|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Study | Q1 | Q2 | Q3 | Q4 | Q5 | Q6.1 | Q6.2 | Q7 | Q8 | Q9 |
| Anthony et al., 1978 |  |  | N |  |  |  | N |  | N | N |
| Anthony et al, 1981 |  |  | N | N |  |  | N |  |  | N |
| Baker et al., 1976 | N/A | N/A | N | N |  |  | N |  |  | N/A |
| El Aila et al., 2009 | N/A | N/A | N | N |  |  | N |  |  | N/A |
| Ferrieri et al, 2004 | N/A | N/A | N |  |  | N | N |  |  | N/A |
| Foster-Nyarko et al., 2016 |  |  | N |  |  | N |  |  | N |  |
| Foxman et al., 2006 |  |  | N |  |  |  | N |  | N | N |
| Furfaro et al., 2019 |  |  |  |  |  |  |  |  |  | N |
| Hoogkamp-Korstanje et al., 1982 |  | N | N | N | N | N | N |  |  | U |
| Jisuvei et al., 2020 |  |  | N |  |  | N |  |  |  |  |
| Khatami et al., 2018 | N/A | N/A | N | N |  |  |  |  |  | N/A |
| Maurer et al., 1979 |  |  | N |  |  |  | N |  |  | U |
| Plameiro et al., 2010 | N/A | N/A | N |  |  | U | N |  | N | N/A |
| Pérez-Ruiz et al., 2004 | N/A | N/A | N | N |  | U | N |  |  | N/A |
| Slotved et al., 2017 |  |  | N |  |  |  |  |  |  |  |
| Taylor, 2006 |  |  | N |  | N |  | N |  |  | U |
| To et al., 2021 | N/A | N/A | N |  | N |  |  |  |  | N/A |
| Whitney et al., 2004 |  |  | N |  |  |  | N |  |  | U |

|  |  |
| --- | --- |
| Yes |  |
| No | N |
| Unclear | U |
| Not applicable | N/A |

|  |
| --- |
| Q1. Was the sample appropriate to address the target population?  Q2. Were study participants sampled in an appropriate way?  Q3. Was the sample size adequate? As we estimate the percentage of co-carriage for both same and different anatomical sites to be 11%, we chose to judge the adequacy of the sample size (n) with a prevalence estimate (P) of 11, a level of confidence of 95% (associated with a Z statistic) and a precision (d) of 5%. Considering the formula n= Z2P(1-P), we estimate that studies with less than 148 positive swabs or pairs of swabs did not have an adequate sample size.  Q4. Were the study subjects and the settings described in detail?  Q5. Was the data analysis conducted with sufficient coverage of the identified sample?  Q6. Were valid methods used for the identification of the condition?   1. Were valid methods used for the evaluation of serotypes carriage, i.e. use of a selective broth followed by plating on agar with methods enabling to pick both hemolytic and non-hemolytic strains followed by systematic serotyping. 2. Were all 10 serotypes tested?   Q7. Was the condition measured in a standard, reliable way for all participants?  Q8. Was there appropriate statistical analysis, i.e. could we extract from the studies or the correspondence with the author the relevant number to be able to carry out our meta-analysis?  Q9. Was the response rate adequate and if not, was the low response rate managed appropriately? |

Supplementary Material S2. Bias assessment of the included studies. Each positive answer scores one point. Unclear or negative answers score zero points. Q6.1 and Q6.2 score 0.5 each.