**Supplementary Materials:**

**Supplemental Table 1**. Evaluation of quality of included observational studies using the Newcastle-Ottawa Scale (NOS) score.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Author | Year published | Study design | Selection | | | | Comparability | | Outcome | | | NOS score |
| Representativeness of exposed cohort | Representativeness of non-exposed cohort | Ascertainment of exposure | Demonstration that outcome of interest was not present at start of study | Study controls for age | Study controls for any additional factor | Assessment of outcome from secure records | Delay between episodes ≤ 90 days | Follow up period clearly reported |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Apisarnthanarak26 | 2014 | PC | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 8 |
| Bleasdale20 | 2007 | PC | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 8 |
| Cassir6 | 2015 | PC | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 8 |
| Chung27 | 2015 | PC | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 6 |
| Dicks28 | 2016 | RC | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 6 |
| Evans29 | 2010 | RC | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 8 |
| Gould4 | 2007 | RC | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 8 |
| Martínez-Reséndez30 | 2014 | PC | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 8 |
| Montecalvo31 | 2012 | PC | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 6 |
| Hong32 | 2017 | RC | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 9 |
| Urbancic33 | 2018 | PC | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 8 |
| PC = Prospective cohort; RC = Retrospective Cohort | | | | | | | | | | | | |

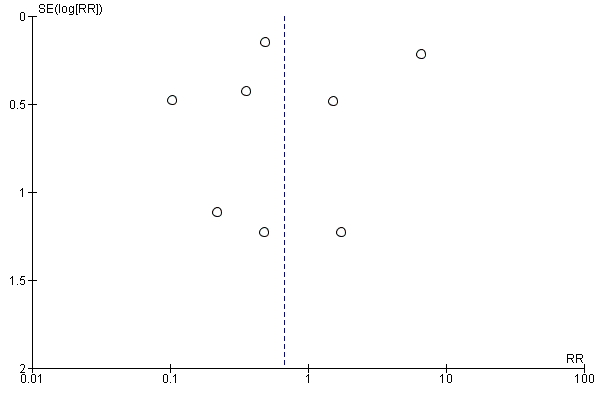
**Supplemental Table 2**. Evaluation of risk of bias of included RCTs using the Cochrane Risk of Bias tool

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| First author, year published | Random sequence generation | Allocation concealment | Blinding of participants and personnel | Blinding of outcome assessment | Incomplete outcome data | Selective reporting | Other bias |
| Boonyasiri, 20157 | **+** | **+** | **+** | **+** | **+** | **+** | **?** |
| Camus, 20058 | **+** | **+** | **+** | **+** | **+** | **+** | **?** |
| Climo, 20133 | **+** | **+** | **+** | **+** | **+** | **+** | **-** |
| Noto, 20155 | **+** | **+** | **+** | **+** | **+** | **+** | **+** |

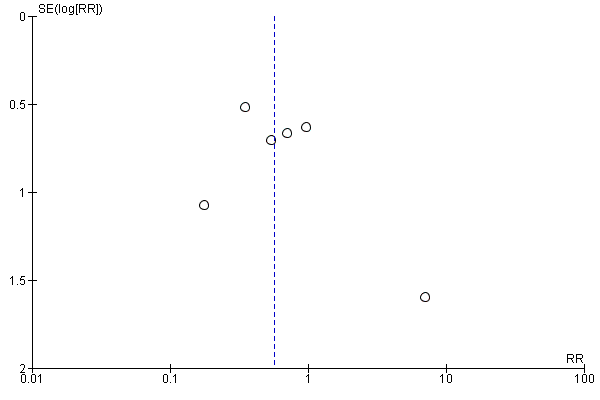
+ = low risk, - = high risk, ? = unknown risk

**Supplemental Figure 1:**

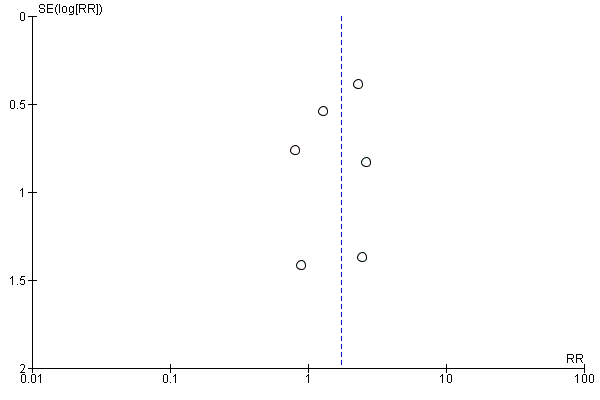
**1A:** Funnel Plot illustrating the risk of Acinetobacter infection with chlorhexidine bathing versus comparator. Dashed line indicates pooled relative risk of 0.67.



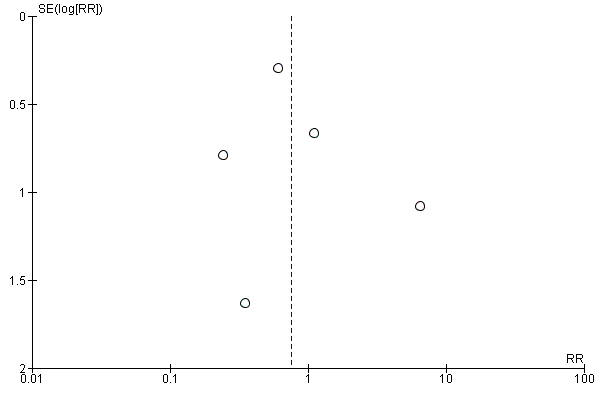
**1B:** Funnel Plot illustrating the risk of Klebsiella species infections with chlorhexidine bathing versus comparator. Dashed line indicates pooled relative risk of 0.57.



**1C:** Funnel Plot illustrating the risk of *E.coli* infection with chlorhexidine bathing versus comparator. Dashed line indicates pooled relative risk of 1.74.



**1D:** Funnel Plot illustrating the risk of Enterobacter infection with chlorhexidine bathing versus comparator. Dashed line indicates pooled relative risk of 0.75.



**1E:** Funnel Plot illustrating the risk of Pseudomonas infection with chlorhexidine bathing versus comparator. Dashed line indicates pooled relative risk of 0.92.

