

## Web appendix 5 – The tolerance of eradication therapies for *H. pylori*

Part A) All adverse events

Table S5.1 Direct and network-meta analysis results for all adverse event outcomes

Intervention	Adverse events	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
<b>7d triple</b>		
7d concomitant	1.19 (0.49 to 2.20)	1.10 (0.70 to 1.73)
10/14d sequential	1.00 (0.85 to 1.18)	0.99 (0.83 to 1.19)
10/14d triple	1.10 (0.94 to 1.26)	1.14 (1.01 to 1.28)
10/14d bismuth	1.08 (0.85 to 1.34)	0.86 (0.74 to 1.01)
7d bismuth	0.97 (0.69 to 1.32)	1.04 (0.94 to 1.16)
10/14d concomitant	1.13 (0.83 to 1.48)	NA
7d probiotic	0.65 (0.47 to 0.87)	0.72 (0.49 to 1.06)
10/14d probiotic	1.59 (0.44 to 3.18)	1.25 (0.41 to 3.77)
7d ranitidine bismuth	1.16 (0.81 to 1.59)	1.29 (1.06 to 1.56)
10/14d ranitidine bismuth	0.99 (0.64 to 1.42)	NA
7d levofloxacin	0.69 (0.49 to 0.94)	0.72 (0.54 to 0.95)
10/14d levofloxacin	1.26 (0.83 to 1.79)	NA
14d hybrid	1.22 (0.72 to 1.86)	NA
<b>7d concomitant</b>		
10/14d sequential	0.98 (0.45 to 2.09)	NA
10/14d triple	1.07 (0.49 to 2.27)	NA
10/14d bismuth	1.05 (0.47 to 2.27)	NA
7d bismuth	0.95 (0.40 to 2.09)	NA
10/14d concomitant	1.10 (0.48 to 2.41)	NA
7d probiotic	0.64 (0.27 to 1.39)	NA
10/14d probiotic	1.55 (0.33 to 4.19)	NA
7d ranitidine bismuth	1.14 (0.48 to 2.50)	NA
10/14d ranitidine bismuth	0.97 (0.39 to 2.16)	NA
7d levofloxacin	0.68 (0.29 to 1.48)	NA

Intervention	Adverse events	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
10/14d levofloxacin	1.23 (0.51 to 2.76)	NA
14d hybrid	1.19 (0.46 to 2.74)	NA
<b>10/14d sequential</b>		
10/14d triple	1.10 (0.93 to 1.29)	1.01 (0.85 to 1.19)
10/14d bismuth	1.08 (0.85 to 1.35)	1.21 (0.77-1.90)
7d bismuth	0.98 (0.67 to 1.37)	NA
10/14d concomitant	1.13 (0.85 to 1.45)	1.08 (0.95 to 1.22)
7d probiotic	0.65 (0.45 to 0.91)	NA
10/14d probiotic	1.60 (0.44 to 3.26)	NA
7d ranitidine bismuth	1.17 (0.78 to 1.65)	NA
10/14d ranitidine bismuth	0.99 (0.64 to 1.44)	NA
7d levofloxacin	0.69 (0.48 to 0.97)	0.40 (0.08 to 2.04)
10/14d levofloxacin	1.27 (0.83 to 1.80)	1.10 (0.72 to 1.70)
14d hybrid	1.22 (0.74 to 1.82)	1.17 (0.89 to 1.55)
<b>10/14d triple</b>		
10/14d bismuth	0.99 (0.78 to 1.23)	1.03 (0.86 to 1.23)
7d bismuth	0.89 (0.62 to 1.24)	NA
10/14d concomitant	1.03 (0.76 to 1.35)	1.09 (0.74 to 1.60)
7d probiotic	0.60 (0.41 to 0.82)	NA
10/14d probiotic	1.46 (0.40 to 2.97)	NA
7d ranitidine bismuth	1.07 (0.72 to 1.49)	NA
10/14d ranitidine bismuth	0.90 (0.60 to 1.27)	0.91 (0.77 to 1.09)
7d levofloxacin	0.63 (0.44 to 0.88)	NA
10/14d levofloxacin	1.16 (0.77 to 1.62)	1.18 (0.96 to 1.46)
14d hybrid	1.12 (0.65 to 1.71)	NA
<b>10/14d bismuth</b>		

Intervention	Adverse events	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
7d bismuth	0.91 (0.63 to 1.27)	0.68 (0.45 to 1.02)
10/14d concomitant	1.06 (0.76 to 1.41)	1.06 (0.57 to 1.95)
7d probiotic	0.61 (0.41 to 0.87)	NA
10/14d probiotic	1.49 (0.41 to 3.09)	NA
7d ranitidine bismuth	1.09 (0.71 to 1.59)	NA
10/14d ranitidine bismuth	0.93 (0.58 to 1.38)	NA
7d levofloxacin	0.65 (0.43 to 0.93)	NA
10/14d levofloxacin	1.18 (0.75 to 1.72)	1.48 (0.43 to 5.05)
14d hybrid	1.15 (0.65 to 1.80)	NA
<b>7d bismuth</b>		
10/14d concomitant	1.19 (0.76 to 1.78)	NA
7d probiotic	0.69 (0.42 to 1.05)	NA
10/14d probiotic	1.68 (0.44 to 3.58)	NA
7d ranitidine bismuth	1.23 (0.74 to 1.90)	NA
10/14d ranitidine bismuth	1.04 (0.60 to 1.67)	NA
7d levofloxacin	0.73 (0.46 to 1.10)	0.60 (0.24 to 1.49)
10/14d levofloxacin	1.33 (0.78 to 2.10)	NA
14d hybrid	1.29 (0.68 to 2.15)	NA
<b>10/14d concomitant</b>		
7d probiotic	0.59 (0.38 to 0.88)	NA
10/14d probiotic	1.44 (0.38 to 3.03)	NA
7d ranitidine bismuth	1.05 (0.66 to 1.60)	NA
10/14d ranitidine bismuth	0.89 (0.54 to 1.38)	NA
7d levofloxacin	0.63 (0.40 to 0.94)	NA
10/14d levofloxacin	1.14 (0.70 to 1.73)	NA
14d hybrid	1.10 (0.62 to 1.76)	NA

Intervention	Adverse events	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
<b>7d probiotic</b>		
10/14d probiotic	2.48 (0.69 to 5.11)	2.67 (0.83 to 8.53)
7d ranitidine bismuth	1.83 (1.13 to 2.82)	NA
10/14d ranitidine bismuth	1.56 (0.91 to 2.49)	NA
7d levofloxacin	1.09 (0.68 to 1.67)	NA
10/14d levofloxacin	1.99 (1.17 to 3.15)	NA
14d hybrid	1.93 (1.03 to 3.23)	NA
<b>10/14d probiotic</b>		
7d ranitidine bismuth	0.96 (0.33 to 2.71)	NA
10/14d ranitidine bismuth	0.81 (0.27 to 2.33)	NA
7d levofloxacin	0.57 (0.20 to 1.61)	NA
10/14d levofloxacin	1.04 (0.35 to 2.96)	NA
14d hybrid	1.01 (0.32 to 2.90)	NA
<b>7d ranitidine bismuth</b>		
10/14d ranitidine bismuth	0.87 (0.52 to 1.37)	1.38 (0.60 to 3.15)
7d levofloxacin	0.61 (0.37 to 0.96)	NA
10/14d levofloxacin	1.12 (0.64 to 1.80)	NA
14d hybrid	1.08 (0.57 to 1.84)	NA
<b>10/14d ranitidine bismuth</b>		
7d levofloxacin	0.73 (0.43 to 1.18)	NA
10/14d levofloxacin	1.33 (0.75 to 2.17)	NA
14d hybrid	1.28 (0.66 to 2.23)	NA
<b>7d levofloxacin</b>		
10/14d levofloxacin	1.87 (1.11 to 2.95)	0.82 (0.14 to 4.72)
14d hybrid	1.82 (0.96 to 3.05)	NA
<b>10/14d levofloxacin</b>		

<b>Intervention</b>	<b>Adverse events</b>	
	<b>Network-meta analysis risk ratio (95% CrI)</b>	<b>Direct comparison risk ratio (95% CI)</b>
14d hybrid	1.00 (0.52 to 1.72)	NA

CrI=credible interval; CI=confidence interval; NA=not applicable.  
 See Table 1 for key of intervention regimen names and descriptions.

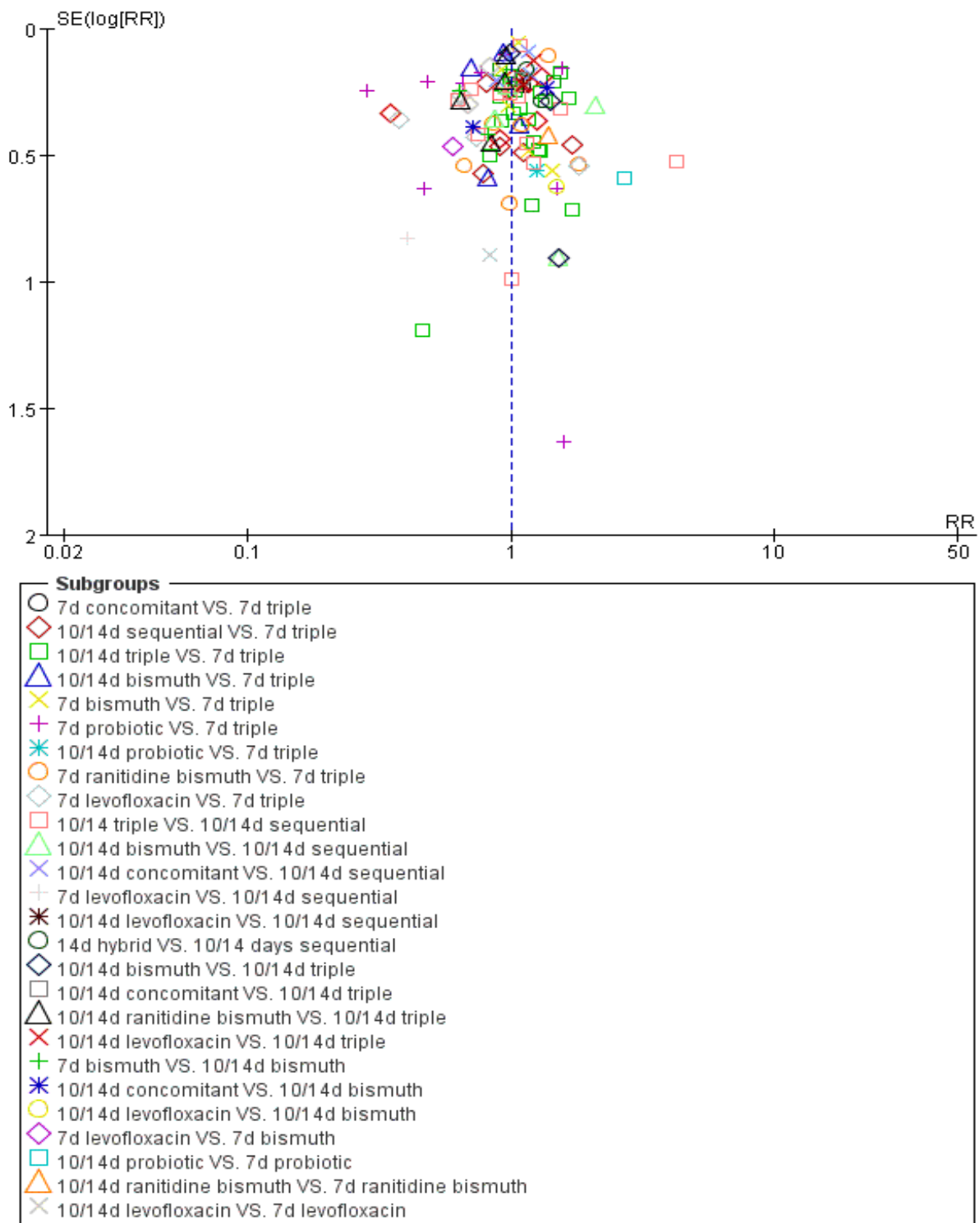
Table S5.2 Traditional meta-analysis results

	<b>Studies</b>	<b>Participants</b>	<b>Statistical Method</b>	<b>Effect Estimate</b>	<b>Heterogeneity</b>
7d concomitant VS. 7d triple	1	110	Risk Ratio (M-H, Random, 95% CI)	1.10 (0.70 to 1.73)	Not applicable
10/14d sequential VS. 7d triple	13	3216	Risk Ratio (M-H, Random, 95% CI)	0.99 (0.83 to 1.19)	P = 0.20; I <sup>2</sup> =24%
10/14d triple VS. 7d triple	22	4560	Risk Ratio (M-H, Random, 95% CI)	1.14 (1.01 to 1.28)	P = 0.89; I <sup>2</sup> =0%
10/14d bismuth VS. 7d triple	4	970	Risk Ratio (M-H, Random, 95% CI)	0.86 (0.74 to 1.01)	P=0.45; I <sup>2</sup> =0%
7d bismuth VS. 7d triple	5	764	Risk Ratio (M-H, Random, 95% CI)	1.04 (0.94 to 1.16)	P = 0.78; I <sup>2</sup> =0%
7d probiotic VS. 7d triple	9	2158	Risk Ratio (M-H, Random, 95% CI)	0.72 (0.49 to 1.06)	P <0.00001; I <sup>2</sup> =84%
10/14d probiotic VS. 7d triple	1	30	Risk Ratio (M-H, Random, 95% CI)	1.25 (0.41 to 3.77)	Not applicable
7d ranitidine bismuth VS. 7d triple	6	943	Risk Ratio (M-H, Random, 95% CI)	1.29 (1.06 to 1.56)	P = 0.52; I <sup>2</sup> =0%
7d levofloxacin VS. 7d triple	6	1413	Risk Ratio (M-H, Random, 95% CI)	0.72 (0.54 to 0.95)	P = 0.20; I <sup>2</sup> =31%
10/14 triple VS. 10/14d sequential	13	3340	Risk Ratio (M-H, Random, 95% CI)	1.01 (0.85 to 1.19)	P = 0.20; I <sup>2</sup> =24%
10/14d bismuth VS. 10/14d sequential	4	1011	Risk Ratio (M-H, Random, 95% CI)	1.21 (0.77 to 1.90)	P = 0.17; I <sup>2</sup> =41%
10/14d concomitant VS. 10/14d sequential	4	903	Risk Ratio (M-H, Random, 95% CI)	1.08 (0.95 to 1.22)	P = 0.45; I <sup>2</sup> =0%
7d levofloxacin VS. 10/14d sequential	1	229	Risk Ratio (M-H, Random, 95% CI)	0.40 (0.08 to 2.04)	Not applicable
10/14d levofloxacin VS. 10/14d sequential	1	230	Risk Ratio (M-H, Random, 95% CI)	1.10 (0.72 to 1.70)	Not applicable
14d hybrid VS. 10/14 days sequential	2	600	Risk Ratio (M-H, Random, 95% CI)	1.17 (0.89 to 1.55)	P = 0.69; I <sup>2</sup> =0%
10/14d bismuth VS. 10/14d triple	3	753	Risk Ratio (M-H, Random, 95% CI)	1.03 (0.86 to 1.23)	P = 0.43; I <sup>2</sup> =0%
10/14d concomitant VS. 10/14d triple	1	246	Risk Ratio (M-H, Random, 95% CI)	1.09 (0.74 to 1.60)	Not applicable
10/14d ranitidine bismuth VS. 10/14d triple	4	550	Risk Ratio (M-H, Random, 95% CI)	0.91 (0.77 to 1.09)	P = 0.64; I <sup>2</sup> =0%
10/14d levofloxacin VS. 10/14d triple	2	480	Risk Ratio (M-H, Random, 95% CI)	1.18 (0.96 to 1.46)	P = 0.71; I <sup>2</sup> =0%
7d bismuth VS. 10/14d bismuth	2	316	Risk Ratio (M-H, Random, 95% CI)	0.68 (0.45 to 1.02)	P = 0.60; I <sup>2</sup> =0%
10/14d concomitant VS. 10/14d bismuth	2	358	Risk Ratio (M-H, Random, 95% CI)	1.06 (0.57 to 1.95)	P = 0.16; I <sup>2</sup> =50%
10/14d levofloxacin VS. 10/14d bismuth	1	161	Risk Ratio (M-H, Random, 95% CI)	1.48 (0.43 to 5.05)	Not applicable
7d levofloxacin VS. 7d bismuth	1	80	Risk Ratio (M-H, Random, 95% CI)	0.60 (0.24 to 1.49)	Not applicable
10/14d probiotic VS. 7d probiotic	1	47	Risk Ratio (M-H, Random, 95% CI)	2.67 (0.83 to 8.53)	Not applicable
10/14d ranitidine bismuth VS. 7d ranitidine bismuth	1	110	Risk Ratio (M-H, Random, 95% CI)	1.38 (0.60 to 3.15)	Not applicable
10/14d levofloxacin VS. 7d levofloxacin	1	105	Risk Ratio (M-H, Random, 95% CI)	0.82 (0.14 to 4.72)	Not applicable

CI=confidence interval; M-H=Mantel-Haenszel (test).

See Table 1 for key of intervention regimen names and descriptions.

Fig S5.1 Assessment of publication bias-Funnel plot of all reported adverse events



See Table 1 for key of intervention regimen names and descriptions.



## Part B) Adverse event: abdominal or epigastric pain

Table S5.3 Direct and network-meta analysis results for abdominal or epigastric pain adverse events

Intervention	Abdominal or epigastric pain	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
<b>7d triple</b>		
7d concomitant	2.95 (0.65 to 8.16)	2.25 (0.61 to 8.25)
10/14d sequential	1.08 (0.76 to 1.50)	0.97 (0.63 to 1.50)
10/14d triple	1.21 (0.86 to 1.68)	1.35 (0.85 to 2.13)
10/14d bismuth	1.36 (0.86 to 2.01)	1.26 (0.73 to 2.19)
7d bismuth	1.31 (0.70 to 2.29)	1.10 (0.33 to 3.68)
10/14d concomitant	1.19 (0.67 to 1.92)	NA
7d probiotic	0.67 (0.41 to 1.04)	0.69 (0.44 to 1.09)
10/14d probiotic	0.36 (0.17 to 0.65)	0.33 (0.01 to 7.58)
7d ranitidine bismuth	0.19 (0.01 to 0.82)	1.00 (0.06 to 15.69)
10/14d ranitidine bismuth	0.19 (0.02 to 0.62)	NA
7d levofloxacin	0.82 (0.45 to 1.32)	0.83 (0.49 to 1.39)
10/14d levofloxacin	0.56 (0.18 to 1.26)	NA
14d hybrid	0.50 (0.15 to 1.27)	NA
<b>7d concomitant</b>		
10/14d sequential	0.56 (0.12 to 1.72)	NA
10/14d triple	0.62 (0.14 to 1.93)	NA
10/14d bismuth	0.70 (0.15 to 2.18)	NA
7d bismuth	0.67 (0.13 to 2.16)	NA
10/14d concomitant	0.61 (0.12 to 1.94)	NA
7d probiotic	0.35 (0.07 to 1.07)	NA
10/14d probiotic	0.19 (0.04 to 0.62)	NA
7d ranitidine bismuth	0.10 (0.00 to 0.48)	NA
10/14d ranitidine bismuth	0.10 (0.01 to 0.43)	NA

Intervention	Abdominal or epigastric pain	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
7d levofloxacin	0.42 (0.09 to 1.36)	NA
10/14d levofloxacin	0.29 (0.04 to 1.07)	NA
14d hybrid	0.26 (0.04 to 0.99)	NA
<b>10/14d sequential</b>		
10/14d triple	1.13 (0.86 to 1.47)	1.09 (0.83 to 1.44)
10/14d bismuth	1.28 (0.82 to 1.91)	1.79 (0.56 to 5.79)
7d bismuth	1.25 (0.62 to 2.25)	NA
10/14d concomitant	1.11 (0.68 to 1.67)	0.82 (0.49 to 1.36)
7d probiotic	0.64 (0.35 to 1.08)	NA
10/14d probiotic	0.34 (0.17 to 0.59)	NA
7d ranitidine bismuth	0.18 (0.01 to 0.77)	NA
10/14d ranitidine bismuth	0.18 (0.02 to 0.58)	NA
7d levofloxacin	0.78 (0.39 to 1.35)	NA
10/14d levofloxacin	0.52 (0.18 to 1.15)	0.38 (0.10 to 1.38)
14d hybrid	0.47 (0.15 to 1.09)	0.48 (0.13 to 1.70)
<b>10/14d triple</b>		
10/14d bismuth	1.14 (0.73 to 1.68)	1.06 (0.57 to 1.95)
7d bismuth	1.11 (0.54 to 2.00)	NA
10/14d concomitant	0.99 (0.60 to 1.53)	1.36 (0.71 to 2.58)
7d probiotic	0.57 (0.31 to 0.96)	NA
10/14d probiotic	0.30 (0.16 to 0.49)	0.43 (0.30 to 0.62)
7d ranitidine bismuth	0.16 (0.01 to 0.68)	NA
10/14d ranitidine bismuth	0.16 (0.02 to 0.50)	0.09 (0.01 to 0.66)
7d levofloxacin	0.69 (0.35 to 1.21)	NA
10/14d levofloxacin	0.46 (0.16 to 0.99)	0.50 (0.21 to 1.17)
14d hybrid	0.42 (0.13 to 1.02)	NA

Intervention	Abdominal or epigastric pain	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
<b>10/14d bismuth</b>		
7d bismuth	1.00 (0.48 to 1.85)	1.33 (0.31 to 5.76)
10/14d concomitant	0.90 (0.50 to 1.48)	1.54 (0.45 to 5.24)
7d probiotic	0.52 (0.27 to 0.92)	NA
10/14d probiotic	0.28 (0.13 to 0.51)	NA
7d ranitidine bismuth	0.15 (0.01 to 0.60)	NA
10/14d ranitidine bismuth	0.14 (0.02 to 0.47)	NA
7d levofloxacin	0.63 (0.29 to 1.16)	NA
10/14d levofloxacin	0.42 (0.13 to 0.98)	NA
14d hybrid	0.38 (0.11 to 0.98)	NA
<b>7d bismuth</b>		
10/14d concomitant	0.98 (0.43 to 1.93)	NA
7d probiotic	0.56 (0.25 to 1.10)	NA
10/14d probiotic	0.30 (0.12 to 0.63)	NA
7d ranitidine bismuth	0.16 (0.01 to 0.64)	NA
10/14d ranitidine bismuth	0.16 (0.02 to 0.55)	NA
7d levofloxacin	0.68 (0.29 to 1.34)	0.30 (0.01 to 6.10)
10/14d levofloxacin	0.46 (0.13 to 1.15)	NA
14d hybrid	0.42 (0.11 to 1.15)	NA
<b>10/14d concomitant</b>		
7d probiotic	0.61 (0.29 to 1.15)	NA
10/14d probiotic	0.32 (0.15 to 0.61)	NA
7d ranitidine bismuth	0.17 (0.01 to 0.70)	NA
10/14d ranitidine bismuth	0.17 (0.02 to 0.60)	NA
7d levofloxacin	0.74 (0.33 to 1.45)	NA
10/14d levofloxacin	0.49 (0.15 to 1.14)	NA

Intervention	Abdominal or epigastric pain	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
14d hybrid	0.44 (0.13 to 1.12)	NA
<b>7d probiotic</b>		
10/14d probiotic	0.57 (0.23 to 1.17)	0.69 (0.03 to 15.95)
7d ranitidine bismuth	0.30 (0.02 to 1.33)	NA
10/14d ranitidine bismuth	0.30 (0.03 to 1.01)	NA
7d levofloxacin	1.29 (0.58 to 2.44)	NA
10/14d levofloxacin	0.88 (0.25 to 2.19)	NA
14d hybrid	0.80 (0.21 to 2.17)	NA
<b>10/14d probiotic</b>		
7d ranitidine bismuth	0.58 (0.04 to 2.59)	NA
10/14d ranitidine bismuth	0.56 (0.06 to 1.93)	NA
7d levofloxacin	2.50 (0.97 to 5.36)	NA
10/14d levofloxacin	1.65 (0.48 to 4.03)	NA
14d hybrid	1.51 (0.39 to 4.07)	NA
<b>7d ranitidine bismuth</b>		
10/14d ranitidine bismuth	1.51 (0.28 to 4.91)	1.67 (0.42 to 6.64)
7d levofloxacin	12.75 (0.94 to 68.58)	NA
10/14d levofloxacin	8.31 (0.55 to 44.58)	NA
14d hybrid	7.46 (0.49 to 38.81)	NA
<b>10/14d ranitidine bismuth</b>		
7d levofloxacin	9.39 (1.14 to 43.80)	NA
10/14d levofloxacin	6.10 (0.66 to 29.85)	NA
14d hybrid	5.44 (0.56 to 25.32)	NA
<b>7d levofloxacin</b>		
10/14d levofloxacin	0.73 (0.20 to 1.80)	NA
14d hybrid	0.66 (0.17 to 1.85)	NA

<b>Intervention</b>	<b>Abdominal or epigastric pain</b>	
	<b>Network-meta analysis risk ratio (95% CrI)</b>	<b>Direct comparison risk ratio (95% CI)</b>
<b>10/14d levofloxacin</b>		
14d hybrid	1.13 (0.24 to 3.48)	NA

CrI=credible interval; CI=confidence interval; NA=not applicable.  
See Table 1 for key of intervention regimen names and descriptions.

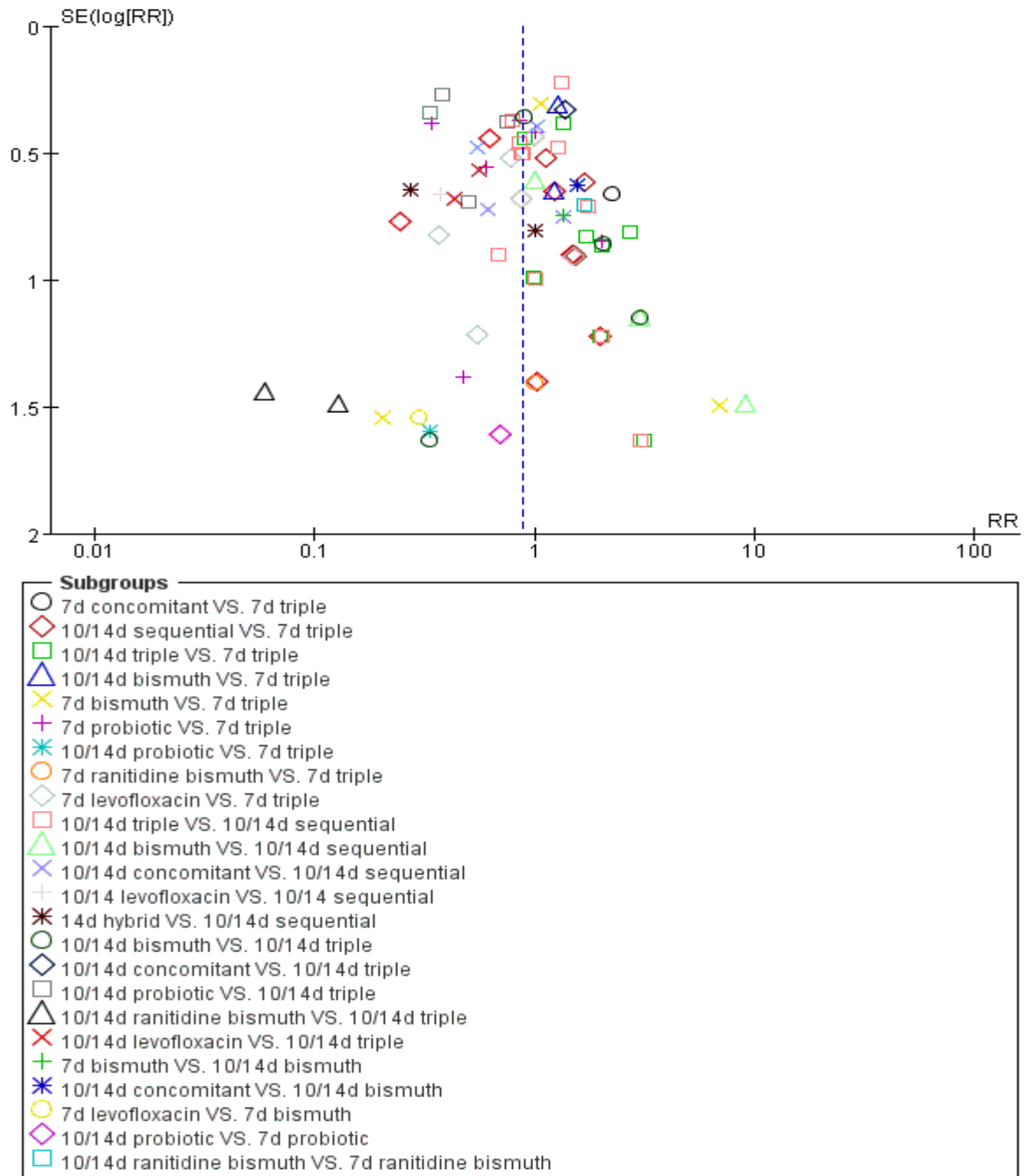
Table S5.4 Traditional meta-analysis results

	<b>Studies</b>	<b>Participants</b>	<b>Statistical Method</b>	<b>Effect Estimate</b>	<b>Heterogeneity</b>
7d concomitant VS. 7d triple	1	110	Risk Ratio (M-H, Random, 95% CI)	2.25 (0.61 to 8.25)	Not applicable
10/14d sequential VS. 7d triple	10	2823	Risk Ratio (M-H, Random, 95% CI)	0.97 (0.63 to 1.50)	P = 0.71; I <sup>2</sup> =0%
10/14d triple VS. 7d triple	8	2300	Risk Ratio (M-H, Random, 95% CI)	1.35 (0.85 to 2.13)	P = 0.96; I <sup>2</sup> =0%
10/14d bismuth VS. 7d triple	2	581	Risk Ratio (M-H, Random, 95% CI)	1.26 (0.73 to 2.19)	P = 0.97; I <sup>2</sup> =0%
7d bismuth VS. 7d triple	3	482	Risk Ratio (M-H, Random, 95% CI)	1.10 (0.33 to 3.68)	P = 0.26; I <sup>2</sup> =26%
7d probiotic VS. 7d triple	6	1309	Risk Ratio (M-H, Random, 95% CI)	0.69 (0.44 to 1.09)	P = 0.29; I <sup>2</sup> =19%
10/14d probiotic VS. 7d triple	1	30	Risk Ratio (M-H, Random, 95% CI)	0.33 (0.01 to 7.58)	Not applicable
7d ranitidine bismuth VS. 7d triple	1	150	Risk Ratio (M-H, Random, 95% CI)	1.00 (0.06 to 15.69)	Not applicable
7d levofloxacin VS. 7d triple	6	1545	Risk Ratio (M-H, Random, 95% CI)	0.83 (0.49 to 1.39)	P = 0.88; I <sup>2</sup> =0%
10/14d triple VS. 10/14d sequential	11	2975	Risk Ratio (M-H, Random, 95% CI)	1.09 (0.83 to 1.44)	P = 0.96; I <sup>2</sup> =0%
10/14d bismuth VS. 10/14d sequential	4	1011	Risk Ratio (M-H, Random, 95% CI)	1.79 (0.56 to 5.79)	P = 0.30; I <sup>2</sup> =16%
10/14d concomitant VS. 10/14d sequential	4	903	Risk Ratio (M-H, Random, 95% CI)	0.82 (0.49 to 1.36)	P = 0.66; I <sup>2</sup> =0%
10/14 levofloxacin VS. 10/14 sequential	1	230	Risk Ratio (M-H, Random, 95% CI)	0.38 (0.10 to 1.38)	Not applicable
14d hybrid VS. 10/14d sequential	2	600	Risk Ratio (M-H, Random, 95% CI)	0.48 (0.13 to 1.70)	P = 0.20; I <sup>2</sup> =38%
10/14d bismuth VS. 10/14d triple	4	959	Risk Ratio (M-H, Random, 95% CI)	1.06 (0.57 to 1.95)	P = 0.54; I <sup>2</sup> =0%
10/14d concomitant VS. 10/14d triple	1	246	Risk Ratio (M-H, Random, 95% CI)	1.36 (0.71 to 2.58)	Not applicable
10/14d probiotic VS. 10/14d triple	4	442	Risk Ratio (M-H, Random, 95% CI)	0.43 (0.30 to 0.62)	P = 0.39; I <sup>2</sup> =1%
10/14d ranitidine bismuth VS. 10/14d triple	2	160	Risk Ratio (M-H, Random, 95% CI)	0.09 (0.01 to 0.66)	P = 0.71; I <sup>2</sup> =0%
10/14d levofloxacin VS. 10/14d triple	2	304	Risk Ratio (M-H, Random, 95% CI)	0.50 (0.21 to 1.17)	P = 0.77; I <sup>2</sup> =0%
7d bismuth VS. 10/14d bismuth	1	156	Risk Ratio (M-H, Random, 95% CI)	1.33 (0.31 to 5.76)	Not applicable
10/14d concomitant VS. 10/14d bismuth	1	158	Risk Ratio (M-H, Random, 95% CI)	1.54 (0.45 to 5.24)	Not applicable
7d levofloxacin VS. 7d bismuth	1	145	Risk Ratio (M-H, Random, 95% CI)	0.30 (0.01 to 6.10)	Not applicable
10/14d probiotic VS. 7d probiotic	1	47	Risk Ratio (M-H, Random, 95% CI)	0.69 (0.03 to 15.95)	Not applicable
10/14d ranitidine bismuth VS. 7d ranitidine bismuth	1	110	Risk Ratio (M-H, Random, 95% CI)	1.67 (0.42 to 6.64)	Not applicable

CI = confidence interval; M-H=Mantel-Haenszel (test).

See Table 1 for key of intervention regimen names and descriptions.

Fig S5.2 Assessment of publication bias-Funnel plot for abdominal or epigastric pain adverse events



See Table 1 for key of intervention regimen names and descriptions.

## Part C) Adverse events: alteration in taste

Table S5.5 Direct and network-meta analysis results for alteration in taste

Intervention	Alteration in taste	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
<b>7d triple</b>		
7d concomitant	3.72 (0.81 to 9.30)	3.38 (0.73 to 15.53)
10/14d sequential	1.13 (0.78 to 1.56)	1.01 (0.65 to 1.58)
10/14d triple	1.48 (1.06 to 1.99)	1.69 (1.08 to 2.63)
10/14d bismuth	0.56 (0.33 to 0.87)	0.58 (0.15 to 2.19)
7d bismuth	0.67 (0.40 to 1.05)	0.71 (0.54 to 0.94)
10/14d concomitant	1.21 (0.71 to 1.93)	NA
7d probiotic	0.91 (0.60 to 1.30)	0.87 (0.53 to 1.41)
10/14d probiotic	2.13 (1.09 to 3.61)	2.00 (0.20 to 19.78)
7d ranitidine bismuth	0.92 (0.50 to 1.54)	0.91 (0.58 to 1.41)
10/14d ranitidine bismuth	1.16 (0.60 to 1.96)	NA
7d levofloxacin	0.47 (0.30 to 0.70)	0.50 (0.31 to 0.81)
10/14d levofloxacin	0.82 (0.34 to 1.60)	NA
14d hybrid	1.57 (0.70 to 2.83)	NA
<b>7d concomitant</b>		
10/14d sequential	0.45 (0.11 to 1.44)	NA
10/14d triple	0.59 (0.15 to 1.96)	NA
10/14d bismuth	0.22 (0.05 to 0.74)	NA
7d bismuth	0.27 (0.06 to 0.89)	NA
10/14d concomitant	0.49 (0.11 to 1.64)	NA
7d probiotic	0.36 (0.09 to 1.12)	NA
10/14d probiotic	0.86 (0.18 to 2.99)	NA
7d ranitidine bismuth	0.37 (0.08 to 1.28)	NA
10/14d ranitidine bismuth	0.47 (0.10 to 1.59)	NA
7d levofloxacin	0.19 (0.05 to 0.59)	NA



Intervention	Alteration in taste	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
10/14d levofloxacin	0.33 (0.06 to 1.21)	NA
14d hybrid	0.62 (0.13 to 2.01)	NA
<b>10/14d sequential</b>		
10/14d triple	1.33 (0.97 to 1.79)	1.18 (0.93 to 1.48)
10/14d bismuth	0.50 (0.31 to 0.78)	0.53 (0.25 to 1.13)
7d bismuth	0.61 (0.33 to 1.06)	NA
10/14d concomitant	1.08 (0.73 to 1.54)	1.06 (0.83 to 1.35)
7d probiotic	0.83 (0.48 to 1.33)	NA
10/14d probiotic	1.93 (0.98 to 3.32)	NA
7d ranitidine bismuth	0.84 (0.42 to 1.51)	NA
10/14d ranitidine bismuth	1.05 (0.54 to 1.78)	NA
7d levofloxacin	0.43 (0.24 to 0.71)	0.34 (0.01 to 8.17)
10/14d levofloxacin	0.73 (0.31 to 1.42)	0.57 (0.17 to 1.90)
14d hybrid	1.40 (0.69 to 2.38)	1.07 (0.31 to 3.76)
<b>10/14d triple</b>		
10/14d bismuth	0.38 (0.24 to 0.58)	0.37 (0.22 to 0.62)
7d bismuth	0.47 (0.25 to 0.80)	NA
10/14d concomitant	0.83 (0.50 to 1.28)	1.00 (0.14 to 6.99)
7d probiotic	0.63 (0.37 to 1.00)	NA
10/14d probiotic	1.45 (0.80 to 2.36)	0.91 (0.76 to 1.07)
7d ranitidine bismuth	0.64 (0.32 to 1.13)	NA
10/14d ranitidine bismuth	0.79 (0.44 to 1.26)	0.74 (0.13 to 4.17)
7d levofloxacin	0.33 (0.19 to 0.54)	NA
10/14d levofloxacin	0.55 (0.25 to 1.02)	0.56 (0.30 to 1.04)
14d hybrid	1.07 (0.49 to 1.94)	NA
<b>10/14d bismuth</b>		

Intervention	Alteration in taste	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
7d bismuth	1.27 (0.61 to 2.37)	NA
10/14d concomitant	2.26 (1.23 to 3.78)	0.68 (0.20 to 2.33)
7d probiotic	1.73 (0.88 to 3.01)	NA
10/14d probiotic	3.99 (1.86 to 7.31)	NA
7d ranitidine bismuth	1.75 (0.78 to 3.39)	NA
10/14d ranitidine bismuth	2.17 (1.02 to 4.02)	NA
7d levofloxacin	0.90 (0.45 to 1.61)	NA
10/14d levofloxacin	1.52 (0.59 to 3.13)	NA
14d hybrid	2.93 (1.22 to 5.66)	NA
<b>7d bismuth</b>		
10/14d concomitant	1.92 (0.90 to 3.52)	NA
7d probiotic	1.44 (0.72 to 2.54)	NA
10/14d probiotic	3.38 (1.42 to 6.84)	NA
7d ranitidine bismuth	1.46 (0.65 to 2.84)	NA
10/14d ranitidine bismuth	1.84 (0.78 to 3.66)	NA
7d levofloxacin	0.75 (0.37 to 1.36)	NA
10/14d levofloxacin	1.30 (0.45 to 2.87)	NA
14d hybrid	2.48 (0.93 to 5.05)	NA
<b>10/14d concomitant</b>		
7d probiotic	0.80 (0.40 to 1.41)	NA
10/14d probiotic	1.85 (0.85 to 3.51)	NA
7d ranitidine bismuth	0.81 (0.36 to 1.56)	NA
10/14d ranitidine bismuth	1.00 (0.47 to 1.87)	NA
7d levofloxacin	0.42 (0.21 to 0.75)	NA
10/14d levofloxacin	0.70 (0.27 to 1.45)	NA
14d hybrid	1.34 (0.59 to 2.51)	NA

Intervention	Alteration in taste	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
<b>7d probiotic</b>		
10/14d probiotic	2.43 (1.13 to 4.56)	4.27 (0.42 to 43.45)
7d ranitidine bismuth	1.06 (0.50 to 1.96)	NA
10/14d ranitidine bismuth	1.33 (0.60 to 2.48)	NA
7d levofloxacin	0.54 (0.30 to 0.93)	NA
10/14d levofloxacin	0.93 (0.35 to 1.95)	NA
14d hybrid	1.79 (0.74 to 3.52)	NA
<b>10/14d probiotic</b>		
7d ranitidine bismuth	0.47 (0.20 to 0.97)	NA
10/14d ranitidine bismuth	0.59 (0.25 to 1.15)	NA
7d levofloxacin	0.24 (0.11 to 0.48)	NA
10/14d levofloxacin	0.41 (0.15 to 0.88)	NA
14d hybrid	0.80 (0.30 to 1.70)	NA
<b>7d ranitidine bismuth</b>		
10/14d ranitidine bismuth	1.34 (0.59 to 2.59)	1.25 (0.35 to 4.41)
7d levofloxacin	0.56 (0.26 to 1.06)	NA
10/14d levofloxacin	0.95 (0.33 to 2.16)	NA
14d hybrid	1.84 (0.67 to 3.94)	NA
<b>10/14d ranitidine bismuth</b>		
7d levofloxacin	0.45 (0.21 to 0.88)	NA
10/14d levofloxacin	0.75 (0.28 to 1.63)	NA
14d hybrid	1.46 (0.56 to 3.10)	NA
<b>7d levofloxacin</b>		
10/14d levofloxacin	1.80 (0.66 to 3.86)	NA
14d hybrid	3.45 (1.37 to 6.89)	NA
<b>10/14d levofloxacin</b>		

<b>Intervention</b>	<b>Alteration in taste</b>	
	<b>Network-meta analysis risk ratio (95% CrI)</b>	<b>Direct comparison risk ratio (95% CI)</b>
14d hybrid	2.21 (0.74 to 5.15)	NA

CrI=credible interval; CI=confidence interval; NA=not applicable.  
See Table 1 for key of intervention regimen names and description.

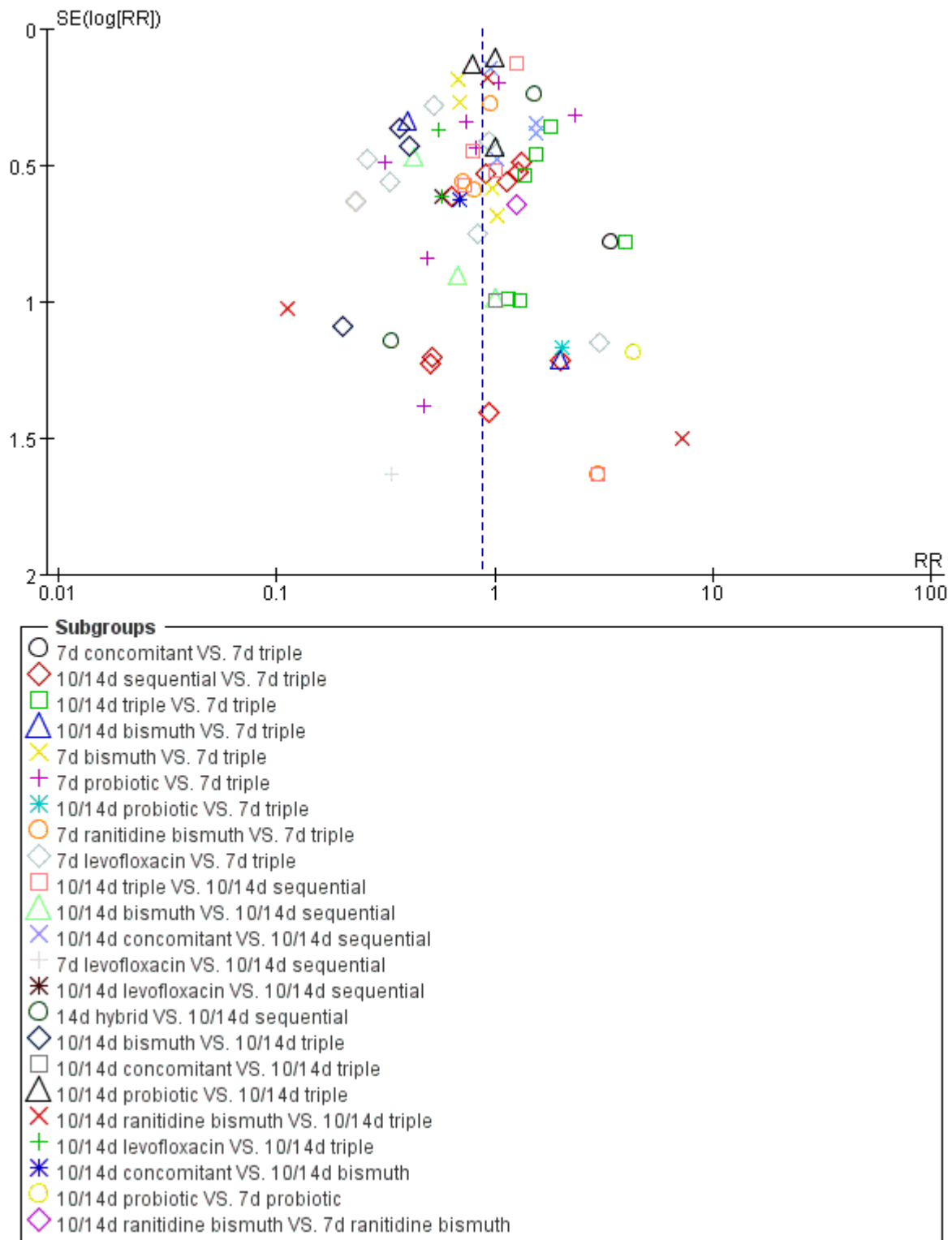
Table S5.6 Traditional meta-analysis results

	<b>Studies</b>	<b>Participants</b>	<b>Statistical Method</b>	<b>Effect Estimate</b>	<b>Heterogeneity</b>
7d concomitant VS. 7d triple	1	110	Risk Ratio (M-H, Random, 95% CI)	3.38 (0.73 to 15.53)	Not applicable
10/14d sequential VS. 7d triple	9	2564	Risk Ratio (M-H, Random, 95% CI)	1.01 (0.65 to 1.58)	P = 0.98; I <sup>2</sup> =0%
10/14d triple VS. 7d triple	6	1833	Risk Ratio (M-H, Random, 95% CI)	1.69 (1.08 to 2.63)	P = 0.90; I <sup>2</sup> =0%
10/14d bismuth VS. 7d triple	2	309	Risk Ratio (M-H, Random, 95% CI)	0.58 (0.15 to 2.19)	P=0.20; I <sup>2</sup> =38%
7d bismuth VS. 7d triple	4	576	Risk Ratio (M-H, Random, 95% CI)	0.71 (0.54 to 0.94)	P=0.89; I <sup>2</sup> =0%
7d probiotic VS. 7d triple	7	1701	Risk Ratio (M-H, Random, 95% CI)	0.87 (0.53 to 1.41)	P = 0.02; I <sup>2</sup> =59%
10/14d probiotic VS. 7d triple	1	30	Risk Ratio (M-H, Random, 95% CI)	2.00 (0.20 to 19.78)	Not applicable
7d ranitidine bismuth VS. 7d triple	4	562	Risk Ratio (M-H, Random, 95% CI)	0.91 (0.58 to 1.41)	P = 0.85; I <sup>2</sup> =0%
7d levofloxacin VS. 7d triple	7	1845	Risk Ratio (M-H, Random, 95% CI)	0.50 (0.31 to 0.81)	P = 0.16; I <sup>2</sup> =35%
10/14d triple VS. 10/14d sequential	5	1819	Risk Ratio (M-H, Random, 95% CI)	1.18 (0.93 to 1.48)	P = 0.70; I <sup>2</sup> =0%
10/14d bismuth VS. 10/14d sequential	3	797	Risk Ratio (M-H, Random, 95% CI)	0.53 (0.25 to 1.13)	P = 0.71; I <sup>2</sup> =0%
10/14d concomitant VS. 10/14d sequential	4	903	Risk Ratio (M-H, Random, 95% CI)	1.06 (0.83 to 1.35)	P = 0.44; I <sup>2</sup> =0%
7d levofloxacin VS. 10/14d sequential	1	229	Risk Ratio (M-H, Random, 95% CI)	0.34 (0.01 to 8.17)	Not applicable
10/14d levofloxacin VS. 10/14d sequential	1	230	Risk Ratio (M-H, Random, 95% CI)	0.57 (0.17 to 1.90)	Not applicable
14d hybrid VS. 10/14d sequential	2	600	Risk Ratio (M-H, Random, 95% CI)	1.07 (0.31 to 3.76)	P = 0.19; I <sup>2</sup> =41%
10/14d bismuth VS. 10/14d triple	3	745	Risk Ratio (M-H, Random, 95% CI)	0.37 (0.22 to 0.62)	P = 0.84; I <sup>2</sup> =0%
10/14d concomitant VS. 10/14d triple	1	246	Risk Ratio (M-H, Random, 95% CI)	1.00 (0.14 to 6.99)	Not applicable
10/14d probiotic VS. 10/14d triple	3	282	Risk Ratio (M-H, Random, 95% CI)	0.91 (0.76 to 1.07)	P = 0.34; I <sup>2</sup> =6%
10/14d ranitidine bismuth VS. 10/14d triple	3	442	Risk Ratio (M-H, Random, 95% CI)	0.74 (0.13 to 4.17)	P = 0.05; I <sup>2</sup> =68%
10/14d levofloxacin VS. 10/14d triple	2	480	Risk Ratio (M-H, Random, 95% CI)	0.56 (0.30 to 1.04)	P = 0.96; I <sup>2</sup> =0%
10/14d concomitant VS. 10/14d bismuth	1	158	Risk Ratio (M-H, Random, 95% CI)	0.68 (0.20 to 2.33)	Not applicable
10/14d probiotic VS. 7d probiotic	1	47	Risk Ratio (M-H, Random, 95% CI)	4.27 (0.42 to 43.45)	Not applicable
10/14d ranitidine bismuth VS. 7d ranitidine bismuth	1	110	Risk Ratio (M-H, Random, 95% CI)	1.25 (0.35 to 4.41)	Not applicable

CI=confidence interval; M-H=Mantel-Haenszel (test).

See Table 1 for key of intervention regimen names and descriptions.

Fig S5.3 Assessment of publication bias-Funnel plot of analysis for alteration in taste



See Table 1 for key of intervention regimen names and descriptions.

## Part D) Adverse events: headache with or without vomiting

Table S5.7 Direct and network-meta analysis results for headache with or without vomiting

Intervention	Headache with or without vomiting	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
<b>7d triple</b>		
10/14d sequential	1.86 (0.97 to 3.33)	1.37 (0.57 to 3.29)
10/14d triple	1.51 (0.82 to 2.48)	1.51 (0.87 to 2.61)
10/14d bismuth	3.01 (1.46 to 5.87)	2.64 (1.13 to 6.20)
7d bismuth	1.98 (0.98 to 3.80)	1.61 (1.11 to 2.34)
10/14d concomitant	2.30 (0.68 to 5.63)	NA
7d probiotic	0.54 (0.04 to 2.07)	0.43 (0.08 to 2.39)
10/14d probiotic	0.28 (0.02 to 1.13)	NA
7d ranitidine bismuth	2.46 (0.12 to 12.20)	3.00 (0.12 to 72.49)
10/14d ranitidine bismuth	0.91 (0.14 to 3.10)	NA
7d levofloxacin	1.07 (0.47 to 2.01)	1.15 (0.63 to 2.10)
10/14d levofloxacin	0.67 (0.12 to 2.03)	NA
14d hybrid	7.78 (0.28 to 33.33)	NA
<b>10/14d sequential</b>		
10/14d triple	0.85 (0.45 to 1.40)	0.87 (0.50 to 1.54)
10/14d bismuth	1.71 (0.79 to 3.33)	2.33 (0.61 to 8.95)
7d bismuth	1.16 (0.44 to 2.56)	NA
10/14d concomitant	1.27 (0.42 to 2.85)	0.79 (0.27 to 2.30)
7d probiotic	0.32 (0.02 to 1.29)	NA
10/14d probiotic	0.16 (0.01 to 0.65)	NA
7d ranitidine bismuth	1.41 (0.06 to 7.23)	NA
10/14d ranitidine bismuth	0.51 (0.08 to 1.72)	NA
7d levofloxacin	0.64 (0.21 to 1.42)	NA
10/14d levofloxacin	0.37 (0.07 to 1.13)	NA

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**Headache with or without vomiting**

<b>Intervention</b>	<b>Network-meta analysis risk ratio (95% CrI)</b>	<b>Direct comparison risk ratio (95% CI)</b>
14d hybrid	4.32 (0.17 to 18.81)	2.00 (0.18 to 21.67)
<b>10/14d triple</b>		
10/14d bismuth	2.09 (1.01 to 4.15)	1.24 (0.58 to 2.65)
7d bismuth	1.42 (0.57 to 3.16)	NA
10/14d concomitant	1.58 (0.49 to 3.84)	1.00 (0.06 to 15.81)
7d probiotic	0.39 (0.03 to 1.56)	NA
10/14d probiotic	0.18 (0.01 to 0.76)	0.17 (0.04 to 0.76)
7d ranitidine bismuth	1.70 (0.09 to 8.44)	NA
10/14d ranitidine bismuth	0.61 (0.10 to 1.99)	0.63 (0.01 to 71.90)
7d levofloxacin	0.77 (0.28 to 1.68)	NA
10/14d levofloxacin	0.44 (0.10 to 1.26)	0.41 (0.18 to 0.94)
14d hybrid	5.41 (0.20 to 24.00)	NA
<b>10/14d bismuth</b>		
7d bismuth	0.73 (0.27 to 1.56)	0.14 (0.02 to 1.13)
10/14d concomitant	0.81 (0.24 to 1.88)	1.71 (0.42 to 6.91)
7d probiotic	0.20 (0.01 to 0.83)	NA
10/14d probiotic	0.10 (0.01 to 0.42)	NA
7d ranitidine bismuth	0.90 (0.04 to 4.51)	NA
10/14d ranitidine bismuth	0.33 (0.05 to 1.12)	NA
7d levofloxacin	0.40 (0.12 to 0.91)	NA
10/14d levofloxacin	0.24 (0.04 to 0.73)	NA
14d hybrid	2.85 (0.10 to 12.72)	NA
<b>7d bismuth</b>		
10/14d concomitant	1.29 (0.31 to 3.51)	NA
7d probiotic	0.30 (0.02 to 1.25)	NA
10/14d probiotic	0.16 (0.01 to 0.66)	NA

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**Headache with or without vomiting**

<b>Intervention</b>	<b>Network-meta analysis risk ratio (95% CrI)</b>	<b>Direct comparison risk ratio (95% CI)</b>
7d ranitidine bismuth	1.38 (0.06 to 6.99)	NA
10/14d ranitidine bismuth	0.51 (0.07 to 1.82)	NA
7d levofloxacin	0.60 (0.20 to 1.32)	0.17 (0.01 to 3.02)
10/14d levofloxacin	0.37 (0.06 to 1.22)	NA
14d hybrid	4.38 (0.14 to 19.83)	NA
<b>10/14d concomitant</b>		
7d probiotic	0.31 (0.02 to 1.41)	NA
10/14d probiotic	0.16 (0.01 to 0.76)	NA
7d ranitidine bismuth	1.38 (0.05 to 7.18)	NA
10/14d ranitidine bismuth	0.51 (0.06 to 2.00)	NA
7d levofloxacin	0.62 (0.14 to 1.79)	NA
10/14d levofloxacin	0.37 (0.05 to 1.30)	NA
14d hybrid	4.26 (0.12 to 21.04)	NA
<b>7d probiotic</b>		
10/14d probiotic	1.45 (0.03 to 8.18)	NA
7d ranitidine bismuth	12.73 (0.19 to 78.01)	NA
10/14d ranitidine bismuth	4.75 (0.18 to 25.50)	NA
7d levofloxacin	5.52 (0.42 to 25.94)	NA
10/14d levofloxacin	3.51 (0.15 to 17.72)	NA
14d hybrid	41.28 (0.44 to 263.60)	NA
<b>10/14d probiotic</b>		
7d ranitidine bismuth	28.85 (0.39 to 175.50)	NA
10/14d ranitidine bismuth	10.10 (0.40 to 53.60)	NA
7d levofloxacin	12.43 (0.79 to 62.83)	NA
10/14d levofloxacin	7.43 (0.29 to 38.19)	NA
14d hybrid	88.12 (0.99 to 529.10)	NA

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**Headache with or without vomiting**

<b>Intervention</b>	<b>Network-meta analysis risk ratio (95% CrI)</b>	<b>Direct comparison risk ratio (95% CI)</b>
<b>7d ranitidine bismuth</b>		
10/14d ranitidine bismuth	0.91 (0.06 to 4.00)	1.00 (0.15 to 6.85)
7d levofloxacin	1.74 (0.07 to 9.04)	NA
10/14d levofloxacin	1.03 (0.03 to 5.67)	NA
14d hybrid	12.17 (0.10 to 81.86)	NA
<b>10/14d ranitidine bismuth</b>		
7d levofloxacin	2.20 (0.26 to 8.31)	NA
10/14d levofloxacin	1.26 (0.11 to 5.33)	NA
14d hybrid	15.56 (0.29 to 91.39)	NA
<b>7d levofloxacin</b>		
10/14d levofloxacin	0.72 (0.11 to 2.45)	NA
14d hybrid	8.37 (0.26 to 39.16)	NA
<b>10/14d levofloxacin</b>		
14d hybrid	18.94 (0.41 to 96.63)	NA

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CrI=credible interval; CI=confidence interval; NA=not applicable.  
See Table 1 for key of intervention regimen names and descriptions.

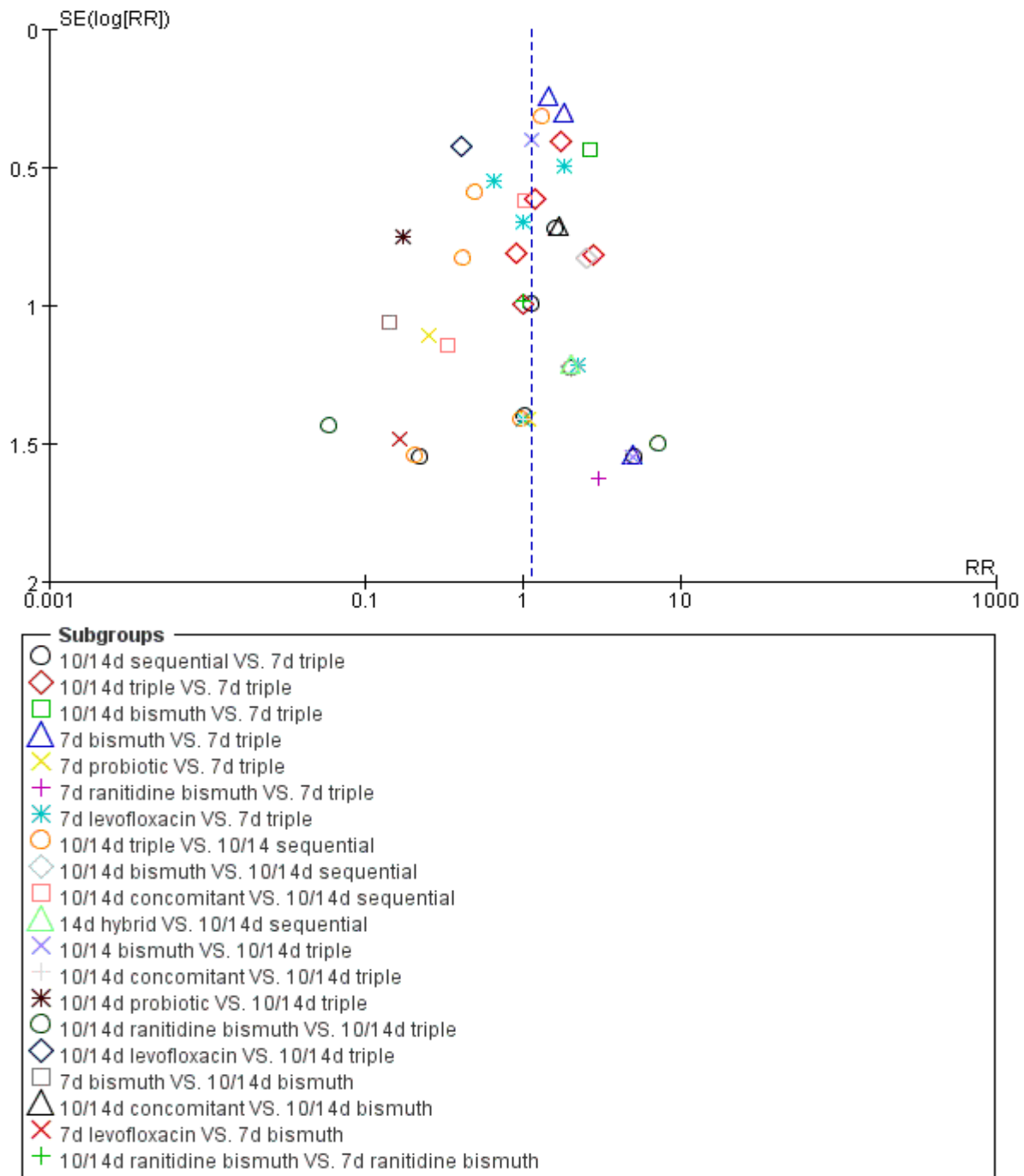
Table S5.8 Traditional meta-analysis results

	<b>Studies</b>	<b>Participants</b>	<b>Statistical Method</b>	<b>Effect Estimate</b>	<b>Heterogeneity</b>
10/14d sequential VS. 7d triple	6	2133	Risk Ratio (M-H, Random, 95% CI)	1.37 (0.57 to 3.29)	P = 0.80; I <sup>2</sup> =0%
10/14d triple VS. 7d triple	5	1699	Risk Ratio (M-H, Random, 95% CI)	1.51 (0.87 to 2.61)	P = 0.84; I <sup>2</sup> =0%
10/14d bismuth VS. 7d triple	1	438	Risk Ratio (M-H, Random, 95% CI)	2.64 (1.13 to 6.20)	Not applicable
7d bismuth VS. 7d triple	3	563	Risk Ratio (M-H, Random, 95% CI)	1.61 (1.11 to 2.34)	P=0.66; I <sup>2</sup> =0%
7d probiotic VS. 7d triple	2	507	Risk Ratio (M-H, Random, 95% CI)	0.43 (0.08 to 2.39)	P=0.42; I <sup>2</sup> =0%
7d ranitidine bismuth VS. 7d triple	1	150	Risk Ratio (M-H, Random, 95% CI)	3.00 (0.12 to 72.49)	Not applicable
7d levofloxacin VS. 7d triple	5	1398	Risk Ratio (M-H, Random, 95% CI)	1.15 (0.63 to 2.10)	P = 0.69; I <sup>2</sup> =0%
10/14d triple VS. 10/14 sequential	5	1846	Risk Ratio (M-H, Random, 95% CI)	0.87 (0.50 to 1.54)	P = 0.36; I <sup>2</sup> =7%
10/14d bismuth VS. 10/14d sequential	2	653	Risk Ratio (M-H, Random, 95% CI)	2.33 (0.61 to 8.95)	P = 0.88; I <sup>2</sup> =0%
10/14d concomitant VS. 10/14d sequential	2	401	Risk Ratio (M-H, Random, 95% CI)	0.79 (0.27 to 2.30)	P = 0.39; I <sup>2</sup> =0%
14d hybrid VS. 10/14d sequential	1	180	Risk Ratio (M-H, Random, 95% CI)	2.00 (0.18 to 21.67)	Not applicable
10/14 bismuth VS. 10/14d triple	2	539	Risk Ratio (M-H, Random, 95% CI)	1.24 (0.58 to 2.65)	P = 0.35; I <sup>2</sup> =0%
10/14d concomitant VS. 10/14d triple	1	246	Risk Ratio (M-H, Random, 95% CI)	1.00 (0.06 to 15.81)	Not applicable
10/14d probiotic VS. 10/14d triple	1	82	Risk Ratio (M-H, Random, 95% CI)	0.17 (0.04 to 0.76)	Not applicable
10/14d ranitidine bismuth VS. 10/14d triple	2	163	Risk Ratio (M-H, Random, 95% CI)	0.63 (0.01 to 71.90)	P = 0.02; I <sup>2</sup> =82%
10/14d levofloxacin VS. 10/14d triple	1	250	Risk Ratio (M-H, Random, 95% CI)	0.41 (0.18 to 0.94)	Not applicable
7d bismuth VS. 10/14d bismuth	1	156	Risk Ratio (M-H, Random, 95% CI)	0.14 (0.02 to 1.13)	Not applicable
10/14d concomitant VS. 10/14d bismuth	1	158	Risk Ratio (M-H, Random, 95% CI)	1.71 (0.42 to 6.91)	Not applicable
7d levofloxacin VS. 7d bismuth	1	145	Risk Ratio (M-H, Random, 95% CI)	0.17 (0.01 to 3.02)	Not applicable
10/14d ranitidine bismuth VS. 7d ranitidine bismuth	1	110	Risk Ratio (M-H, Random, 95% CI)	1.00 (0.15 to 6.85)	Not applicable

CI = confidence interval; M-H=Mantel-Haenszel (test).

See Table 1 for key of intervention regimen names and descriptions.

Fig S5.4 Assessment of publication bias-Funnel plot of analysis for headache with or without vomiting.



See Table 1 for key of intervention regimen names and descriptions.

Table S5.9 Direct and network-meta analysis results for diarrhoea

Intervention	Diarrhoea	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
<b>7d triple</b>		
7d concomitant	1.46 (0.52 to 3.14)	1.26 (0.68 to 2.34)
10/14d sequential	0.79 (0.59 to 1.03)	0.75 (0.55 to 1.02)
10/14d triple	1.03 (0.78 to 1.32)	0.95 (0.70 to 1.27)
10/14d bismuth	0.89 (0.57 to 1.36)	0.89 (0.16 to 4.85)
7d bismuth	1.35 (0.82 to 2.03)	1.44 (0.91 to 2.29)
10/14d concomitant	1.06 (0.60 to 1.67)	NA
7d probiotic	0.60 (0.40 to 0.87)	0.65 (0.36 to 1.18)
10/14d probiotic	0.36 (0.18 to 0.63)	1.50 (0.29 to 7.73)
7d ranitidine bismuth	1.12 (0.55 to 1.94)	1.20 (0.77 to 1.86)
10/14d ranitidine bismuth	0.83 (0.42 to 1.44)	NA
7d levofloxacin	0.61 (0.38 to 0.89)	0.69 (0.51 to 0.94)
10/14d levofloxacin	1.30 (0.68 to 2.19)	NA
14d hybrid	0.91 (0.25 to 2.25)	NA
<b>7d concomitant</b>		
10/14d sequential	0.67 (0.24 to 1.57)	NA
10/14d triple	0.87 (0.31 to 2.01)	NA
10/14d bismuth	0.75 (0.25 to 1.88)	NA
7d bismuth	1.14 (0.37 to 2.78)	NA
10/14d concomitant	0.89 (0.28 to 2.21)	NA
7d probiotic	0.51 (0.17 to 1.23)	NA
10/14d probiotic	0.30 (0.09 to 0.79)	NA
7d ranitidine bismuth	0.95 (0.27 to 2.46)	NA
10/14d ranitidine bismuth	0.70 (0.20 to 1.79)	NA
7d levofloxacin	0.51 (0.17 to 1.25)	NA

Intervention	Diarrhoea	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
10/14d levofloxacin	1.09 (0.33 to 2.76)	NA
14d hybrid	0.77 (0.14 to 2.38)	NA
<b>10/14d sequential</b>		
10/14d triple	1.31 (1.00 to 1.70)	1.22 (0.98 to 1.51)
10/14d bismuth	1.14 (0.69 to 1.79)	1.20 (0.17 to 8.53)
7d bismuth	1.75 (0.99 to 2.79)	NA
10/14d concomitant	1.35 (0.81 to 2.03)	1.45 (0.94 to 2.22)
7d probiotic	0.78 (0.46 to 1.21)	NA
10/14d probiotic	0.46 (0.23 to 0.82)	NA
7d ranitidine bismuth	1.45 (0.67 to 2.63)	NA
10/14d ranitidine bismuth	1.06 (0.54 to 1.85)	NA
7d levofloxacin	0.79 (0.45 to 1.25)	3.03 (0.12 to 73.51)
10/14d levofloxacin	1.66 (0.88 to 2.80)	2.00 (0.78 to 5.15)
14d hybrid	1.15 (0.34 to 2.77)	1.00 (0.39 to 2.60)
<b>10/14d triple</b>		
10/14d bismuth	0.87 (0.55 to 1.33)	0.82 (0.32 to 2.08)
7d bismuth	1.34 (0.77 to 2.12)	NA
10/14d concomitant	1.04 (0.60 to 1.62)	0.86 (0.30 to 2.48)
7d probiotic	0.60 (0.36 to 0.92)	NA
10/14d probiotic	0.35 (0.19 to 0.59)	0.46 (0.34 to 0.64)
7d ranitidine bismuth	1.11 (0.52 to 2.00)	NA
10/14d ranitidine bismuth	0.81 (0.44 to 1.34)	0.72 (0.41 to 1.25)
7d levofloxacin	0.61 (0.35 to 0.94)	NA
10/14d levofloxacin	1.27 (0.70 to 2.07)	1.16 (0.74 to 1.82)
14d hybrid	0.89 (0.25 to 2.20)	NA
<b>10/14d bismuth</b>		

Intervention	Diarrhoea	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
7d bismuth	1.59 (0.82 to 2.64)	0.72 (0.28 to 1.87)
10/14d concomitant	1.24 (0.62 to 2.15)	0.75 (0.17 to 3.27)
7d probiotic	0.71 (0.37 to 1.20)	NA
10/14d probiotic	0.42 (0.19 to 0.80)	NA
7d ranitidine bismuth	1.33 (0.55 to 2.57)	NA
10/14d ranitidine bismuth	0.97 (0.44 to 1.83)	NA
7d levofloxacin	0.72 (0.36 to 1.24)	NA
10/14d levofloxacin	1.52 (0.70 to 2.78)	NA
14d hybrid	1.07 (0.27 to 2.87)	NA
<b>7d bismuth</b>		
10/14d concomitant	0.82 (0.40 to 1.51)	NA
7d probiotic	0.47 (0.25 to 0.83)	NA
10/14d probiotic	0.28 (0.12 to 0.56)	NA
7d ranitidine bismuth	0.87 (0.37 to 1.73)	NA
10/14d ranitidine bismuth	0.64 (0.29 to 1.28)	NA
7d levofloxacin	0.47 (0.25 to 0.83)	0.30 (0.01 to 6.10)
10/14d levofloxacin	1.01 (0.45 to 1.95)	NA
14d hybrid	0.71 (0.18 to 1.86)	NA
<b>10/14d concomitant</b>		
7d probiotic	0.61 (0.31 to 1.11)	NA
10/14d probiotic	0.36 (0.16 to 0.72)	NA
7d ranitidine bismuth	1.13 (0.46 to 2.31)	NA
10/14d ranitidine bismuth	0.83 (0.37 to 1.65)	NA
7d levofloxacin	0.62 (0.30 to 1.12)	NA
10/14d levofloxacin	1.30 (0.60 to 2.52)	NA
14d hybrid	0.90 (0.24 to 2.35)	NA

Intervention	Diarrhoea	
	Network-meta analysis risk ratio (95% CrI)	Direct comparison risk ratio (95% CI)
<b>7d probiotic</b>		
10/14d probiotic	0.62 (0.28 to 1.20)	3.20 (0.60 to 17.18)
7d ranitidine bismuth	1.94 (0.84 to 3.73)	NA
10/14d ranitidine bismuth	1.43 (0.65 to 2.74)	NA
7d levofloxacin	1.05 (0.56 to 1.78)	NA
10/14d levofloxacin	2.24 (1.03 to 4.19)	NA
14d hybrid	1.57 (0.41 to 4.13)	NA
<b>10/14d probiotic</b>		
7d ranitidine bismuth	3.47 (1.27 to 7.46)	NA
10/14d ranitidine bismuth	2.51 (1.05 to 5.14)	NA
7d levofloxacin	1.89 (0.82 to 3.73)	NA
10/14d levofloxacin	3.95 (1.64 to 7.93)	NA
14d hybrid	2.79 (0.66 to 7.74)	NA
<b>7d ranitidine bismuth</b>		
10/14d ranitidine bismuth	0.81 (0.33 to 1.72)	1.50 (0.26 to 8.63)
7d levofloxacin	0.60 (0.26 to 1.20)	NA
10/14d levofloxacin	1.28 (0.50 to 2.74)	NA
14d hybrid	0.89 (0.21 to 2.48)	NA
<b>10/14d ranitidine bismuth</b>		
7d levofloxacin	0.81 (0.35 to 1.58)	NA
10/14d levofloxacin	1.70 (0.72 to 3.39)	NA
14d hybrid	1.20 (0.29 to 3.24)	NA
<b>7d levofloxacin</b>		
10/14d levofloxacin	2.23 (1.02 to 4.26)	NA
14d hybrid	1.56 (0.40 to 4.14)	NA
<b>10/14d levofloxacin</b>		



<b>Intervention</b>	<b>Diarrhoea</b>	
	<b>Network-meta analysis risk ratio (95% CrI)</b>	<b>Direct comparison risk ratio (95% CI)</b>
14d hybrid	0.76 (0.19 to 2.04)	NA

CrI=credible interval; CI=confidence interval; NA=not applicable.  
See Table 1 for key of intervention regimen names and descriptions.

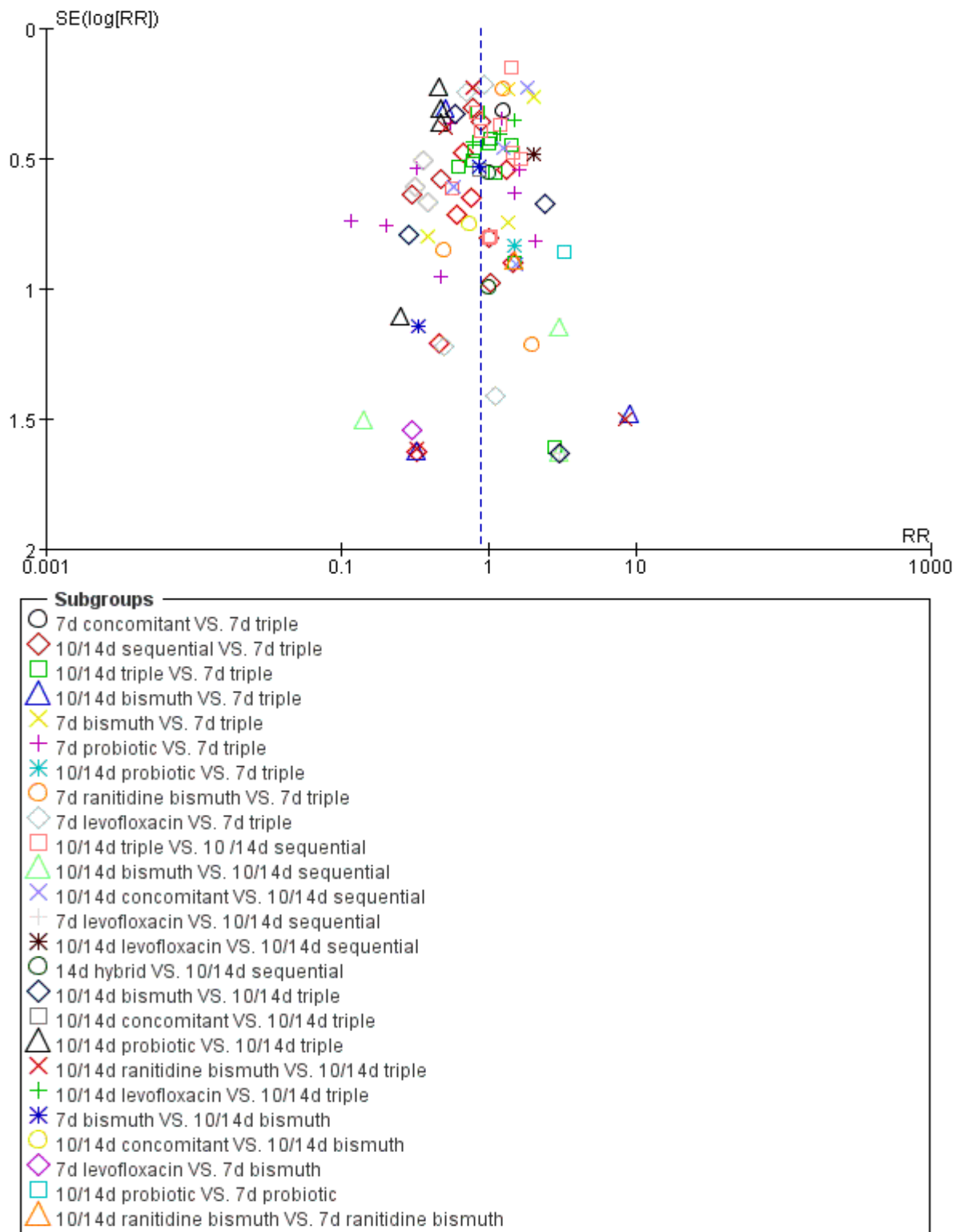
Table S5.10 Traditional meta-analysis results

	<b>Studies</b>	<b>Participants</b>	<b>Statistical Method</b>	<b>Effect Estimate</b>	<b>Heterogeneity</b>
7d concomitant VS. 7d triple	1	110	Risk Ratio (M-H, Random, 95% CI)	1.26 (0.68 to 2.34)	Not applicable
10/14d sequential VS. 7d triple	13	3223	Risk Ratio (M-H, Random, 95% CI)	0.75 (0.55 to 1.02)	P = 0.95; I <sup>2</sup> =0%
10/14d triple VS. 7d triple	11	3083	Risk Ratio (M-H, Random, 95% CI)	0.95 (0.70 to 1.27)	P = 0.99; I <sup>2</sup> =0%
10/14d bismuth VS. 7d triple	3	747	Risk Ratio (M-H, Random, 95% CI)	0.89 (0.16 to 4.85)	P = 0.14; I <sup>2</sup> =48%
7d bismuth VS. 7d triple	4	576	Risk Ratio (M-H, Random, 95% CI)	1.44 (0.91 to 2.29)	P = 0.22; I <sup>2</sup> =33%
7d probiotic VS. 7d triple	9	2050	Risk Ratio (M-H, Random, 95% CI)	0.65 (0.36 to 1.18)	P = 0.01; I <sup>2</sup> =59%
10/14d probiotic VS. 7d triple	1	30	Risk Ratio (M-H, Random, 95% CI)	1.50 (0.29 to 7.73)	Not applicable
7d ranitidine bismuth VS. 7d triple	3	522	Risk Ratio (M-H, Random, 95% CI)	1.20 (0.77 to 1.86)	P = 0.53; I <sup>2</sup> =0%
7d levofloxacin VS. 7d triple	7	1845	Risk Ratio (M-H, Random, 95% CI)	0.69 (0.51 to 0.94)	P = 0.38; I <sup>2</sup> =6%
10/14d triple VS. 10 /14d sequential	10	2841	Risk Ratio (M-H, Random, 95% CI)	1.22 (0.98 to 1.51)	P = 0.71; I <sup>2</sup> =0%
10/14d bismuth VS. 10/14d sequential	4	1011	Risk Ratio (M-H, Random, 95% CI)	1.20 (0.17 to 8.53)	P = 0.22; I <sup>2</sup> =34%
10/14d concomitant VS. 10/14d sequential	4	903	Risk Ratio (M-H, Random, 95% CI)	1.45 (0.94 to 2.22)	P = 0.35; I <sup>2</sup> =10%
7d levofloxacin VS. 10/14d sequential	1	229	Risk Ratio (M-H, Random, 95% CI)	3.03 (0.12 to 73.51)	Not applicable
10/14d levofloxacin VS. 10/14d sequential	1	230	Risk Ratio (M-H, Random, 95% CI)	2.00 (0.78 to 5.15)	Not applicable
14d hybrid VS. 10/14d sequential	2	600	Risk Ratio (M-H, Random, 95% CI)	1.00 (0.39 to 2.60)	P = 1.00; I <sup>2</sup> =0%
10/14d bismuth VS. 10/14d triple	4	959	Risk Ratio (M-H, Random, 95% CI)	0.82 (0.32 to 2.08)	P = 0.13; I <sup>2</sup> =47%
10/14d concomitant VS. 10/14d triple	1	246	Risk Ratio (M-H, Random, 95% CI)	0.86 (0.30 to 2.48)	Not applicable
10/14d probiotic VS. 10/14d triple	4	442	Risk Ratio (M-H, Random, 95% CI)	0.46 (0.34 to 0.64)	P = 0.95; I <sup>2</sup> =0%
10/14d ranitidine bismuth VS. 10/14d triple	4	549	Risk Ratio (M-H, Random, 95% CI)	0.72 (0.41 to 1.25)	P = 0.27; I <sup>2</sup> =24%
10/14d levofloxacin VS. 10/14d triple	3	554	Risk Ratio (M-H, Random, 95% CI)	1.16 (0.74 to 1.82)	P = 0.51; I <sup>2</sup> =0%
7d bismuth VS. 10/14d bismuth	2	316	Risk Ratio (M-H, Random, 95% CI)	0.72 (0.28 to 1.87)	P = 0.45; I <sup>2</sup> =0%
10/14d concomitant VS. 10/14d bismuth	1	200	Risk Ratio (M-H, Random, 95% CI)	0.75 (0.17 to 3.27)	Not applicable
7d levofloxacin VS. 7d bismuth	1	145	Risk Ratio (M-H, Random, 95% CI)	0.30 (0.01 to 6.10)	Not applicable
10/14d probiotic VS. 7d probiotic	1	47	Risk Ratio (M-H, Random, 95% CI)	3.20 (0.60 to 17.18)	Not applicable
10/14d ranitidine bismuth VS. 7d ranitidine bismuth	1	110	Risk Ratio (M-H, Random, 95% CI)	1.50 (0.26 to 8.63)	Not applicable

CI=confidence interval; M-H=Mantel-Haenszel (test).

See Table 1 for key of intervention regimen names and descriptions.

Fig S5.5 Assessment of publication bias-Funnel plot of analysis of patients experiencing diarrhoea



See Table 1 for key of intervention regimen names and descriptions.