# **Supplemental Material S2.** The specific database search strategies for each database.

## 1. Medline

Interface: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily

Date of Search: 12 February 2020

Number of hits: 2,601

Comment: In Ovid, two or more words are automatically searched as phrases; i.e. no quotation marks are needed

#### Field labels

- exp/ = exploded MeSH term
- / = non exploded MeSH term
- .ti,ab,kf. = title, abstract and author keywords
- adjx = within x words, regardless of order
- \* = truncation of word for alternate endings

- 1. exp Cleft Palate/
- 2. exp Cleft Lip/
- 3. exp Velopharyngeal Insufficiency/
- 4. (harelip\* or hare lip\* or labiopalatoschi\* or palatoschi\* or palatoschi\* or palatolabioschi\* or palatum fissum).ti,ab,kf.
- 5. ((palatopharyngeal or velopharyngeal) adj3 (incompetenc\* or insufficienc\*)).ti,ab,kf.
- 6. cleft\*.ti.ab.kf.
- 7. 1 or 2 or 3 or 4 or 5 or 6
- 8. exp "Rehabilitation of Speech and Language Disorders"/
- 9. exp "Early Intervention (Education)"/
- 10. exp Speech Production Measurement/
- 11. (articulat\* or language\* or misarticulat\* or phonolog\* or speech\* or voice\*).ti,ab,kf.
- 12. (therap\* or training or treat\* or rehabilitat\* or intervention\*).ti,ab,kf.
- 13. 11 and 12
- 14. (early adj3 (educat\* or intervention\*)).ti,ab,kf.
- 15. (Speech adj3 (assess\* or screen\* or measure\* or outcome\* or evaluat\* or test\*)).ti,ab,kf.
- 16. 8 or 9 or 10 or 13 or 14 or 15
- 17. 7 and 16
- 18. 17 not (animals not humans).sh.

## 2. Embase

Interface: embase.com

Date of Search: 12 February 2020

Number of hits: 3,359

Comment: Emtree is the controlled

vocabulary in Embase

#### Field labels

- /exp = exploded Emtree term
- /de = non exploded Emtree term
- ti,ab = title and abstract
- NEAR/x = within x words, regardless of order
- \* = truncation of word for alternate endings

#18 NOT ([animals]/lim NOT [humans]/lim)

#18 #8 AND #17

#17 #9 OR #10 OR #11 OR #14 OR #15 OR #16

#16 (speech NEAR/3 (assess\* OR screen\* OR measure\* OR outcome\* OR evaluat\* OR test\*)):ti,ab,kw

#15 (early NEAR/3 (educat\* OR intervention\*)):ti,ab,kw

#14 #12 AND #13

#13 therap\*:ti,ab,kw OR training:ti,ab,kw OR treat\*:ti,ab,kw OR rehabilitat\*:ti,ab,kw OR intervention\*:ti,ab,kw

#12 articulat\*:ti,ab,kw OR language\*:ti,ab,kw OR misarticulat\*:ti,ab,kw OR phonolog\*:ti,ab,kw OR speech\*:ti,ab,kw OR voice\*:ti,ab,kw

#11 'speech analysis'/exp

#10 'early childhood intervention'/de

#9 'speech rehabilitation'/exp

#8 #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7

#7 cleft\*:ti,ab,kw

#6 ((palatopharyngeal OR velopharyngeal) NEAR/3 (incompetenc\* OR insufficienc\*)):ti,ab,kw

#5 harelip\*:ti,ab,kw OR 'hare lip\*':ti,ab,kw OR labiopalatoschi\*:ti,ab,kw OR palatoschi\*:ti,ab,kw OR palatoschi\*:ti,ab,kw OR palatoschi\*:ti,ab,kw OR 'palatum fissum':ti,ab,kw

#4 'cleft lip face palate'/exp

#3 'cleft lip with or without cleft palate'/exp

#2 'palatopharyngeal incompetence'/exp

#1 'cleft palate'/exp

## 3. Cochrane Library

Interface: Wiley

Date of Search: 12 February 2020

Number of hits: 173 (17 +156)

#### Field labels

- ti,ab,kw = title, abstract and author keywords
- NEAR/x = within x words, regardless of order
- \* = truncation of word for alternate endings

#1 (harelip\* or (hare NEXT lip\*) or labiopalatoschi\* or palatoschi\* or palatoschi\* or palatolabioschi\* or "palatum fissum"):ti,ab,kw

#2 ((palatopharyngeal or velopharyngeal) NEAR/3 (incompetenc\* or insufficienc\*)):ti,ab,kw #3 cleft\*:ti,ab,kw

#4 #1 OR #2 OR #3

#5 (articulat\* or language\* or misarticulat\* or phonolog\* or speech\* or voice\*):ti,ab,kw

#6 (therap\* or training or treat\* or rehabilitat\* or intervention\*):ti,ab,kw

#7 #5 AND #6

#8 (early NEAR/3 (educat\* or intervention\*)):ti,ab,kw

#9 (speech NEAR/3 (assess\* or screen\* or measure\* or outcome\* or evaluat\* or test\*))

#10 #7 OR #8 OR #9

#11 #4 AND #10

## 4. Web of Science Core Collection

Interface: Clarivate Analytics

Date of Search: 12 February 2020

Number of hits: 1,711

#### Field labels

- TS/Topic = title, abstract, author keywords and Keywords Plus
- NEAR/x = within x words, regardless of order
- \* = truncation of word for alternate endings

Note: sometimes "quotation marks" are needed for single search terms to avoid automatic term mapping (lemmatization).

#1 **TOPIC:** ((harelip\* or "hare lip\*" or labiopalatoschi\* or palatoschi\* or palatischi\* or palatolabioschi\* or "palatum fissum")) *OR* **TOPIC:** (((palatopharyngeal or velopharyngeal) NEAR/2 (incompetenc\* or insufficienc\*))) *OR* **TOPIC:** (cleft\*)

#2 **TOPIC:** ((articulat\* or language\* or misarticulat\* or phonolog\* or speech\* or voice\*))

AND TOPIC: ((therap\* or training or treat\* or rehabilitat\* or intervention\*))

#3 **TOPIC:** ((early NEAR/2 (educat\* or intervention\*))) OR **TOPIC:** ((speech NEAR/2 (assess\* or screen\* or measure\* or outcome\* or evaluat\* or test\*)))

#4 #3 OR #2

#5 #4 AND #1

## 5. Psycinfo

Interface: Ovid

Date of Search: 12 February 2020

Number of hits: 267

Comment: In Ovid, two or more words are automatically searched as phrases; i.e. no quotation marks are needed

#### Field labels

- exp/ = exploded controlled term
- /= non exploded controlled term
- .ti,ab,id. = title, abstract and author keywords
- adjx = within x words, regardless of order
- \* = truncation of word for alternate endings

- 1. exp Cleft Palate/
- 2. (harelip\* or hare lip\* or labiopalatoschi\* or palatoschi\* or palatoschi\* or palatolabioschi\* or palatum fissum).ti,ab,id.
- 3. ((palatopharyngeal or velopharyngeal) adj3 (incompetenc\* or insufficienc\*)).ti,ab,id.
- 4. cleft\*.ti,ab,id.
- 5. 1 or 2 or 3 or 4
- 6. Speech Therapy/
- 7. Language Therapy/
- 8. Early Intervention/
- 9. (articulat\* or language\* or misarticulat\* or phonolog\* or speech\* or voice\*).ti,ab,id.
- 10. (therap\* or training or treat\* or rehabilitat\* or intervention\*).ti,ab,id.
- 11. 9 and 10
- 12. (early adj3 (educat\* or intervention\*)).ti,ab,id.
- 13. (Speech adj3 (assess\* or screen\* or measure\* or outcome\* or evaluat\* or test\*)).ti,ab,id.
- 14. 6 or 7 or 8 or 11 or 12 or 13
- 15. 5 and 14

## 6. Cinahl

Interface: Ebsco	Field labels	
Date of Search: 12 February 2020	<ul><li>MH+ = exploded Cinahl Heading</li><li>MH = non exploded Cinahl Heading</li></ul>	
Number of hits: 646	<ul><li>TI = title</li><li>AB = abstract</li></ul>	
	<ul> <li>AB = abstract</li> <li>Nx = within x words, regardless of order</li> </ul>	
	<ul> <li>* = truncation of word for alternate endings</li> </ul>	
S17 S7 AND S16	•	
S16 S8 OR S9 OR S10 OR S13 OR S14 OR S15		
S15 TI ( (speech N2 (assess* or screen* or measure* or outcome* or evaluat* or test*)) ) OR AB ( (speech N2 (assess* or screen* or measure* or outcome* or evaluat* or test*)) )		
S14 TI ( (early N2 (educa	t* or intervention*)) ) OR AB ( (early N2 (educat* or intervention*)) )	
S13 S11 AND S12		
S12 TI ( (therap* or training or treat* or rehabilitat* or intervention*) ) OR AB ( (therap* or training or treat* or rehabilitat* or intervention*) )		
S11 TI ( (articulat* or language* or misarticulat* or phonolog* or speech* or voice*) ) OR AB ( (articulat* or language* or misarticulat* or phonolog* or speech* or voice*) )		
S10 (MH "Speech Production Measurement+")		
S9 (MH "Early Intervention+")		
S8 (MH "Rehabilitation, Speech and Language+")		
S7 S1 OR S2 OR S3 OR S4 OR S5 OR S6		
S6 TI cleft* OR AB cleft*		
S5 TI ( ((palatopharyngeal or velopharyngeal) N2 (incompetenc* or insufficienc*)) ) OR AB ( ((palatopharyngeal or velopharyngeal) N2 (incompetenc* or insufficienc*)) )		
S4 TI ( (harelip* or "hare lip*" or labiopalatoschi* or palatoschi* or palatischi* or palatolabioschi* or "palatum fissum") ) OR AB ( (harelip* or "hare lip*" or labiopalatoschi* or palatoschi* or palatischi* or palatolabioschi* or "palatum fissum") )		
S3 (MH "Velopharyngea	Il Insufficiency")	
S2 (MH "Cleft Lip")	(MH "Cleft Lip")	
S1 (MH "Cleft Palate")	(MH "Cleft Palate")	