**Supplementary table 1** Studies excluded from the review

|  |  |  |  |
| --- | --- | --- | --- |
| No viral culture or PCR | Viral culture but no PCR | Not all participants had viral PCR | Not specified how infection was included, likely no viral diagnostics |
| Tarvij *et al.* 2012[17]  Smith *et al.* 2008[5]  Mhanna *et al.* 2008[18]  Rodriquez *et al.* 1990[19]  Bonadio *et al.* 1988[20]  Pappu *et al.* 1982[21]  Illi *et al.* 1983[22]  Gill *et al.* 1980[23]  Heine *et al.* 1981[24]  Gutierrez *et al.* 1977[25]  Sarff *et al.* 1976[26]  Krause et al. 1975[27]  Naidoo *et al.* 1968[28]  Roldan *et al.* 1968[29]  Otila *et al.* 1949[30] | Bonadio *et al.* 1992[31]  Bonadio *et al.* 1989[32]  Portnoy *et al.* 1985[33]  Escobedo *et al.* 1975[34] | De Blaw *et al.* 2019[35]  Byington *et al.* 2011[7]  Chadwick *et al.* 2011[6] | Liu *et al.* 2019[36]  Majumdar *et al.* 2013[37]  Moreno-Carvalho *et al.* 2008[38] |
| Antibiotics before lumbar puncture | **Neurological or systemic illness** | **Only total cell count reported and not clear if infants were term or preterm** |  |
| Thomson *et al.* 2018[43]  Srinivasan *et al.* 2012[3]  Shah *et al.* 2011[4]  Kestenbaum *et al.* 2010[44] | Carraccio *et al.* 1995[61]  Weyrauch *et al.* 1973[62]  Dos Reis *et al.* 1970[63]  Wolf *et al.* 1961[64] | Gyllensward *et al.* 1962 [65] |  |