Appendix 1: Search Strategies

1.1 Search Strategy COVID-19 Emergency Department Visits

**Embase Classic**+**Embase** <1947 to 2021 June 22>
**Ovid MEDLINE(R) ALL** <1946 to June 22, 2021>

1 COVID-19/
2 (exp coronavirus/ or coronavirus*.mp. or corona virus*.mp.) and (wuhan or beijing or shanghai or hubei).mp.
3 (coronavirus* or corona virus* or coronavirus* or coronaviridae or coronavirus* or betacoronavirus*) adj3 ("19" or "2019").tw.
4 covid.tw,kw.
5 covid19.tw,kw. or covid 19,kw.
6 sars cov 2.tw,kw.
7 (ncov or n cov).tw,kw.
8 (novel coronavirus* or novel corona virus*).tw,kw.
9 (CoV 2 or CoV2 or sarscov2 or 2019nCoV or novel CoV or wuhan virus*).tw,kw.
10 (Coronavirus Infections/ or Severe Acute Respiratory Syndrome/) and (Pandemics/ or pandemic*).tw,kf.
11 or/1-
12 exp Emergency Service, Hospital/
13 emergency department*.tw,kf.
14 (emergency room* or emergency visit* or ed visit*).tw,kf. or emergenc*.ti.
15 or/12-14
16 11 and 15
17 infant/ or infant, newborn/
18 (infant* or baby or babies or neonat* or newborn*).tw,kf.
19 17 or 18
20 16 and 19

**Medline**

21 20 use medall Medline
22 coronavirus disease 2019/
23 (Coronavirinae/ or coronavirus*.mp. or corona virus*.mp.) and (wuhan or beijing or shanghai or hubei).mp.
24 (coronavirus* or corona virus* or coronavirus* or coronaviridae or coronavirus* or betacoronavirus*) adj3 ("19" or "2019").tw.
25 (covid or covid19).tw.
26 sars cov 2.tw.
27 (ncov or n cov).tw.
28 (novel coronavirus* or novel corona virus*).tw.
29 (CoV 2 or CoV2 or sarscov2 or 2019nCoV or novel CoV or wuhan virus*).tw.
30 (coronavirus infection/ or severe acute respiratory syndrome/) and (pandemic/ or pandemic*).tw.
31 limit 30 to yr="2019 -Current"
32 or/22-29,31
33 exp infant/
(infant* or baby or babies or neonat* or newborn*).tw.
35 33 or 34
36 32 and 35
37 emergency ward/
38 emergency department*.tw.
39 (emergency room* or emergency visit* or ed visit*).tw. or emergenc*.ti.
40 emergency health service/
41 or/37-40
42 36 and 41
43 42 use emczd Embase
44 21 or 43
45 remove duplicates from 44
46 45 use medall
47 45 use emczd

Web of Science – June 23, 2021
# 7
#6 AND #5
Indexes=SCI-EXPANDED, CPCI-S, ESCI Timespan=1900-2021

# 6
TOPIC:
(infant* or baby or babies or neonat* or newborn*)
Indexes=SCI-EXPANDED, CPCI-S, ESCI Timespan=1900-2021

# 5
#4 AND #3
Indexes=SCI-EXPANDED, CPCI-S, ESCI Timespan=1900-2021

# 4
TS=(emergency room* or emergency visit* or ed visit* or emergency department*) OR
TI=(emergenc*)
OR TS=(emergency service*)
Indexes=SCI-EXPANDED, CPCI-S, ESCI Timespan=1900-2021

# 3
#2 OR #1
Indexes=SCI-EXPANDED, CPCI-S, ESCI Timespan=1900-2021

# 2
TOPIC: (sars cov 2 OR sars cov2) OR TOPIC: (ncov or n cov)
OR TOPIC: (novel coronavirus or novel corona virus)
Indexes=SCI-EXPANDED, CPCI-S, ESCI Timespan=1900-2021

# 1
TOPIC: (covid OR covid19 or covid2019)
Indexes=SCI-EXPANDED, CPCI-S, ESCI Timespan=1900-2021

Cinahl - June 23, 2021

Wednesday, June 23, 2021 6:25:31 PM

#     Query
S1    (MH "COVID-19")
S2    (MH "COVID-19 Pandemic")
S3    (MH "SARS-CoV-2")
S4    TI covid* OR AB covid* OR TI sars cov 2 OR AB sars cov 2 OR TI novel coronavirus OR AB novel coronavirus OR TI wuhan virus OR AB wuhan virus OR TI 2019nCoV OR AB 2019nCoV
S5    TI ( CoV 2 or CoV2 or sarscov2 ) OR AB ( CoV 2 or CoV2 or sarscov2 )
S6    S1 OR S2 OR S3 OR S4 OR S5
S7    (MH "Emergency Service+")
S8    emergency department*
S9    (emergency room* or emergency visit* or ed visit*)
S10   TI emergene*
S11   (MH "Emergency Medical Services")
S12   (S7 OR S8 OR S9 OR S10 OR S11)
S13   (S6 AND S12)
S14   (MH "Infant+")
S15   TI ( (infant* or baby or babies or neonat* or newborn*) ) OR AB ( (infant* or baby or babies or neonat* or newborn*) )
S16   S14 OR S15
S17   (S13 AND S16)
1.2 Search Strategy COVID-19 Neonatal Mortality

Embase Classic+Embase <1947 to 2021 June 22>
Ovid MEDLINE(R) ALL <1946 to June 22, 2021>

1 COVID-19/
2 (exp coronavirus/ or coronavirus*.mp. or corona virus*.mp.) and (wuhan or beijing or shanghai or hubei).mp.
3 ((coronavirus* or corona virus* or coronavirus* or coronaviridae or coronaviridae or betacoronavirus*) adj3 ("19" or "2019")).tw.
4 covid.tw,kw.
5 covid19.tw,kw. or covid 19.kw.
6 sars cov 2.tw,kw.
7 (ncov or n cov).tw,kw.
8 (novel coronavirus* or novel corona virus*).tw,kw.
9 (CoV 2 or CoV2 or sarscov2 or 2019nCoV or novel CoV or wuhan virus*).tw,kw.
10 (Coronavirus Infections/ or Severe Acute Respiratory Syndrome/) and (Pandemics/ or pandemic*).tw,kf.
11 or/1
12 exp Infant Mortality/
13 exp infant death/ or perinatal death/
14 ((infant* or baby or babies or neonat* or newborn* or perinat*) adj3 (death* or mortalit*)).tw,kf.
15 12 or 13 or 14
16 11 and 15
17 16 use medall Medline
18 coronavirus disease 2019/
19 (Coronavirinae/ or coronavirus*.mp. or corona virus*.mp.) and (wuhan or beijing or shanghai or hubei).mp.
20 ((coronavirus* or corona virus* or coronavirus* or coronaviridae or coronaviridae or betacoronavirus*) adj3 ("19" or "2019")).tw.
21 (covid or covid19).tw.
22 sars cov 2.tw.
23 (ncov or n cov).tw.
24 (novel coronavirus* or novel corona virus*).tw.
25 (CoV 2 or CoV2 or sarscov2 or 2019nCoV or novel CoV or wuhan virus*).tw.
26 (coronavirus infection/ or severe acute respiratory syndrome/) and (pandemic/ or pandemic*).tw.)
27 limit 26 to yr="2019 -Current"
28 or/18-25,27
29 infant mortality/
30 newborn mortality/
31 perinatal mortality/
32 perinatal death/
33 ((infant* or baby or babies or neonat* or newborn*) adj2 (death* or mortalit*)).tw.
or/29-33
28 and 34

35 use emczd Emebase
36 17 or 36
38 remove duplicates from 37
39 38 use medall
40 38 use emczd

Web of Science – June 23, 2021

# 5 #4 AND #3
Indexes=SCI-EXPANDED, CPCI-S, ESCI Timespan=1900-2021

# 4 TOPIC: ((infant* or baby or babies or neonat* or newborn*) NEAR/5 (death* or mortalit*))
Indexes=SCI-EXPANDED, CPCI-S, ESCI Timespan=1900-2021

# 3 #2 OR #1
Indexes=SCI-EXPANDED, CPCI-S, ESCI Timespan=1900-2021

# 2 TOPIC: (sars cov 2 OR sars cov2) OR TOPIC: (ncov or n cov) OR TOPIC: (novel coronavirus or novel corona virus)
Indexes=SCI-EXPANDED, CPCI-S, ESCI Timespan=1900-2021

# 1 TOPIC: (covid OR covid19 or covid2019)
Indexes=SCI-EXPANDED, CPCI-S, ESCI Timespan=1900-2021

Cinahl – June 23, 2021

# Query

S1 (MH "COVID-19")
S2 (MH "COVID-19 Pandemic")
S3 (MH "SARS-CoV-2")
TI covid* OR AB covid* OR TI sars cov 2 OR AB sars cov 2 OR TI novel coronavirus OR AB novel coronavirus OR TI wuhan virus OR AB wuhan virus
S4 OR TI 2019nCoV OR AB 2019nCoV
S5 TI ( CoV 2 or CoV2 or sarsov2 ) OR AB ( CoV 2 or CoV2 or sarsov2 )
S6 S1 OR S2 OR S3 OR S4 OR S5
S7 (MH "Infant Mortality")
S8  (MH "Infant Death")
S9  (MH "Perinatal Death")
S10  TI ( ((infant* or baby or babies or neonat* or newborn* or perinat*) N3 (death* or mortalit*)) ) OR AB ( ((infant* or baby or babies or neonat* or newborn* or perinat*) N3 (death* or mortalit*)) )
S11  (S7 OR S8 OR S9 OR S10)
S12  S6 AND S11
## Appendix 2: Data Charting Form

<table>
<thead>
<tr>
<th>Data charting framework</th>
<th>Main category</th>
<th>Subcategory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year of publication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Journal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Citation Details</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study objective(s)</td>
<td></td>
<td></td>
<td>Describe the stated objectives of the studies included in the review</td>
</tr>
<tr>
<td>Study Design</td>
<td></td>
<td></td>
<td>Specify the types of studies included in the review</td>
</tr>
<tr>
<td>Study Setting</td>
<td></td>
<td></td>
<td>Specify the geographical areas covered by the studies included in the review Specify the level of medical facility in each study included in the review</td>
</tr>
<tr>
<td>Study Population/Sample size</td>
<td></td>
<td></td>
<td>Describe the study population and specify the number of participants included in each study</td>
</tr>
<tr>
<td>Eligibility Criteria</td>
<td></td>
<td></td>
<td>Specify the inclusion and exclusion criteria of each study included in the review</td>
</tr>
<tr>
<td>Study period</td>
<td></td>
<td></td>
<td>Specify the time period of data collection of each studies included in the review Specify the stage/wave of the pandemic during which each included study was conducted</td>
</tr>
<tr>
<td>Reported primary outcomes (neonates &lt;28 days and infants &lt;1 year-old)</td>
<td>Frequency of ED visits</td>
<td></td>
<td>Specify the frequency of ED visits before and during the COVID-19 pandemic</td>
</tr>
<tr>
<td></td>
<td>Main Reason(s) for ED visits</td>
<td></td>
<td>Describe the main reasons for ED visits before and during the COVID-19 pandemic</td>
</tr>
<tr>
<td></td>
<td>Change in mortality</td>
<td></td>
<td>Specify if there was an increase or decrease of neonatal/infant mortality during the COVID-19 pandemic compared to pre-pandemic</td>
</tr>
<tr>
<td></td>
<td>Causes of mortality</td>
<td></td>
<td>Describe the main causes of mortality before and during the COVID-19 pandemic</td>
</tr>
<tr>
<td></td>
<td>ED visit length</td>
<td></td>
<td>Specify the ED visit length (in hours) during the COVID-19 pandemic compared to pre-pandemic</td>
</tr>
<tr>
<td></td>
<td>NICU/PICU/HDU admission</td>
<td></td>
<td>Specify the NICU/PICU/HDU admission rate before and during the COVID-19 pandemic</td>
</tr>
<tr>
<td></td>
<td>Reasons for NICU/PICU/HDU admission</td>
<td></td>
<td>Describe the main reasons for NICU/PICU/HDU admission before and during the COVID-19 pandemic</td>
</tr>
<tr>
<td>NICU/PICU/HDU length of stay</td>
<td>Specify the NICU/PICU/HDU length of stay (in days) during the COVID-19 pandemic compared to pre-pandemic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infant hospitalization</td>
<td>Specify the infant hospitalization rate before and during the COVID-19 pandemic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reasons for infant hospitalization</td>
<td>Describe the main reasons of infant hospitalization before and during the COVID-19 pandemic</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>