## Search Strategies



Figure 1: Search strategy from the beginning to our last rerun strategy (2022 for 2023 ILCOR CoSTR)

2022 Search Strategies (from 22 October 2019 to 19 September 2022)

Database(s):  MEDLINE(R) with PUBMED

Date search: 19 September 2022

| **#** | **Searches** | **Results** | **Annotations** |
| --- | --- | --- | --- |
| 1 | (recogni\*[Title/Abstract] OR knowledge\*[Title/Abstract] OR skill\*[Title/Abstract] OR educat\*[Title/Abstract] OR information\*[Title/Abstract] OR train\*[Title/Abstract]) AND (anaphyla\*[Title/Abstract] OR epinephrin\*[Title/Abstract] OR adrenalin\*[Title/Abstract] OR epi-pen\*[Title/Abstract] OR epipen\*[Title/Abstract]) | 1162 |  |
| 2 | ((underus\*[Title/Abstract] OR under-us\*[Title/Abstract] OR underutili\*[Title/Abstract] OR under-utili\*[Title/Abstract]) AND (anaphyla\*[Title/Abstract] OR epinephrin\*[Title/Abstract] OR adrenalin\*[Title/Abstract] OR epi-pen\*[Title/Abstract] OR epipen\*[Title/Abstract])) | 21 |  |
| 3 | ((comfort\*[Title/Abstract] OR discomfort\*[Title/Abstract] OR dis-comfort\*[Title/Abstract] OR uncomfortable[Title/Abstract] OR confiden\*[Title/Abstract] OR empower\*[Title/Abstract]) AND (anaphyla\*[Title/Abstract] OR epinephrin\*[Title/Abstract] OR adrenalin\*[Title/Abstract] OR epi-pen\*[Title/Abstract] OR epipen\*[Title/Abstract])) | 344 |  |
| 4 | (manage\*[Title/Abstract] AND anaphyla\*[Title/Abstract]) | 700 |  |
| 5 | #1 or #2 or #3 or #4 | 1835 |  |
| 6 | "Patient Education as Topic"[Mesh] | 3351 |  |
| 7 | "Self Administration"[Mesh] | 844 |  |
| 8 | "Self-Management"[Mesh] | 2628 |  |
| 9 | (layperson\*[Title/Abstract] OR lay-person\*[Title/Abstract] OR laypeople\*[Title/Abstract] OR lay-people\*[Title/Abstract] OR nonprofessional\*[Title/Abstract] OR non-professional\*[Title/Abstract]) | 1706 |  |
| 10 | (parent[Title/Abstract] OR parents[Title/Abstract] OR parental[Title/Abstract] OR communit\*[Title/Abstract] OR teacher\*[Title/Abstract] OR caregiver\*[Title/Abstract] OR care-giver\*[Title/Abstract] OR personnel\*[Title/Abstract] OR school\*[Title/Abstract] OR child care worker\*[Title/Abstract] OR childcare worker\*[Title/Abstract] OR aide\*[Title/Abstract]) | 323405 |  |
| 11 | (patient\*[Title/Abstract] AND (educat\*[Title/Abstract] OR train\*[Title/Abstract] OR manage\*[Title/Abstract] OR instruct\*[Title/Abstract] OR confiden\*[Title/Abstract] OR complian\*[Title/Abstract] OR adheren\*[Title/Abstract])) | 378510 |  |
| 12 | self-manage\*[Title/Abstract] | 7869 |  |
| 13 | "First Aid"[Mesh] | 349 |  |
| 14 | "Emergency Medical Technicians"[Mesh] | 281 |  |
| 15 | first aid\*[Title/Abstract] OR first respon\*[Title/Abstract] OR EMT[Title/Abstract] OR emergency medical technician\*[Title/Abstract] OR paramedic\*[Title/Abstract] OR para-medic\*[Title/Abstract] OR ambulance\*[Title/Abstract] | 17145 |  |
| 16 | #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 | 686475 |  |
| 17 | #5 AND #16 | 955 |  |
| 18 | ("Animals"[Mesh] NOT ("Animals"[Mesh] AND "Humans"[Mesh])) | 345367 | Excluded animal studies |
| 19 | #17 NOT #18 | 953 |  |
| 20 | comment[Publication Type] OR editorial[Publication Type] OR news[Publication Type] OR newspaper article[Publication Type] | 231609 | Excluded letter, comment, editorial. |
| 21 | #19 NOT #20 | **952** |  |

Database(s): **EMBASE (R) with Embase** (from 22 October 2019 to 19 September 2022)

**Date search**: September, 19 2022

| **#** | **Searches** | **Results** | **Annotations** |
| --- | --- | --- | --- |
| 1 | (recogni\*:ti,ab,kw OR knowledge\*:ti,ab,kw OR skill\*:ti,ab,kw OR educat\*:ti,ab,kw OR information\*:ti,ab,kw OR train\*:ti,ab,kw) AND (anaphyla\*:ti,ab,kw OR epinephrin\*:ti,ab,kw OR adrenalin\*:ti,ab,kw OR 'epi pen\*':ti,ab,kw OR epipen\*:ti,ab,kw) | 2185 |  |
| 2 | (underus\*:ti,ab,kw OR 'under us\*':ti,ab,kw OR underutili\*:ti,ab,kw OR 'under utili\*':ti,ab,kw) AND (anaphyla\*:ti,ab,kw OR epinephrin\*:ti,ab,kw OR adrenalin\*:ti,ab,kw OR 'epi pen\*':ti,ab,kw OR epipen\*:ti,ab,kw) | 38 |  |
| 3 | (comfort\*:ti,ab,kw OR discomfort\*:ti,ab,kw OR 'dis comfort\*':ti,ab,kw OR uncomfortable:ti,ab,kw OR confiden\*:ti,ab,kw OR empower\*:ti,ab,kw) AND (anaphyla\*:ti,ab,kw OR epinephrin\*:ti,ab,kw OR adrenalin\*:ti,ab,kw OR 'epi pen\*':ti,ab,kw OR epipen\*:ti,ab,kw) | 602 |  |
| 4 | manage\*:ti,ab,kw AND anaphyla\*:ti,ab,kw | 1265 |  |
| 5 | #1 OR #2 OR #3 OR #4 | 3307 |  |
| 6 | 'patient education'/exp | 11503 |  |
| 7 | 'drug self administration'/exp | 1716 |  |
| 8 | 'self medication'/exp | 1439 |  |
| 9 | (layperson\*:ti,ab,kw OR 'lay person\*':ti,ab,kw OR laypeople\*:ti,ab,kw OR 'lay people\*':ti,ab,kw OR nonprofessional\*:ti,ab,kw OR 'non professional\*':ti,ab,kw) | 1407 |  |
| 10 | (parent:ti,ab,kw OR parents:ti,ab,kw OR parental:ti,ab,kw OR communit\*:ti,ab,kw OR teacher\*:ti,ab,kw OR caregiver\*:ti,ab,kw OR 'care giver\*':ti,ab,kw OR personnel\*:ti,ab,kw OR school\*:ti,ab,kw OR 'child care worker\*':ti,ab,kw OR 'childcare worker':ti,ab,kw OR 'childcare workers':ti,ab,kw OR aide\*:ti,ab,kw) | 302975 |  |
| 11 | patient\*:ti,ab,kw AND (educat\*:ti,ab,kw OR train\*:ti,ab,kw OR manage\*:ti,ab,kw OR instruct\*:ti,ab,kw OR confiden\*:ti,ab,kw OR complian\*:ti,ab,kw OR adheren\*:ti,ab,kw) | 536453 |  |
| 12 | 'self manage\*':ti,ab,kw | 7863 |  |
| 13 | 'layperson'/exp | 736 |  |
| 14 | 'first aid'/exp | 935 |  |
| 15 | 'rescue personnel'/exp | 963 |  |
| 16 | ('first aid\*':ti,ab,kw OR 'first respon\*':ti,ab,kw OR emt:ti,ab,kw OR 'emergency medical technician\*':ti,ab,kw OR paramedic\*:ti,ab,kw OR 'para medic\*':ti,ab,kw OR ambulance\*:ti,ab,kw) | 20530 |  |
| 17 | #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 | 825625 |  |
| 18 | #5 AND #17 | 1880 |  |
| 19 | #18 NOT ([conference abstract]/lim OR [editorial]/lim OR [erratum]/lim OR [letter]/lim OR [note]/lim) | 954 |  |
| 20 | #19 NOT ([animal cell]/lim OR [animal experiment]/lim OR [animal model]/lim OR [animal tissue]/lim) | **946** | Excluded animal studies |

**Database(s):**  COCHRANE(R) with Cochrane Central Register of Controlled Trials (Central interface) (from 22 october 2019 to 19 september 2022)

**Date search** : September, 19 2022

| **#** | **Searches** | **Results** | **Annotations** |
| --- | --- | --- | --- |
| 1 | ((recogni\* or knowledge\* or skill\* or educat\* or information\* or train\*) AND (anaphyla\* or epinephrin\* or adrenalin\* or epi-pen\* or epipen\*)):ti,ab,kw | 361 |  |
| 2 | ((underus\* or under-us\* or underutili\* or under-utili\*) and (anaphyla\* or epinephrin\* or adrenalin\* or epi-pen\* or epipen\*)):ti,ab,kw | 3 |  |
| 3 | ((comfort\* or discomfort\* or dis-comfort\* or uncomfortable or confiden\* or empower\*) and (anaphyla\* or epinephrin\* or adrenalin\* or epi-pen\* or epipen\*)):ti,ab,kw | 260 |  |
| 4 | (manage\* AND anaphyla\*):ti,ab,kw | 93 |  |
| 5 | #1 OR #2 OR #3 OR #4 | 597 |  |
| 6 | MeSH descriptor: [Patient Education as Topic] explode all trees | 9294 |  |
| 7 | MeSH descriptor: [Self Administration] explode all trees | 787 |  |
| 8 | MeSH descriptor: [Self-Management] explode all trees | 714 |  |
| 9 | (layperson\* OR lay-person\* OR laypeople\* OR lay-people\* OR nonprofessional\* OR non-professional\*):ti,ab,kw | 331 |  |
| 10 | (parent OR parents OR parental OR communit\* OR teacher\* OR caregiver\* OR care-giver\* OR personnel\* OR school\* OR 'child care worker\*' OR 'childcare worker\*' OR aide\*):ti,ab,kw | 46277 |  |
| 11 | (patient\* AND (educat\* OR train\* OR manage\* OR instruct\* OR confiden\* OR complian\* OR adheren\*)):ti,ab,kw | 82181 |  |
| 12 | (self-manage\*):ti,ab,kw | 3404 |  |
| 13 | MeSH descriptor: [First Aid] explode all trees | 99 |  |
| 14 | MeSH descriptor: [Emergency Medical Technicians] explode all trees | 181 |  |
| 15 | (first aid\* OR first respon\* OR EMT OR emergency medical technician\* OR paramedic\* OR para-medic\* OR ambulance\*):ti,ab,kw | 20561 |  |
| 16 | #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 | 140925 |  |
| 17 | #5 AND #16 | **409** |  |

|  |  |  |
| --- | --- | --- |
| **Databases Searched** | **Date of Search** | **Number of Results** |
| All Medline (appendix 1) | September 19, 2022 | 952 |
| All Embase (appendix 2) | September 19, 2022 | 946 |
| Cochrane Trials only (appendix 3) | September 19, 2022 | 409 |
| Total 2019 – 2022 | 2307 |
| Total  2019 – 2022  (after deduplication) | 949 |
| Total after title and abstract screen | 18 |
| **Total after full text stage** | **5** |

Google search executed on September 30, 2022 from 2019 to 2022

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **#** | **Search** | **# results (2019-2020)** | **# results screened** | **# new potentially relevant records** | **Total # records** | **# included after review** |
| 1 | anaphylaxis AND recognition | ~ 12 300 | 100 | 18 | 3 | 1 |
| 2 | anaphylaxis AND recognize | ~ 16 200 | 100 | 12 | 3 | 1 |
| 3 | anaphylaxis AND identification | ~ 17 600 | 100 | 8 | 0 | 0 |
| 4 | anaphylaxis AND identify | ~ 17 400 | 100 | 3 | 0 | 0 |

## RESULTs for the 2022 ScoRev, search strategy from 2010 to September 19, 2022

|  |  |  |
| --- | --- | --- |
| **Sources** | **Number of articles** | **Number of articles selected** |
| 2019 ScoRev not published (ILCOR Website) | 582 | 2 |
| 2020 EvUp (search strategy limited to medline) | 103 | 8 |
| 2022 re-run search strategy ILCOR FATF (2019 -2022) | 949 | 7 |
|  | **Total of included studies** | **17** |

For the literature search and study selection, the updated search strategy of PubMed, EMBASE and Cochrane database from 2019 to 2022 identified 949 unique titles/abstracts. The 2019 search strategy identified 582 titles rerunning and the 2020 ILCOR FATF CoSTR identified 103 titles. After removing duplicates and initial review, 37 articles were included in the full-text review. After full-text review 20 were excluded leaving a total of 17 studies.

## Inclusion and Exclusion criteria

**Inclusion criteria**

Our population included adults and children experiencing anaphylaxis with a description of any specific symptom to a first aid provider and in a prehospital setting.

**Exclusion criteria**

We also excluded all studies where data collection occurred in an emergency department or other healthcare facility by healthcare provider.