

## **Appendix 1: Literature search to complement the existing systematic review**

### ***Search strategy***

We searched for any additional study published between 2011 and 31 May 2014 using MEDLINE and EMBASE databases, and the same search strategy as in (5), but restricted to nasopharyngeal carriage as outcome.

We used the following keywords [all fields] :

#### *Search #1: pathogen*

“Streptococcus pneumoniae” OR (“Diplococcus” AND “pneumoniae”) OR (“micrococcus” AND “pneumoniae”) OR “Pneumococcus” OR “pneumococcal” OR “s.pneumoniae” OR “pneumococci” OR “streptococcus” OR “streptococcal” OR “Pneumococc”

#### *Search #2: outcome*

(“Nasopharyngeal” AND “carriage”) OR (“Nasopharyngeal” AND “colonization”) OR (“Nasopharyngeal” AND “colonisation”)

#### *Search #3: vaccine*

“Vaccine” OR “vaccines” OR “vaccination” OR “vaccinated” OR “immunization” OR “immunisation” OR “immunized” OR “immunised” OR “PCV” OR “Prevenar” OR “PCV7” OR “PCV-7” OR “PNCRM7” OR “PNCRM-7” OR “PCV10” OR “PCV-10” OR “PCV9” OR “PCV-9” OR “PCV11” OR “PCV-11”.

### ***Results***

Combining those three searches yielded 468 citations. After automatic and manual de-duplication, we ended up with 208 citations to screen.

Of those, 179 were excluded based on the title or the abstract. The full text of 29 references were screened. Of those, three were from trials meeting our inclusion criteria, including a PCV7 trial from Israel (28) and a PCV10 trial from the Czech Republic, with two different publications (26, 27) (Figure 5 below). Additionally, we also retrieved data from a large Finnish trial presented at a conference in 2001 (25), and used illustratively by Auranen et al.(15)