**Search strategy: Incidence, management and outcome of pneumomediastinum and pneumothorax in ICU patients with COVID pneumonitis**

**Sources searched**  
Cochrane Library (0)  
EMBASE (25)  
EUROPE PMC (5)  
Google Scholar (1)  
MEDLINE (40)  
NICE Evidence Search (0)  
TRIP Database (18)  
UpToDate (4)

**Date range used** (5 years, 10 years): 2019-current   
**Limits used** (gender, article/study type, etc.): none   
**Search terms and notes** (full search strategy for database searches below):

Relevant natural language and controlled vocabulary terms were selected and combined. Thesaurus terms were adapted for different databases. Medline and Embase searched on Ovid. Results were reviewed for relevance and de-duplicated in EndNote. Full search strategy below.

**Search terms**

**NICE Evidence search:**

COVID 19 pneumomediastinum

COVID 19 pneumothorax

**Cochrane Library:**

COVID-19 pneumomediastinum

COVID 19 pneumothorax

**UpToDate:**

Coronavirus pneumomediastinum

Coronavirus pneumothorax

**Europe PMC:**

(("COVID-19" or COVID19 or 2019nCoV or "Corona Virus" or Coronavirus or "CoV 2" or CoV2 or COVID or nCoV or SARS2 or SARSCoV or "SARS-CoV") AND ((pneumomediastinum OR pneumothorax OR "collapsed lung"))) AND (SRC:PPR)

**Google Scholar search:**

(("COVID-19" or COVID 19 or 2019 nCoV or "Corona Virus" or Coronavirus or "CoV 2" or CoV2 or COVID or nCoV or SARS 2 or SARS CoV and "SARS-CoV") AND ((pneumomediastinum OR pneumothorax OR "collapsed lung")))

**TRIP Medical database:**

covid-19 pneumomediastinum

covid-19 pneumothorax

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| --- | --- | --- | --- |
| 1 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | exp coronavirus/ | 85497 |
| 2 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | exp Coronavirus Infections/ | 104459 |
| 3 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | ((corona\* or corono\*) adj1 (virus\* or viral\* or virinae\*)).ti,ab,kw,kf. | 3771 |
| 4 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | (coronavirus\* or coronovirus\* or coronavirinae\* or CoV).ti,ab,kw,kf. | 97514 |
| 5 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | ("2019-nCoV\*" or 2019nCoV\* or "19-nCoV\*" or 19nCoV\* or nCoV2019\* or "nCoV-2019\*" or nCoV19\* or "nCoV-19\*" or "COVID-19\*" or COVID19\* or "COVID-2019\*" or COVID2019\* or "HCoV-19\*" or HCoV19\* or "HCoV-2019\*" or HCoV2019\* or "2019 novel\*" or Ncov\* or "n-cov" or "SARS-CoV-2\*" or "SARSCoV-2\*" or "SARSCoV2\*" or "SARS-CoV2\*" or SARSCov19\* or "SARS-Cov19\*" or "SARSCov-19\*" or "SARS-Cov-19\*" or SARSCov2019\* or "SARS-Cov2019\*" or "SARSCov-2019\*" or "SARS-Cov-2019\*" or SARS2\* or "SARS-2\*" or SARScoronavirus2\* or "SARS-coronavirus-2\*" or "SARScoronavirus 2\*" or "SARS coronavirus2\*" or SARScoronovirus2\* or "SARS-coronovirus-2\*" or "SARScoronovirus 2\*" or "SARS coronovirus2\*" or covid).ti,ab,kw,kf. | 151694 |
| 6 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | (respiratory\* adj2 (symptom\* or disease\* or illness\* or condition\*) adj5 (Wuhan\* or Hubei\* or China\* or Chinese\* or Huanan\*)).ti,ab,kw,kf. | 355 |
| 7 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | (("seafood market\*" or "food market\*") adj10 (Wuhan\* or Hubei\* or China\* or Chinese\* or Huanan\*)).ti,ab,kw,kf. | 106 |
| 8 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | (pneumonia\* adj3 (Wuhan\* or Hubei\* or China\* or Chinese\* or Huanan\*)).ti,ab,kw,kf. | 640 |
| 9 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | ((outbreak\* or wildlife\* or pandemic\* or epidemic\*) adj1 (Wuhan\* or Hubei\* or China\* or Chinese\* or Huanan\*)).ti,ab,kw,kf. | 409 |
| 10 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | "severe acute respiratory syndrome\*".ti,ab,kw,kf. | 23343 |
| 11 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | or/1-10 | 182008 |
| 12 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | limit 11 to yr="2019 -Current" | 162583 |
| 13 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | Critical Care/ or Critical Illness/ or Intensive Care Units/ | 124659 |
| 14 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | ((intensive or critical or "high dependency") adj3 care).ti,ab. | 186049 |
| 15 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | ((intensive or critical or "high dependency") adj3 unit\*).ti,ab. | 132050 |
| 16 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | (ICU or ITU).ti,ab. | 65846 |
| 17 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | (critical\* adj3 ill\*).ti,ab. | 57680 |
| 18 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | or/13-17 | 273050 |
| 19 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | Mediastinal Emphysema/ or Pneumothorax/ | 20264 |
| 20 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | (pneumomediastinum or "mediastinal emphysema").ti,ab. | 4024 |
| 21 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | (pneumothorax or pneumothoraces or "collapsed lung").ti,ab. | 23959 |
| 22 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | or/19-21 | 32513 |
| 23 | Ovid MEDLINE(R) ALL <1946 to July 23, 2021> | 12 and 18 and 22 | 76 |

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| 1 | Embase <1974 to 2021 Week 29> | exp Coronavirinae/ | 58081 |
| 2 | Embase <1974 to 2021 Week 29> | exp Coronavirus infection/ | 151012 |
| 3 | Embase <1974 to 2021 Week 29> | ("coronavirus disease 2019" or "severe acute respiratory syndrome coronavirus 2").sh,dj. | 136663 |
| 4 | Embase <1974 to 2021 Week 29> | ((corona\* or corono\*) adj1 (virus\* or viral\* or virinae\*)).ti,ab,kw. | 2992 |
| 5 | Embase <1974 to 2021 Week 29> | (coronavirus\* or coronovirus\* or coronavirinae\* or CoV).ti,ab,kw. | 96997 |
| 6 | Embase <1974 to 2021 Week 29> | ("2019-nCoV\*" or 2019nCoV\* or "19-nCoV\*" or 19nCoV\* or nCoV2019\* or "nCoV-2019\*" or nCoV19\* or "nCoV-19\*" or "COVID-19\*" or COVID19\* or "COVID-2019\*" or COVID2019\* or "HCoV-19\*" or HCoV19\* or "HCoV-2019\*" or HCoV2019\* or "2019 novel\*" or Ncov\* or "n-cov" or "SARS-CoV-2\*" or "SARSCoV-2\*" or "SARSCoV2\*" or "SARS-CoV2\*" or SARSCov19\* or "SARS-Cov19\*" or "SARSCov-19\*" or "SARS-Cov-19\*" or SARSCov2019\* or "SARS-Cov2019\*" or "SARSCov-2019\*" or "SARS-Cov-2019\*" or SARS2\* or "SARS-2\*" or SARScoronavirus2\* or "SARS-coronavirus-2\*" or "SARScoronavirus 2\*" or "SARS coronavirus2\*" or SARScoronovirus2\* or "SARS-coronovirus-2\*" or "SARScoronovirus 2\*" or "SARS coronovirus2\*" or covid).ti,ab,kw. | 149963 |
| 7 | Embase <1974 to 2021 Week 29> | (respiratory\* adj2 (symptom\* or disease\* or illness\* or condition\*) adj5 (Wuhan\* or Hubei\* or China\* or Chinese\* or Huanan\*)).ti,ab,kw. | 419 |
| 8 | Embase <1974 to 2021 Week 29> | (("seafood market\*" or "food market\*") adj10 (Wuhan\* or Hubei\* or China\* or Chinese\* or Huanan\*)).ti,ab,kw. | 110 |
| 9 | Embase <1974 to 2021 Week 29> | (pneumonia\* adj3 (Wuhan\* or Hubei\* or China\* or Chinese\* or Huanan\*)).ti,ab,kw. | 680 |
| 10 | Embase <1974 to 2021 Week 29> | ((outbreak\* or wildlife\* or pandemic\* or epidemic\*) adj1 (Wuhan\* or Hubei\* or China\* or Chinese\* or Huanan\*)).ti,ab,kw. | 181 |
| 11 | Embase <1974 to 2021 Week 29> | "severe acute respiratory syndrome\*".ti,ab,kw. | 22783 |
| 12 | Embase <1974 to 2021 Week 29> | or/1-11 | 192620 |
| 13 | Embase <1974 to 2021 Week 29> | limit 12 to yr="2019 -Current" | 169278 |
| 14 | Embase <1974 to 2021 Week 29> | exp \*intensive care/ | 258216 |
| 15 | Embase <1974 to 2021 Week 29> | \*intensive care unit/ | 37344 |
| 16 | Embase <1974 to 2021 Week 29> | (ICU or ITU).ti. | 20353 |
| 17 | Embase <1974 to 2021 Week 29> | ((intensive or critical or "high dependency") adj3 care).ti. | 81109 |
| 18 | Embase <1974 to 2021 Week 29> | ((intensive or critical or "high dependency") adj3 unit\*).ti. | 46116 |
| 19 | Embase <1974 to 2021 Week 29> | (critical\* adj1 ill\*).ti,ab. | 84707 |
| 20 | Embase <1974 to 2021 Week 29> | or/14-19 | 379680 |
| 21 | Embase <1974 to 2021 Week 29> | \*pneumomediastinum/ or \*pneumothorax/ | 11415 |
| 22 | Embase <1974 to 2021 Week 29> | (pneumomediastinum or "mediastinal emphysema").ti,ab. | 4955 |
| 23 | Embase <1974 to 2021 Week 29> | (pneumothorax or pneumothoraces or "collapsed lung").ti,ab. | 31158 |
| 24 | Embase <1974 to 2021 Week 29> | or/21-23 | 35981 |
| 25 | Embase <1974 to 2021 Week 29> | 13 and 20 and 24 | 79 |