#### The association between bronchopulmonary dysplasia and cerebral palsy in children: A meta-analysis

### Supplement 1. Retrieval strategy of PubMed, EMBASE and Web of Science

Before 1 September 2017.

#### PubMed 195

#### **EMBASE 523**

Before 1 September 2017.

- 1 Cerebral palsy/
- 2 Cerebral pals\$.tw.
- 3 Little\$ disease.tw.
- 4 CP.tw.
- 5 (unilateral adj3 spastic\$).tw.
- 6 (hemiplegi\$ adj3 spastic\$).tw.
- 7 (diplegi\$ adj3 spastic\$).tw.
- 8 (tetrapleg\$ adj3 spastic\$).tw.
- 9 (triplegi\$ adj3 spastic\$).tw.

10 ((bilateral or bi-lateral) adj3 spastic\$).tw.

11 (quadripleg\$ adj3 spastic\$).tw.

12 or/1-11

13 Bronchopulmonary Dysplasia.mp. or exp lung dysplasia/

14 BPD.tw.

15 Dysplasia, Bronchopulmonary.tw.

16 Bronchopulmonary Dysplasia.tw.

17 13 or 14 or 15 or 16

18 12 and 17

### Web of science 515

Before 1 September 2017.

TS=(cerebral pals\* or spastic\* or quadripleg\* or cerebral palsy or CP)

TS=(Bronchopulmonary Dysplasia or lung dysplasia or bronchopulmonary dysplasia or BPD or Dysplasia, Bronchopulmonary)

# **Supplement 2. Newcastle - Ottawa Quality Assessment Scale results for case-control studies**

Question	Option	Kim	Schlapbach	Tran
Is the case definition adequate?	<ul><li>a) yes, with independent validation *</li><li>b) yes, eg record linkage or based on self reports</li><li>c) no description</li></ul>	a	a	a
Representativeness of the cases	<ul><li>a) consecutive or obviously representative series of cases *</li><li>b) potential for selection biases or not stated</li></ul>	a	b	b
Selection of Controls	<ul><li>a) community controls *</li><li>b) hospital controls</li><li>c) no description</li></ul>	b	b	b
Definition of Controls	a) no history of disease (endpoint)* b) no description of source	a	a	b
Comparability of cases and controls on the basis of the design or analysis	<ul> <li>a) study controls for (Select the most important factor.*</li> <li>b) study controls for any additional factor (This criteria could be modified to indicate specific control for a second important factor.) *</li> </ul>	a	a	a

Ascertainment of exposure	a) secure record (eg surgical records)*	a	a	a		
	b) structured interview where blind to case/control status*					
	c) interview not blinded to case/control status					
	d) written self report or medical record only					
	e) no description					
Same method of ascertainment for cases and	a) yes*	a	a	a		
controls	b) no					
Non-Response rate	a) same rate for both groups*	b	a	b		
	b) non-respondents described					
	c) rate different and no designation					

# **Supplement 3. Newcastle - Ottawa Quality Assessment Scale results for cohort studies**

Question	Option	Gagliardi	Lodha	Palta	Natarajan	Synnes	Van Marter	Wang	Bahir
Representativeness of the exposed cohort	<ul> <li>a) truly representative of the average (describe) in the community *</li> <li>b) somewhat representative of the average in the community*</li> <li>c) selected group of users eg nurses, volunteered) no description of the derivation of the cohort</li> </ul>	b	b	b	b	b	b	b	b
Selection of the Non-exposed cohort	<ul> <li>a) drawn from the same community as the exposed cohort*</li> <li>b) drawn from a different source</li> <li>c) no description of the derivation of the non-exposed cohort</li> </ul>	a	a	a	a	a	a	a	a
Ascertainment of exposure	<ul> <li>a) secure record (eg surgical records)*</li> <li>b) structured interview*</li> <li>c) written self report</li> <li>d) no description</li> </ul>	a	a	a	a	b	a	a	a
Demonstration that outcome of interest was not present at start of study	a) yes* b) no	a	a	a	a	a	a	a	a
Comparability of cohorts on the basis of the design or analysis	<ul> <li>a) study controls for (select the most important factor)*</li> <li>b) study controls for any additional factor*</li> </ul>	a	a	a	a	a	a	a	a

Assessment of outcome	a) independent blind assessment*	b	b	b	b	b	b	b	b
	b) record linkage*								
	c) self report								
	d) no description								
Was follow-up long enough	a) yes*	b	b	b	a	a	a	a	a
for outcomes to occur	b) no								
Adequacy of follow up of cohort	<ul> <li>a) complete follow up - all subjects accounted for*</li> <li>b) subjects lost to follow up unlikely to introduce bias - small number lost -&gt; % (select an adequate %) follow up, or description provided of those lost)</li> <li>c) follow up rate &lt; % (select an adequate %) and no description of those lost</li> <li>d) no statement</li> </ul>	d	d	d	d	d	d	d	d

## Supplement 4. Egger's and Begg's test for publication bias test

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Begg's Test
 adj. Kendall's Score (P-Q) = 6
     Std. Dev. of Score = 9.59
     Number of Studies =
             z = 0.63
          Pr > |z| = 0.532
              z = 0.52 (continuity corrected)
          Pr > |z| = 0.602 (continuity corrected)
Egger's test
  Std_Eff | Coef. Std. Err. t P>|t| [95% Conf. Interval]
   slope | .1683662 .139195 1.21 0.266 -.1607777 .49751
    bias | -.8435039 .608102 -1.39 0.208 -2.281437 .5944288
```