**Table S1. GRADE evidence profile summarizing the effect of *Lactobacillus rhamnosus* GG supplementation vs. placebo or no intervention on antibiotic-associated diarrhea**

| **Quality assessment** | **№ of patients** | **Effect** | **Quality** |
| --- | --- | --- | --- |
| **№ of studies** | **Study design** | **Risk of bias** | **Inconsistency** | **Indirectness** | **Imprecision** | **Other considerations** | **[intervention]** | **[comparison]** | **Relative(95% CI)** | **Absolute(95% CI)** |
| Lactobacillus rhamnosus GG or preventing antibiotic-associated diarrhea - in children |
| 5  | randomized trials  | serious 3 | not serious  | not serious  | not serious  | none  | 21/219 (9.6%)  | 52/226 (23.0%)  | **RR 0.48**(0.26 to 0.89)  | 120 fewer per 1000 (from 25 fewer to 170 fewer)  | ⨁⨁⨁◯MODERATE 3 |

1. Unclear random sequence generation (2 trials), unclear allocation concealment (3 trials), no or unclear blinding of participants and personnel (3 trials), no or unclear blinding of outcome assessment (3 trials) Incomplete outcome assessment was unclear 2 trials and there was high risk in one trial and, and unclear selective reporting (2 trials).

**Table S2. GRADE evidence profile summarizing the effect of *S. boulardii* supplementation vs. placebo or no intervention on antibiotic-associated diarrhea.**

| **Quality assessment** | **№ of patients** | **Effect** | **Quality** |
| --- | --- | --- | --- |
| **№ of studies** | **Study design** | **Risk of bias** | **Inconsistency** | **Indirectness** | **Imprecision** | **Other considerations** | **[intervention]** | **[comparison]** | **Relative(95% CI)** | **Absolute(95% CI)** |
| S. boulardii for preventing antibiotic-associated diarrhea in children |
| 6  | randomized trials  | serious 1 | not serious  | not serious  | not serious  | none  | 74/837 (8.8%)  | 171/816 (21.0%)  | **RR 0.43**(0.30 to 0.60)  | 119 fewer per 1000 (from 84 fewer to 147 fewer)  | ⨁⨁⨁◯MODERATE 1 |
| 20.7%  | 118 fewer per 1000 (from 83 fewer to 145 fewer)  |

1. In 6 included RCTs, there was unclear random sequence generation in 3 RCTs, no (1 RCT) or unclear (3 RCT) allocation concealment, no (3 RCTs) or unclear (2 RCTs) blinding of participants and personnel; no (1 RCT) or unclear (4 RCT) blinding of outcome assessment, incomplete outcome data in 6 RCTs, unclear selective reporting in 1 RCTs.

**Table S3. GRADE evidence profile summarizing the effect of *S. boulardii* supplementation vs. placebo or no intervention on *C. difficile*-associated diarrhea.**

| **Quality assessment** | **№ of patients** | **Effect** | **Quality** |
| --- | --- | --- | --- |
| **№ of studies** | **Study design** | **Risk of bias** | **Inconsistency** | **Indirectness** | **Imprecision** | **Other considerations** | **[intervention]** | **[comparison]** | **Relative(95% CI)** | **Absolute(95% CI)** |
| S. boulardii for preventing C. difficile-associated diarrhea in children |
| 2  | randomised trials  | serious 1 | not serious  | not serious  | serious 2 | none  | 4/286 (1.4%)  | 18/293 (6.1%)  | **RR 0.25**(0.08 to 0.73)  | 46 fewer per 1000 (from 17 fewer to 57 fewer)  | ⨁⨁◯◯LOW 1 2 |
| 6.3%  | 48 fewer per 1000 (from 17 fewer to 58 fewer)  |

1. In 2 included RCTs, there was no blinding of participants and personnel in 1 RCT; unclear blinding of outcome assessment in 1 RCT, unclear incomplete outcome data in 1 RCT.
2. Small number of included trials; the number of events was small; in none of the included trials, *C. difficile*-associated diarrhea was a primary outcome; wide confidence interval.