**Supplemental Table 3: GRADE evidence profile for the studies in the meta-analysis**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Quality assessment** | | | | | | | **No of patients** | | **Effect** | | **Quality** | **Importance** |
|
| **No of studies** | **Study**  **Design** | **Risk of bias** | **Inconsistency** | **Indirectness** | **Imprecision** | **Other considerations** | **NIV** | **Standard oxygen therapy** | **Relative (95% CI)** | **Absolute**  **(95% CI)** |
| **Endotracheal intubation rate** | | | | | | | | | | | | |
| 11 | randomized trials | not serious1 | serious2 | not serious3 | not serious4 | none5 | 230/753 (30.5%) | 319/727 (43.9%) | **RR 0.59**  (0.44 to 0.79) | 180 fewer per 1,000  (from 92 fewer to 246 fewer) |  MODERATE | CRITICAL |
| **ICU mortality** | | | | | | | | | | | | |
| 7 | randomized trials | not serious1 | serious6 | not serious3 | serious7 | none5 | 62/253  (24.5%) | 90/250  (36.0%) | **RR 0.73** (0.51 to 1.03) | 97 fewer per 1,000  (from 11 more to 176 fewer) |  LOW | CRITICAL |
| **Hospital mortality** | | | | | | | | | | | | |
| 6 | randomized trials | not serious1 | serious8 | not serious3 | not serious4 | none5 | 31/252  (12.3%) | 62/251  (24.7%) | **RR 0.46** (0.24 to 0.87) | 133 fewer per 1,000  (from 32 fewer to 188 fewer) |   MODERATE | CRITICAL |

1 Most of studies had low risk of bias. CI: Confidence interval; RR: Risk ratio

2 I2=69%, the heterogeneity was moderate.

3 The evidences were direct.

4 The confidence intervals of the pooled RR did not cross the line of no effect.

5 Funnel plot did not suggest substantial publication bias.

6 I2=38%, the heterogeneity was moderate.

7 Wide conﬁdence interval including beneﬁts and harms.

8 I2=54%, the heterogeneity was moderate.