**Search Strategies**

The following search strategy was used for the tier one strategy after consultation a senior health researcher (JR).

EMBASE.com (Embase + Medline)

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| **Approach** | **No.** | **Query (13 July 2020)** | **Results** |
| nosebleed; nose near bleed (title or abstract) +  first aid (title, abstract, keyword or index terms) + cold (title or abstract) | #1 | epistaxis'/de OR epistaxis:ti,ab OR nosebleed\*:ti,ab OR (((nose OR nasal OR rhino\*) NEAR/2 (blood OR bleed$ OR bleeding OR haemorrhag\* OR hemorrhag\*)):ti,ab) | 25,792 |
| #2 | 'first aid'/de OR 'emergency treatment'/de OR 'emergency medicine'/de OR 'first aid':ti,ab,kw,de OR 'first response':ti,ab,kw,de OR 'first responder$':ti,ab,kw,de OR bystander$:ti,ab,kw,de OR 'by stander\*':ti,ab,kw,de OR 'wilderness medicine':ti,ab,kw,de | 89,878 |
| #3 | ice:ti,ab OR cryo\*:ti,ab OR cold:ti,ab OR cool:ti,ab OR cooling:ti,ab | 337,941 |
| #4 | #1 AND (#2 OR #3) | 605 |
| nosebleed; nose (title) +  cold (title) | #5 | epistaxis'/de OR epistaxis:ti OR nosebleed\*:ti OR nose:ti OR nasal:ti OR rhino\*:ti | 106,480 |
| #6 | ice:ti OR cryo\*:ti OR cold:ti OR cool:ti OR cooling:ti | 104,696 |
| #7 | #5 AND #6 | 481 |
| nosebleed (title) +  study design (trial; study) | #8 | epistaxis:ti OR nosebleed$:ti OR 'nose bleed$':ti | 3,121 |
| #9 | #8 AND ('clinical protocol'/de OR 'clinical study'/de OR 'clinical trial'/de OR 'comparative effectiveness'/de OR 'comparative study'/de OR 'controlled clinical trial'/de OR 'controlled study'/de OR 'multicenter study'/de OR 'randomized controlled trial'/de OR 'randomized controlled trial topic'/de) | 478 |
| #10 | #4 OR #7 OR #9 | 1,439 |
|  | #11 | #10 NOT (rhinosinusitis:ti,ab,kw,de OR rhinorrhea:ti,ab,kw,de OR 'common cold':ti,ab,kw,de OR cryoablation:ti,ab,kw,de OR decongestant:ti,ab,kw,de OR rhinoplasty:ti,ab,kw,de OR ablation:ti,ab,kw,de OR tranexamic:ti,ab,kw,de OR ligation:ti,ab,kw,de) | 1,032 |
|  | #12 | #11 NOT ([conference abstract]/lim OR [conference review]/lim OR [editorial]/lim OR [erratum]/lim OR [note]/lim OR [book]/lim OR 'case report'/de) | 739 |
|  | #13 | #12 NOT (('animal'/exp OR 'nonhuman'/exp OR 'rodent'/exp OR 'animal experiment'/exp OR 'experimental animal'/exp OR rat:ti,ab OR rats:ti,ab OR mouse:ti,ab OR mice:ti,ab OR dog$:ti,ab OR pig$:ti,ab OR porcine:ti,ab OR swine:ti,ab OR chick$:ti,ab) NOT 'human'/exp) | **669** |

[EMBASE.com](https://nam01.safelinks.protection.outlook.com/?url=http%3A%2F%2Fambase.com%2F&data=02%7C01%7Cdcberry%40svsu.edu%7Cbefbd1efd5764198e8b508d8272ae9e3%7C550f45ff3e8342a197d970ad8935b0c5%7C0%7C0%7C637302412756634370&sdata=obLnnWKtG%2BlwHSzMpCvgNsVJp4XnBlA7Uc%2F%2BSse3jTM%3D&reserved=0) (Embase + Medline)

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| **No.** | **Query (14 January 2020)** | **Results** |
| #1 | 'epistaxis'/de OR epistaxis:ti,ab OR nosebleed\*:ti,ab OR (((nose OR nasal OR rhino\*) NEAR/2 (blood OR bleed$ OR bleeding OR haemorrhag\* OR hemorrhag\*)):ti,ab) | 26,730 |
| #2 | 'first aid'/de OR 'emergency treatment'/de OR 'emergency medicine'/de OR 'first aid':ti,ab,kw,de OR 'first response':ti,ab,kw,de OR 'first responder$':ti,ab,kw,de OR bystander$:ti,ab,kw,de OR 'by stander\*':ti,ab,kw,de OR 'wilderness medicine':ti,ab,kw,de | 92,792 |
| #3 | ice:ti,ab OR cryo\*:ti,ab OR cold:ti,ab OR cool:ti,ab OR cooling:ti,ab | 350,738 |
| #4 | #1 AND (#2 OR #3) | 621 |
| #5 | 'epistaxis'/de OR epistaxis:ti OR nosebleed\*:ti OR nose:ti OR nasal:ti OR rhino\*:ti | 109,911 |
| #6 | ice:ti OR cryo\*:ti OR cold:ti OR cool:ti OR cooling:ti | 108,359 |
| #7 | #5 AND #6 | 490 |
| #8 | epistaxis:ti OR nosebleed$:ti OR 'nose bleed$':ti | 3,187 |
| #9 | #8 AND ('clinical protocol'/de OR 'clinical study'/de OR 'clinical trial'/de OR 'comparative effectiveness'/de OR 'comparative study'/de OR 'controlled clinical trial'/de OR 'controlled study'/de OR 'multicenter study'/de OR 'randomized controlled trial'/de OR 'randomized controlled trial topic'/de) | 500 |
| #10 | #4 OR #7 OR #9 | 1,484 |
| #11 | #10 NOT (rhinosinusitis:ti,ab,kw,de OR rhinorrhea:ti,ab,kw,de OR 'common cold':ti,ab,kw,de OR cryoablation:ti,ab,kw,de OR decongestant:ti,ab,kw,de OR rhinoplasty:ti,ab,kw,de OR ablation:ti,ab,kw,de OR tranexamic:ti,ab,kw,de OR ligation:ti,ab,kw,de) | 1,064 |
| #12 | #11 NOT ([conference abstract]/lim OR [conference review]/lim OR [editorial]/lim OR [erratum]/lim OR [note]/lim OR [book]/lim OR 'case report'/de) | 759 |
| #13 | #12 NOT (('animal'/exp OR 'nonhuman'/exp OR 'rodent'/exp OR 'animal experiment'/exp OR 'experimental animal'/exp OR rat:ti,ab OR rats:ti,ab OR mouse:ti,ab OR mice:ti,ab OR dog$:ti,ab OR pig$:ti,ab OR porcine:ti,ab OR swine:ti,ab OR chick$:ti,ab) NOT 'human'/exp) | 688 |
| #14 | #13 AND [12-7-2020]/sd | **7** |

**Cochrane Library**

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| **No.** | **Cochrane Library 13 July 2020** | **Results** |
| #1 | MeSH descriptor: [Epistaxis] explode all trees | 204 |
| #2 | epistaxis:ti,ab OR nosebleed\*:ti,ab OR ((nose:ti OR nasal:ti OR rhino\*:ti) and (blood:ti or bleed\*:ti or haemorrhage\*:ti or hemorrhage\*:ti)) | 8,987 |
| #3 | #1 or #2 | 9,024 |
| #4 | ice:ti,ab OR cryo\*:ti,ab OR cold:ti,ab OR cool:ti,ab OR cooling:ti,ab | 17,670 |
| #5 | #3 and #4 | 207 |
| #6 | epistaxis:ti | 232 |
| #7 | #5 or #6 | 439 |
| #8 | #7 NOT (rhinosinusitis:ti,ab OR rhinorrhea:ti,ab OR 'common cold':ti,ab OR cryoablation:ti,ab OR decongestant:ti,ab OR rhinoplasty:ti,ab OR ablation:ti,ab) | **309** |
|  | Cochrane Reviews | 2 |
|  | Cochrane Protocols | 1 |
|  | Trials | 306 |

**Cochrane Library**

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| **No.** | **Cochrane Library 14 January 2021** | **Results** |
| #1 | [mh epistaxis] | 207 |
| #2 | epistaxis:ti,ab OR nosebleed\*:ti,ab OR ((nose:ti OR nasal:ti OR rhino\*:ti) and (blood:ti or bleed\*:ti or haemorrhage\*:ti or hemorrhage\*:ti)) | 945 |
| #3 | #1 or #2 | 1009 |
| #4 | ice:ti,ab OR cryo\*:ti,ab OR cold:ti,ab OR cool:ti,ab OR cooling:ti,ab | 18699 |
| #5 | #3 and #4 | 14 |
| #6 | epistaxis:ti | 244 |
| #7 | #5 or #6 | 258 |
| #8 | #7 NOT (rhinosinusitis:ti,ab OR rhinorrhea:ti,ab OR 'common cold':ti,ab OR cryoablation:ti,ab OR decongestant:ti,ab OR rhinoplasty:ti,ab OR ablation:ti,ab) | 250 |
| #9 | #8 with Publication Year from 2020 to 2021, with Cochrane Library publication date Between Jul 2020 and Jan 2021, in Trials | **7** |
| #10 | #8 with Cochrane Library publication date Between Jul 2020 and Jan 2021, in Cochrane Reviews, Cochrane Protocols | 0 |
| \* In July 2020, the string found 8987 records. Believe the fewer trials were due to changes made to the CENTRAL database. | | |

We conducted a focused literature search (Pubmed) on December 19, 2020, to identify clinical practice guidelines and position statements from professional organizations. The search was inclusive for all years and all languages as long as an English abstract was available.

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| **Approach** | **No.** | **Query** | **Results** |
| Title, abstract, keyword or index terms | #1 | ("guideline"[Publication Type] OR "guidelines as topic"[MeSH Terms] OR "guideline"[All Fields]) AND ("epistaxis"[MeSH Terms] OR "epistaxis"[All Fields]) | 58 |
| #2 | ("protocol"[All Fields] OR "protocol s"[All Fields] OR "protocolized"[All Fields] OR "protocols"[All Fields]) AND ("epistaxis"[MeSH Terms] OR "epistaxis"[All Fields])  responder$':ti,ab,kw,de OR bystander$:ti,ab,kw,de OR 'by stander\*':ti,ab,kw,de OR 'wilderness medicine':ti,ab,kw,de | 210 |
|  |  |  | **269** |

A gray literature search of Google.com was conducted on December 21, 2020, to identify clinical practice guidelines related to first aid for acute epistaxis. The search was inclusive for all years and limited to the first 50 websites.

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| --- | --- | --- | --- |
| **Approach** | **No.** | **Query** | **Results** |
| Limited to past year, verbatim, first 50 hits | #1 | “practice guideline” AND Epistaxis | 59,500 |
|  |  |  | 59,500 |

A second gray literature search of Google scholar was conducted on December 28, 2020, to identify relevant literature. The search was inclusive for all years and limited to the first 100 sites per search string.

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| **Approach** | **No.** | **Query** | **Results** |
| Limited to verbatim, first 100 hits | #1 | "First aid" AND Epistaxis AND ICE NOT Chronic NOT Posterior NOT Cautery NOT intranasal NOT Idiopathic NOT Packing NOT Silver NOT Tranexamic”); | 3 |
| #2 | “First Aid Guidelines” | 856 |
| #3 | "First aid" AND Nosebleed AND ICE OR Cryotherapy | 930 |
|  |  |  | 1786 |

A third gray literature search on December 28, 2020 examined the eight Resuscitation Councils (and sub-councils) websites aligned with the International Liaison Committee on Resuscitation. We hand examined the organizations for position or guideline statements addressing first aid management of epistaxis.

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| **Approach** | **No.** | **Query** | **Results** |
| Hand Search | #1 | American Heart Association | 6 |
| #2 | European Resuscitation Council and associated Councils | 10 |
|  | #3 | Heart and Stoke Foundation | 3 |
|  | #4 | Australia and New Zealand Committee on Resuscitation (ANZCOR) | 1 |
|  | #5 | ResuscitationCouncil of Asia and associated Councils | 7 |
|  | #6 | Resuscitation Council of Southern Africa and associated Councils | 1 |
|  | #7 | InterAmerican Heart Foundation | 1 |
|  |  |  | 29 |

A hand search for secondary resources identified from reviewed manuscripts on acute anterior epistaxis was conducted as needed.