1. Database search strategy

Appendix 1.

**Web of Science (Clarivate Analytics) - Web of Science Core Collection**

Searched 6.1.2022

|  |  |  |
| --- | --- | --- |
| Search no. | Search | Result |
| 1 |  ( ( communicat\* NEAR/2 system\* ) OR coms OR ( communication NEAR/2 breakdown\* ) OR (radio NEAR/2 communicat\*) OR (radios NEAR/2 communicat\*) OR "Emergency medical service communication system\*" OR "ems communication system\*" OR (tetra NEAR/4 communicat\*) OR ("terrestrial trunked radio\*" NEAR/4 communicat\*) OR ( ( "multi disciplinary" OR multidisciplinary OR "cross disciplinary" OR "inter disciplinary" OR interdisciplinary ) NEAR/2 communication\* ) ) (Topic)7:36 PM | 125,031 |
| 2 | TS=(rescue NEAR/2 work\*) | 1,426 |
| 3 | TS=((emergen\*) NEAR/1 ("health care" or healthcare or medical) NEAR/1 (service\* or dispatch)) | 12,594 |
| 4 | TS=((accident\*) NEAR/1 (emergen\* or squad\*) NEAR/1 (service\*)) | 224 |
| 5 | TS=(((mass\* or major or multiple or complex) NEAR/2 (electric\* or "high voltage") NEAR/2 (accident\*))) | 9 |
| 6 | TS=((structure\* or building\* or bridge\*) NEAR/2 (collapse\*)) | 6,838 |
| 7 | TS=((aviation\* or airline\* or aeroplane\* or aircraft\*) NEAR/2 (accident\* or crash\* or collision\* or trauma\* or injur\*) ) | 2,604 |
| 8 | TS=(((mass\* or major or multiple or complex) NEAR/2 (traffic or road\*) NEAR/2 (accident\* or crash\* or collision\* or trauma\* or injur\*))) | 490 |
| 9 | TS=(terror\* or bioterror\* or bio-terror\*) | 54,205 |
| 10 | TS=((disaster\* or calamit\* or fatalit\* or catastroph\* or poly-trauma\* or polytrauma\* or multi-trauma\* or multitrauma\*)) | 215,967 |
| 11 | (mass\* or major or multiple or complex) NEAR/2 (incident\* or emergen\* or casualt\* or accident\* or trauma\* or injur\* or destruction or explosion\*) (Topic) | 55,924 |
| 12 | #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 | 336,321 |
| 13 | #12 AND #1 | 1,650 |
| 14 | TS=(((mass\* or major or multiple or complex) NEAR/4 (incident\* or accident\* or disaster\* or trauma\* or casualt\* or emergenc\*) NEAR/4 (communicat\*))) |  |
| **15** | **#14 OR #13** | **1,778** |

Appendix 2.

**Ovid MEDLINE(R) ALL 1946 to January 05, 2022**

Searched 6.1.2022.

|  |  |  |
| --- | --- | --- |
| Search no. | Search | Result |
| 1 | Radio/ | 2206 |
| 2 | Emergency Medical Service Communication Systems/ and (radio or radios).ab,ti. | 92 |
| 3 | ((Communicat\* adj3 system\*) or COMS or (Communication adj3 breakdown\*) or ((Radio or radios) adj3 communicat\*) or Emergency medical service communication system\* or ems communication system\* or (tetra adj5 communicat\*) or (terrestrial trunked radio\* adj5 communicat\*) or ((multi disciplinary or multidisciplinary or cross disciplinary or inter disciplinary or interdisciplinary) adj3 communication\*)).ab,ti. | 15007 |
| 4 | 1 or 2 or 3 | 17132 |
| 5 | Disasters/ | 20159 |
| 6 | Disaster Medicine/ | 898 |
| 7 | Disaster Planning/ | 15082 |
| 8 | Mass Casualty Incidents/ | 2333 |
| 9 | Accidents/ | 19928 |
| 10 | Accident Prevention/ | 9250 |
| 11 | Accidents, Aviation/ | 2731 |
| 12 | Accidents, Traffic/ | 46023 |
| 13 | Explosions/ | 4159 |
| 14 | Structure Collapse/ | 139 |
| 15 | Rescue Work/ | 2220 |
| 16 | Emergency Medical Services/ | 45967 |
| 17 | Emergency Medical Dispatch/ | 163 |
| 18 | exp Terrorism/ | 13299 |
| 19 | ((mass\* or major or multiple or complex) adj3 (incident\* or emergen\* or casualt\* or accident\* or trauma\* or injur\* or destruction or explosion\*)).ti,ab. | 49376 |
| 20 | (disaster\* or calamit\* or fatalit\* or catastroph\* or poly-trauma\* or polytrauma\* or multi-trauma\* or multitrauma\*).ti,ab. | 95116 |
| 21 | (terror\* or bioterror\* or bio-terror\*).ti,ab. | 12485 |
| 22 | ((aviation\* or airline\* or aeroplane\* or aircraft\*) adj3 (accident\* or crash\* or collision\* or trauma\* or injur\*)).ti,ab. | 1035 |
| 23 | ((mass\* or major or multiple or complex) adj3 (traffic or road\*) adj3 (accident\* or crash\* or collision\* or trauma\* or injur\*)).ti,ab. | 261 |
| 24 | ((structure\* or building\* or bridge\*) adj3 collapse\*).ti,ab. | 1053 |
| 25 | ((mass\* or major or multiple or complex) adj3 (electric\* or "high voltage") adj3 accident\*).ti,ab. | 1 |
| 26 | (accident\* adj2 (emergen\* or squad\*) adj2 service\*).ti,ab. | 226 |
| 27 | (emergen\* adj2 (health care or healthcare or medical) adj2 (service\* or dispatch)).ti,ab. | 10497 |
| 28 | (rescue adj3 work\*).ti,ab. | 579 |
| 29 | 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 | 282551 |
| 30 | 4 and 29 | 688 |
| 31 | ((mass\* or major or multiple or complex) adj5 (incident\* or accident\* or disaster\* or trauma\* or casualt\* or emergenc\*) adj5 communicat\*).ab,ti. | 71 |
| **32** | **30 or 31** | **748** |

Appendix 3.

**Embase Classic+Embase 1947 to 2022 January 05**

Searched 6.1.2022.

|  |  |  |
| --- | --- | --- |
| Search no. | Search | Result |
| 1 | radio/ | 821 |
| 2 | ((Communicat\* adj3 system\*) or COMS or (Communication adj3 breakdown\*) or ((Radio or radios) adj3 communicat\*) or Emergency medical service communication system\* or ems communication system\* or (tetra adj5 communicat\*) or (terrestrial trunked radio\* adj5 communicat\*) or ((multi disciplinary or multidisciplinary or cross disciplinary or inter disciplinary or interdisciplinary) adj3 communication\*)).ab,ti. | 18345 |
| 3 | 1 or 2 | 19078 |
| 4 | disaster/ | 19078 |
| 5 | mass disaster/ | 2984 |
| 6 | exp disaster planning/ | 13498 |
| 7 | disaster medicine/ | 1497 |
| 8 | accident/ | 42343 |
| 9 | accident prevention/ | 18186 |
| 10 | aircraft accident/ | 3011 |
| 11 | destruction/ | 8614 |
| 12 | electric accident/ | 648 |
| 13 | explosion/ | 6232 |
| 14 | structure collapse/ | 266 |
| 15 | traffic accident/ | 69677 |
| 16 | rescue work/ | 1122 |
| 17 | emergency health service/ | 110530 |
| 18 | emergency medical dispatch/ | 268 |
| 19 | exp terrorism/ | 9881 |
| 20 | ((mass\* or major or multiple or complex) adj3 (incident\* or emergen\* or casualt\* or accident\* or trauma\* or injur\* or destruction or explosion\*)).ti,ab. | 66681 |
| 21 | (disaster\* or calamit\* or fatalit\* or catastroph\* or poly-trauma\* or polytrauma\* or multi-trauma\* or multitrauma\*).ti,ab. | 121466 |
| 22 | (terror\* or bioterror\* or bio-terror\*).ti,ab. | 14719 |
| 23 | ((aviation\* or airline\* or aeroplane\* or aircraft\*) adj3 (accident\* or crash\* or collision\* or trauma\* or injur\*)).ti,ab. | 1318 |
| 24 | ((mass\* or major or multiple or complex) adj3 (traffic or road\*) adj3 (accident\* or crash\* or collision\* or trauma\* or injur\*)).ti,ab. | 340 |
| 25 | ((structure\* or building\* or bridge\*) adj3 collapse\*).ti,ab. | 1103 |
| 26 | ((mass\* or major or multiple or complex) adj3 (electric\* or "high voltage") adj3 accident\*).ti,ab. | 3 |
| 27 | accident\* adj2 (emergen\* or squad\*) adj2 service\*).ti,ab. | 263 |
| 28 | (emergen\* adj2 (health care or healthcare or medical) adj2 (service\* or dispatch)).ti,ab. | 14260 |
| 29 | (rescue adj3 work\*).ti,ab. | 763 |
| 30 | 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 | 439194 |
| 31 | 3 and 30 | 860 |
| 32 | ((mass\* or major or multiple or complex) adj5 (incident\* or accident\* or disaster\* or trauma\* or casualt\* or emergenc\*) adj5 communicat\*).ab,ti. | 86 |
| **33** | **31 or 32** | **929** |

Appendix 4.

**Cochrane Library (Wiley)**

Searched 6.1.2022.

|  |  |  |
| --- | --- | --- |
| Search no. | Search | Result |
| 1 | MeSH descriptor: [Radio] this term only  | 28 |
| 2 | MeSH descriptor: [Emergency Medical Service Communication Systems] this term only | 53 |
| 3 | ((radio OR radios)):ti,ab,kw | 2889 |
| 4 | #2 AND #3 | 0 |
| 5 | ((Communicat\* NEAR/2 system\*) or COMS or (Communication NEAR/2 breakdown\*) or ((Radio or radios) NEAR/2 communicat\*) or “Emergency medical service communication system\*” or “ems communication system\*” or (tetra NEAR/4 communicat\*) or (“terrestrial trunked radio\*” NEAR/4 communicat\*) or ((“multi disciplinary” or multidisciplinary or “cross disciplinary” or “inter disciplinary” or interdisciplinary) NEAR/2 communication\*)):ti,ab,kw | 851 |
| 6 | #1 OR #4 OR #5 | 878 |
| 7 | MeSH descriptor: [Disasters] this term only  | 82 |
| 8 | MeSH descriptor: [Disaster Medicine] this term only | 4 |
| 9 | MeSH descriptor: [Disaster Planning] this term only | 34 |
| 10 | MeSH descriptor: [Mass Casualty Incidents] this term only | 24 |
| 11 | MeSH descriptor: [Accidents] this term only | 47 |
| 12 | MeSH descriptor: [Accident Prevention] this term only | 134 |
| 13 | MeSH descriptor: [Accidents, Aviation] this term only  | 13 |
| 14 | MeSH descriptor: [Accidents, Traffic] this term only  | 444 |
| 15 | MeSH descriptor: [Explosions] explode all trees  | 4 |
| 16 | MeSH descriptor: [Structure Collapse] this term only  | 0 |
| 17 | MeSH descriptor: [Rescue Work] this term only | 21 |
| 18 | MeSH descriptor: [Emergency Medical Services] this term only  | 1077 |
| 19 | MeSH descriptor: [Emergency Medical Dispatch] explode all trees  | 6 |
| 20 | MeSH descriptor: [Terrorism] explode all trees  | 75 |
| 21 | ((mass\* or major or multiple or complex) NEAR/3 (incident\* or emergen\* or casualt\* or accident\* or trauma\* or injur\* or destruction or explosion\*)):ti,ab,kw  | 4691 |
| 22 | (disaster\* or calamit\* or fatalit\* or catastroph\* or poly-trauma\* or polytrauma\* or multi-trauma\* or multitrauma\*):ti,ab,kw  | 6241 |
| 23 | (terror\* or bioterror\* or bio-terror\*):ti,ab,kw  | 259 |
| 24 | (((mass\* or major or multiple or complex) NEAR/3 (traffic or road\*) NEAR/3 (accident\* or crash\* or collision\* or trauma\* or injur\*))):ti,ab,kw  | 16 |
| 25 | ((aviation\* or airline\* or aeroplane\* or aircraft\*) NEAR/3 (accident\* or crash\* or collision\* or trauma\* or injur\*)):ti,ab,kw  | 24 |
| 26 | ((structure\* or building\* or bridge\*) NEAR/3 collapse\*):ti,ab,kw  | 6 |
| 27 | (((mass\* or major or multiple or complex) NEAR/3 (electric\* or "high voltage") NEAR/3 (accident\*))):ti,ab,kw  | 0 |
| 28 | ((accident\* NEAR/2 (emergen\* or squad\*) NEAR/2 service\*)):ti,ab,kw  | 7 |
| 29 | ((emergen\* NEAR/2 ("health care" or healthcare or medical) NEAR/2 (service\* or dispatch))):ti,ab,kw  | 1627 |
| 30 | (rescue NEAR/3 work\*):ti,ab,kw  | 40 |
| 31 | #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24 or #25 or #26 or #27 or #28 or #29 or #30 | 13095 |
| 32 | #6 AND #31 | 69 |
| 33 | (((mass\* or major or multiple or complex) NEAR/5 (incident\* or accident\* or disaster\* or trauma\* or casualt\* or emergenc\*) NEAR/5 communicat\*)):ti,ab,kw  | 6 |
| **34** | **#32 OR #33** | **75** |

Appendix 5.

**Scopus (Elsevier).**

Searched 10.1.2022.

|  |  |  |
| --- | --- | --- |
| Search no. | Search | Result |
| 1 | TITLE-ABS-KEY ( ( communicat\* W/2 system\* ) OR coms OR ( communication W/2 breakdown\* ) OR ((radio OR radios) W/2 communicat\*) OR "Emergency medical service communication system\*" OR "ems communication system\*" OR (tetra W/4 communicat\*) OR ("terrestrial trunked radio\*" W/4 communicat\*) OR ( ( "multi disciplinary" OR multidisciplinary OR "cross disciplinary" OR "inter disciplinary" OR interdisciplinary ) W/2 communication\* ) ) | 413,511 |
| 2 | ( TITLE-ABS-KEY ( ( mass\* OR major OR multiple OR complex ) W/2 ( incident\* OR emergen\* OR casualt\* OR accident\* OR trauma\* OR injur\* OR destruction OR explosion\* ) ) ) | 92,661 |
| 3 | ( TITLE-ABS-KEY ( ( disaster\* OR calamit\* OR fatalit\* OR catastroph\* OR poly-trauma\* OR polytrauma\* OR multi-trauma\* OR multitrauma\* ) ) ) | 447,530 |
| 4 | ( TITLE-ABS-KEY ( terror\* OR bioterror\* OR bio-terror\* ) ) | 80,960 |
| 5 | ( TITLE-ABS-KEY ( ( ( mass\* OR major OR multiple OR complex ) W/2 ( traffic OR road\* ) W/2 ( accident\* OR crash\* OR collision\* OR trauma\* OR injur\* ) ) ) ) | 1,131 |
| 6 | ( TITLE-ABS-KEY ( ( aviation\* OR airline\* OR aeroplane\* OR aircraft\* ) W/2 ( accident\* OR crash\* OR collision\* OR trauma\* OR injur\* ) ) ) | 13,624 |
| 7 | ( TITLE-ABS-KEY ( ( structure\* OR building\* OR bridge\* ) W/2 ( collapse\* ) ) ) | 11,195 |
| 8 | ( TITLE-ABS-KEY ( ( ( mass\* OR major OR multiple OR complex ) W/2 ( electric\* OR "high voltage" ) W/2 ( accident\* ) ) ) ) | 10 |
| 9 | ( TITLE-ABS-KEY ( ( accident\* ) W/1 ( emergen\* OR squad\* ) W/1 ( service\* ) ) ) | 279 |
| 10 | ( TITLE-ABS-KEY ( ( emergen\* ) W/1 ( "health care" OR healthcare OR medical ) W/1 ( service\* OR dispatch ) ) ) | 51,602 |
| 11 | ( TITLE-ABS-KEY ( rescue W/2 work\* ) ) | 3,951 |
| 12 | #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11( ( TITLE-ABS-KEY ( ( mass\* OR major OR multiple OR complex ) W/2 ( incident\* OR emergen\* OR casualt\* OR accident\* OR trauma\* OR injur\* OR destruction OR explosion\* ) ) ) ) OR ( ( TITLE-ABS-KEY ( ( disaster\* OR calamit\* OR fatalit\* OR catastroph\* OR poly-trauma\* OR polytrauma\* OR multi-trauma\* OR multitrauma\* ) ) ) ) OR ( ( TITLE-ABS-KEY ( terror\* OR bioterror\* OR bio-terror\* ) ) ) OR ( ( TITLE-ABS-KEY ( ( ( mass\* OR major OR multiple OR complex ) W/2 ( traffic OR road\* ) W/2 ( accident\* OR crash\* OR collision\* OR trauma\* OR injur\* ) ) ) ) ) OR ( ( TITLE-ABS-KEY ( ( aviation\* OR airline\* OR aeroplane\* OR aircraft\* ) W/2 ( accident\* OR crash\* OR collision\* OR trauma\* OR injur\* ) ) ) ) OR ( ( TITLE-ABS-KEY ( ( structure\* OR building\* OR bridge\* ) W/2 ( collapse\* ) ) ) ) OR ( ( TITLE-ABS-KEY ( ( ( mass\* OR major OR multiple OR complex ) W/2 ( electric\* OR "high voltage" ) W/2 ( accident\* ) ) ) ) ) OR ( ( TITLE-ABS-KEY ( ( accident\* ) W/1 ( emergen\* OR squad\* ) W/1 ( service\* ) ) ) ) OR ( ( TITLE-ABS-KEY ( ( emergen\* ) W/1 ( "health care" OR healthcare OR medical ) W/1 ( service\* OR dispatch ) ) ) ) OR ( ( TITLE-ABS-KEY ( rescue W/2 work\* ) ) ) | 662,276 |
| 13 | #1 AND #12 | 6,689 |
| 14 | TITLE-ABS-KEY(((mass\* or major or multiple or complex) W/4 (incident\* or accident\* or disaster\* or trauma\* or casualt\* or emergenc\*) W/4 (communicat\*))) | 197 |
| **15** | **#13 OR #14** | **6,838** |

Appendix 6.

**SveMed+ (Karolinska Institutet)**

Searched 6.1.2022.

**Note: Update of Svemed with new material ended on 1 January 2020.**

|  |  |  |
| --- | --- | --- |
| Search no. | Search | Result |
| 1 | noexp:"Radio" | 29 |
| 2 | noexp:"Emergency Medical Service Communication Systems" | 47 |
| 3 | radio OR radios | 68 |
| 4 | #2 AND #3 | 4 |
| 5 | "communication system" | 71 |
| 6 | "communication breakdown" | 0 |
| 7 | "radio communication" | 1 |
| 8 | "ems communication system" | 47 |
| 9 | tetra | 0 |
| 10 | "Multidisciplinary communication" | 822 |
| 11 | "Multi-disciplinary communication" | 0 |
| 12 | "cross disciplinary communication" | 822 |
| 13 | "interdisciplinary communication" | 822 |
| 15 | "inter-disciplinary communication" | 0 |
| 16 | "terrestrial trunked radio" | 0 |
| 17 | #1 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 | 920 |
| 18 | noexp:"disaster" | 0 |
| 19 | noexp:"disaster planning" | 204 |
| 20 | noexp:"Disaster Medicine" | 14 |
| 21 | noexp:"Mass Casualty Incidents" | 42 |
| 22 | noexp:"Accidents" | 325 |
| 23 | noexp:"Accidents, Aviation" | 10 |
| 24 | noexp:"Accidents, Traffic" | 510 |
| 25 | noexp:"Explosions" | 45 |
| 26 | noexp:"structure collapse" | 0 |
| 27 | exp:"Terrorism" | 118 |
| 28 | noexp:"Accident Prevention" | 151 |
| 29 | noexp:"Emergency Medical Services" | 1065 |
| 30 | noexp:"emergency medical dispatch" | 0 |
| 31 | noexp:"Rescue Work" | 57 |
| 32 | disaster\* | 371 |
| 33 | calamit\* | 0 |
| 34 | fatalit\* | 16 |
| 35 | catastroph\* | 37 |
| 36 | polytrauma\* | 3 |
| 37 | poly-trauma\* | 0 |
| 38 | multitrauma\* | 110 |
| 39 | multi-trauma\* | 0 |
| 40 | major incident\* | 7 |
| 41 | mass casualt\* | 42 |
| 42 | accident\* | 1583 |
| 43 | trauma\* | 2162 |
| 44 | emergenc\* | 3041 |
| 45 | destruction | 35 |
| 46 | explosion\* | 67 |
| 47 | injur\* | 4311 |
| 48 | terror\* | 84 |
| 49 | bioterror\* | 40 |
| 50 | bio-terror\* | 0 |
| 51 | collapse\* | 30 |
| 52 | rescue work\* | 62 |
| 53 | #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 | 2229 |
| 54 | #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41OR #42 | 2042 |
| 55 | #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52  | 7981 |
| 56 | #53 OR #54 OR #55 | 9039 |
| **57** | **#17 AND #56** | **126** |