

Appendix: Supplementary data [posted as supplied by authors]

Electronic search strategy (MEDLINE).

1. exp Intensive Care/
2. exp Intensive Care Units/
3. exp Critical Care/
4. exp Critical Illness/
5. exp Respiration, Artificial/
6. exp Ventilators, Mechanical/
7. 1 or 2 or 3 or 4 or 5 or 6
8. exp Anti-Bacterial Agents/
9. exp Antibiotic Prophylaxis/
10. exp Amphotericin B/
11. exp Polymyxins/
12. exp Tobramycin/
13. exp Cefotaxime/
14. exp Antisepsis/
15. chlorhexidine.mp. or exp Chlorhexidine/
16. 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15
17. exp Death/ or death.mp.
18. mortality.mp. or exp Hospital Mortality/ or exp Mortality/
19. 17 or 18
19. 7 and 16 and 19
21. (gut adj2 decont\$).mp. [mp=title, abstract, original title, name of substance word, subject heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]
22. (oral adj2 decont\$).mp. [mp=title, abstract, original title, name of substance word, subject heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]
23. (digestive adj2 decont\$).mp. [mp=title, abstract, original title, name of substance word, subject heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]
24. (orophar\$ adj2 decont\$).mp. [mp=title, abstract, original title, name of substance word, subject heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]

25. (oral adj2 antisept\$).mp. [mp=title, abstract, original title, name of substance word, subject heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]
26. (orophar\$ adj2 antisept\$).mp. [mp=title, abstract, original title, name of substance word, subject heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]
27. 21 or 22 or 23 or 24 or 25 or 26
28. 20 or 27
29. randomly.ab.
30. randomised.ab.
31. randomized.ab.
32. Clinical Trials as Topic/
33. randomized controlled trial.pt.
34. controlled clinical trial.pt.
35. trial.ti
36. 29 or 30 or 31 or 32 or 33 or 34 or 35
37. 28 and 36
29. limit 37 to yr="1984 - Current"

Approach to studies with a 3 arm design.

Two control groups were used in the studies of Aerdt³¹ and Bergmans⁴⁴; these were combined as one. Palomar³⁷ used two intervention arms: SDD (with rantidine), and sucralfate alone; only the control and SDD groups were used. Verwaest⁴² used two treatment arms: one with polymyxin-tobramycin-amphotericin and IV cefotaxime, and one with ofloxacin-amphotericin and IV ofloxacin. Only the ofloxacin-amphotericin treatment group was included, since this was the only group for which intention to treat data was available¹² This approach to these four studies is the same as that adopted by the Cochrane group.¹²

Scannapieco⁵⁶ applied chlorhexidine either once or twice per day and we combined these as a single intervention group, this approach has been taken by others.^{14,15} Munro⁵⁴ used a two by two design around chlorhexidine and mechanical toothbrushing; since there was no effect of mechanical toothbrushing, we collapsed these groups to consider them as chlorhexidine or no chlorhexidine. Berry⁴⁸ had one group who received chlorhexidine, one bicarbonate and one control. We combined the bicarbonate and control group as a single control group; bicarbonate having been used as a control group in another included study.⁵⁰ These data were all obtained by communication with the respective authors and are presented below:

Berry⁴⁸	Deaths	Total
Control	17	78
Bicarbonate	13	76
Chlorhexidine	17	71
Munro⁵⁴	Deaths	Total
Control	23	137
Chlorhexidine	34	138
Toothbrushing	24	135
Chlorhexidine + Toothbrushing	35	137
Scannapieco⁵⁶	Deaths	Total
Control	9	59
Chlorhexidine once per day	11	58
Chlorhexidine twice per day	8	58

Table A: Raw Outcome Data

SDD Study (1st Author)	Experimental Deaths	Total	Control Deaths	Total	Data Source
Aerdt ³¹	4	28	12	60	Previous communication with authors ¹²
Blair ³²	24	161	32	170	Published paper
Boland ³³	2	32	4	32	Previous communication with authors ¹²
Cockerill ³⁴	8	75	14	75	Published paper
De Jonge ¹⁸	69	466	107	468	Published paper
De Smet ^{19*}	Adjusted values used				Published paper
Jacobs ³⁵	14	45	23	46	Published paper
Kreuger ³⁶	52	265	75	262	Published paper
Palomar ³⁷	14	50	14	49	Previous communication with authors ¹²
Rocha ³⁸	27	74	40	77	Previous communication with authors ¹²
Sanchez-Garcia ³⁹	51	131	66	140	Published paper
Stoutenbeek ⁴⁰	42	201	44	200	Published paper
Ulrich ⁴¹	22	55	33	57	Previous communication with authors ¹²
Verwaest ⁴²	47	220	40	220	Previous communication with authors ¹²
Winter ⁴³	33	91	40	92	Published paper
SOD Study (1st Author)	Experimental Deaths	Total	Control Deaths	Total	Data Source
Bergmans ⁴⁴	25	87	53	139	Published paper
De Smet ^{19*}	Adjusted values used				Published paper
Pugin ⁴⁵	10	38	11	41	Previous communication with authors ¹²
Rios ⁴⁶	18	47	21	49	Published paper
Chlorhexidine (1st Author)	Experimental Deaths	Total	Control Deaths	Total	Data Source
Bellissimo-Rodrigues ⁴⁷	35	98	33	96	Published paper
Berry ⁴⁸	17	71	28	154	Our communication with author
Cabov ⁴⁹	1	30	3	30	Published paper
Fourrier 2000 ⁵⁰	3	30	7	30	Published paper
Fourrier 2005 ⁵¹	31	114	24	114	Published paper
Koeman ⁵²	49	127	39	130	Previous communication with authors ¹³
MacNaughton ⁵³	29	101	29	93	Previous communication with authors ¹³
Munro ⁵⁴	69	275	47	272	Our communication with author
Panchabhai ⁵⁵	78	224	70	247	Published paper
Scannapieco ⁵⁶	19	116	9	59	Our communication with author
Tantipong ⁵⁷	36	102	37	105	Published paper