,kf,ti. | 742451 |
| 26 | (asphyxia or sepsis or septic or shock or trauma or anaphylaxis or asthma or croup or meningitis or seizure\* or hypoglycemia or arrhythmia or sedation or anesthesia).ab,kf,ti. | 1026183 |
| 27 | or/20-26 | 6219524 |
| 28 | 12 and 15 and 19 and 27 | 756 |
| 29 | limit 28 to (editorial or letter) | 4 |
| 30 | 28 not 29 | 752 |
| 31 | limit 30 to english | 718 |

**EMBASE**

|  |  |  |
| --- | --- | --- |
| 1 | exp pediatrics/ | 97255 |
| 2 | pediatric nurse practitioner/ | 241 |
| 3 | exp pediatrician/ | 18438 |
| 4 | "pediatric\*".ab,kw,ti. | 407006 |
| 5 | "paediatric\*".ab,kw,ti. | 103584 |
| 6 | "neonatal\*".ab,kw,ti. | 251157 |
| 7 | "adolescent\*".ab,kw,ti. | 300224 |
| 8 | "teenager\*".ab,kw,ti. | 18676 |
| 9 | (child or children).ab,kw,ti. | 1397419 |
| 10 | "newborn\*".ab,kw,ti. | 181018 |
| 11 | (infant or infants).ab,kw,ti. | 398028 |
| 12 | or/1-11 | 2287015 |
| 13 | exp simulation training/ | 3340 |
| 14 | (simulation\* adj5 (train\* or medical or scenario\* or team\*)).ab,kw,ti. | 12419 |
| 15 | 13 or 14 | 14124 |
| 16 | (team\* or group\* or unit\* or crew or high-fidelity or hi-fidelity or in-situ).ab,kw,ti. | 5902354 |
| 17 | (professionals or clinicians or providers or participants or trainees or doctors or physicians or residents or nurses or midwifes or midwives).ab,kw,ti. | 1849032 |
| 18 | 16 or 17 | 7070559 |
| 19 | exp intensive care unit/ | 161894 |
| 20 | delivery room/ | 2926 |
| 21 | exp intensive care/ | 635491 |
| 22 | (NICU or ICU or intensive or delivery room\* or transport).ab,kw,ti. | 798457 |
| 23 | (emergen\* or code or crisis or critical\* or high-risk or acute or disaster or life\* or mortality or death or rapid response or deteriorat\* or unstable or compromise).ab,kw,ti. | 5733395 |
| 24 | (cardiac or resuscitation or CPR or chest compression\* or defibrillat\* or cardiopulmonary or ECMO).ab,kw,ti. | 915249 |
| 25 | (airway or respiratory or intubat\* or tube or ventilat\*).ab,kw,ti. | 997784 |
| 26 | (asphyxia or sepsis or septic or shock or trauma or anaphylaxis or asthma or croup or meningitis or seizure\* or hypoglycemia or arrhythmia or sedation or anesthesia).ab,kw,ti. | 1355402 |
| 27 | or/19-26 | 8184420 |
| 28 | 12 and 15 and 18 and 27 | 1176 |
| 29 | limit 28 to (conference abstract or conference paper or "conference review" or editorial or letter) | 569 |
| 30 | 28 not 29 | 607 |
| 31 | limit 30 to english | 573 |

**COCHRANE LIBRARY**

|  |  |  |
| --- | --- | --- |
| #1 | MeSH descriptor: [Pediatrics] explode all trees | 620 |
| #2 | MeSH descriptor: [Pediatric Nurse Practitioners] this term only | 3 |
| #3 | MeSH descriptor: [Pediatricians] explode all trees | 7 |
| #4 | (pediatric\*):ti,ab,kw | 20748 |
| #5 | (paediatric\*):ti,ab,kw | 4501 |
| #6 | (neonatal\*):ti,ab,kw | 11779 |
| #7 | (adolescent\*):ti,ab,kw | 121239 |
| #8 | (teenager\*):ti,ab,kw | 626 |
| #9 | (child or children):ti,ab,kw | 112210 |
| #10 | (newborn\*):ti,ab,kw | 22553 |
| #11 | (infant or infants):ti,ab,kw | 49171 |
| #12 | #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 | 226205 |
| #13 | MeSH descriptor: [Simulation Training] explode all trees | 743 |
| #14 | (simulation\* NEAR/5 (train\* or medical or scenario\* or team\*)):ti,ab,kw  | 1497 |
| #15 | #13 OR #14 | 1827 |
| #16 | MeSH descriptor: [Patient Care Team] explode all trees | 1601 |
| #17 | (team\* or group\* or unit\* or crew or high-fidelity or hi-fidelity or in-situ):ti,ab,kw  | 553814 |
| #18 | (professionals or clinicians or providers or participants or trainees or doctors or physicians or residents or nurses or midwifes or midwives):ti,ab,kw | 307402 |
| #19 | #16 OR #17 OR #18 | 670946 |
| #20 | MeSH descriptor: [Intensive Care Units] explode all trees | 3233 |
| #21 | MeSH descriptor: [Critical Care] explode all trees | 1911 |
| #22 | (NICU or ICU or intensive or delivery room\* or transport):ti,ab,kw | 79675 |
| #23 | (emergen\* or code or crisis or critical\* or high-risk or acute or disaster or life\* or mortality or death or rapid response or deteriorat\* or unstable or compromise):ti,ab,kw | 346358 |
| #24 | (cardiac or resuscitation or CPR or chest compression\* or defibrillat\* or cardiopulmonary or ECMO):ti,ab,kw | 56002 |
| #25 | (airway or respiratory or intubat\* or tube or ventilat\*):ti,ab,kw | 85292 |
| #26 | (asphyxia or sepsis or septic or shock or trauma or anaphylaxis or asthma or croup or meningitis or seizure\* or hypoglycemia or arrhythmia or sedation or anesthesia):ti,ab,kw | 130821 |
| #27 | #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 | 524149 |
| #28 | #12 AND #15 AND #19 AND #27 | 165 |
| - | Cochrane reviews | 1 |
| - | Trials | 163 |

**CINAHL**

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| --- | --- | --- | --- |
| # | Query | Limiters/Expanders | Results |
| S32 | S31 | Limiters - Language: EnglishSearch modes - Boolean/Phrase | 860 |
| S31 | S29 NOT S30 | Search modes - Boolean/Phrase | 870 |
| S30 | S29 | Limiters - Publication Type: Editorial, LetterSearch modes - Boolean/Phrase | 7 |
| S29 | S12 AND S16 AND S20 AND S28 | Search modes - Boolean/Phrase | 877 |
| S28 | S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27 | Search modes - Boolean/Phrase | 1603005 |
| S27 | asphyxia or sepsis or septic or shock or trauma or anaphylaxis or asthma or croup or meningitis or seizure\* or hypoglycemia or arrhythmia or sedation or anesthesia | Search modes - Boolean/Phrase | 278588 |
| S26 | airway or respiratory or intubat\* or tube or ventilat\* | Search modes - Boolean/Phrase | 175363 |
| S25 | cardiac or resuscitation or CPR or chest compression\* or defibrillat\* or cardiopulmonary or ECMO | Search modes - Boolean/Phrase | 164083 |
| S24 | emergen\* or code or crisis or critical\* or high-risk or acute or disaster or life\* or mortality or death or rapid response or deteriorat\* or unstable or compromise | Search modes - Boolean/Phrase | 1237455 |
| S23 | NICU or ICU or intensive or delivery room\* or transport | Search modes - Boolean/Phrase | 121630 |
| S22 | (MH "Critical Care+") | Search modes - Boolean/Phrase | 24511 |
| S21 | (MH "Intensive Care Units+") OR (MH "Delivery Rooms+") | Search modes - Boolean/Phrase | 51919 |
| S20 | S17 OR S18 OR S19 | Search modes - Boolean/Phrase | 1966740 |
| S19 | "professionals" or "clinicians" or "providers" or "participants" or "trainees" or "doctors" or "physicians" or "residents" or "nurses" or "midwifes" or "midwives" | Search modes - Boolean/Phrase | 887544 |
| S18 | team\* or group\* or unit\* or crew or high-fidelity or hi-fidelity or in-situ | Search modes - Boolean/Phrase | 1421115 |
| S17 | (MH "Multidisciplinary Care Team+") | Search modes - Boolean/Phrase | 37852 |
| S16 | S13 OR S14 OR S15 | Search modes - Boolean/Phrase | 22337 |
| S15 | simulation\* N5 (train\* or medical or scenario\* or team\*) | Search modes - Boolean/Phrase | 3807 |
| S14 | (MH "Models, Anatomic+") | Search modes - Boolean/Phrase | 7672 |
| S13 | (MH "Simulations") OR (MH "Patient Simulation") | Search modes - Boolean/Phrase | 13983 |
| S12 | S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 | Search modes - Boolean/Phrase | 815888 |
| S11 | infant or infants | Search modes - Boolean/Phrase | 248110 |
| S10 | newborn\* | Search modes - Boolean/Phrase | 118502 |
| S9 | child or children | Search modes - Boolean/Phrase | 597040 |
| S8 | teenager\* | Search modes - Boolean/Phrase | 5202 |
| S7 | adolescent\* | Search modes - Boolean/Phrase | 114339 |
| S6 | neonatal\* | Search modes - Boolean/Phrase | 54252 |
| S5 | paediatric\* | Search modes - Boolean/Phrase | 20415 |
| S4 | pediatric\* | Search modes - Boolean/Phrase | 138841 |
| S3 | (MH "Pediatricians") | Search modes - Boolean/Phrase | 2622 |
| S2 | (MH "Pediatric Nurse Practitioners+") | Search modes - Boolean/Phrase | 1688 |
| S1 | (MH "Pediatrics+") | Search modes - Boolean/Phrase | 17929 |