

Appendix A

Search strategy

Literature searches were run using the OvidSP search platform in the following databases: MEDLINE, Embase, and Cochrane Central Register of Controlled Trials. We retrieved a total of 2011 references. All references were saved in an EndNote library, which was used to identify the 131 duplicates. We reviewed the remaining 1880 unique references against our inclusion criteria. The following tables record the search strategies and terms used.

MEDLINE

The search strategy for OvidSP MEDLINE (1946 to May Week 3 2012) retrieved 573 references. We used a combination of MeSH and free-text terms as follows:

Set	History	Results	Comments
1	Probiotics/ or probiotic*.mp.	338 752	Probiotics terms
2	or exp Lactobacillaceae/ or exp Saccharomyces/ or exp Actinobacteria/ or exp Streptococcus/ or exp Clostridium/ or exp Bacillus/ and tu.fs.	25 039	Probiotics therapeutic use subheading terms
3	1 or 2		
4	Clostridium difficile/ or exp Diarrhea/ci, co, pc	13 418	C-difficile diarrhea terms
5	3 and 4	1 318	Base clinical set terms
6	clinical trial.pt. or clinical trials as topic/ or clinical trial, phase i.pt. or clinical trials, phase i as topic/ or clinical trial, phase ii.pt. or clinical trials, phase ii as topic/ or clinical trial, phase iii.pt. or clinical trials, phase iii as topic/ or clinical trial, phase iv.pt. or clinical trials, phase iv as topic/ or controlled clinical trial.pt. or controlled clinical trials as topic/ or meta analysis.pt. or meta analysis as topic/ or multicentre study.pt. or multicenter studies as topic/ or randomized controlled trial.pt. or randomized controlled trials as topic/ or ((clin: adj 5 trial:) or ((singl: or doubl: or tripl: or trebl:)) and (mask: or blind:)),ti,ab. or ((random: adj5 trial:) or rct or rcts).ti,ab. (855826)	855 826	Clinical trials search filter
7	5 and 6	280	Trials results
8	(consensus development conference or consensus development conference, nih or guideline or practice guideline).pt. or guideline/ or practice guideline/ or advance directive adherence/ or guideline adherence/ or clinical protocols/ or antineoplastic protocols/ or nursing process/ or patient care planning/ or advance care planning/ or advance directives/ or living wills/ or critical pathways/ or patient- centered care/ or "consensus development conference".pt. or (guideline: or (standard adj2 care) or consensus).mp.	378 065	Guidelines quality filter
9	7 and 8	58	Guideline results
10	cohort studies/ or longitudinal studies/ or follow-up studies/ or prospective studies/ or case-control studies/ or retrospective studies/ or prognosis/ or disease-free survival/ or medical futility/ or pregnancy outcome/ or treatment outcome/ or treatment failure/ or disease progression/ or morbidity/ or incidence/ or prevalence/ or mortality/ or "cause of death"/ or child mortality/ or fatal outcome/ or fetal mortality/ or hospital mortality/ or infant mortality/ or maternal mortality/ or perinatal mortality/ or survival rate/ or survival analysis/ or disease-free survival/ or natural history.mp.	2 262 637	Prognosis quality filter
11	7 and 10	467	Prognosis results
12	7 or 9 or 11	654	All study designs
13	limit 12 to ("adult (19 to 44 years)" or "middle aged (45 plus years)" or "all aged (65 and over)" or "aged (80 and over)")	311	Adult studies
14	limit 12 to "all child (0 to 18 years)"	147	Pediatric studies
15	12 not (13 or 14)	262	Non-age-specified studies
16	13 or 15	573	Final results

Appendix A continued

Embase

The search strategy for OvidSP EMBASE (1980 to 2012 Week 21) retrieved 1185 references. We used a combination of Embase and free-text terms as follows:

Set	History	Results	Comments
1	probiotic agent/ or probiotic*.mp. or lactobacillales/ or exp enterococcaceae/ or exp lactobacillaceae/ or exp streptococcaceae/ or exp saccharomycetales/ or exp Actinobacteria/ or exp Streptococcaceae/ or exp clostridia/ or exp bacilli/	575 874	Probiotics terms
2	Clostridium difficile/ or diarrhea/ or acute diarrhea/ or bloody diarrhea/ or chronic diarrhea/ or infectious diarrhea/ /	138 527	C-difficile diarrhea terms
3	1 and 2	14 860	Base clinical set terms
4	ct.fs. or clinical trial/ or phase 1 clinical trial/ or phase 2 clinical trial/ or phase 3 clinical trial/ or phase 4 clinical trial/ or controlled clinical trial/ or meta analysis/ or multicenter study/ or randomized controlled trial/ or outcomes research/ or ((clin adj10 trial:) or ((singl: or doubl: or tripl: or trebl:) and (random: or blind: or mask:)) or (sham or placebo: or multicenter: or multicentre: or metaanalys:) or (meta adj2 analys:)). mp.)	1 225 354	Clinical trials search filter
5	3 and 4	3 030	Trials results
6	practice guideline/ or consensus development/ or good clinical practice/ or nursing care plan/ or clinical pathway/ or (guideline: or (standard adj2 care) or consensus).mp.	452 501	Guidelines quality filter
7	3 and 6	699	Guideline results
8	cohort analysis/ or longitudinal study/ or prospective study/ or case control study/ or hospital based case control study/ or population based case control study/ or retrospective study/ or cancer recurrence/ or cancer regression/ or cancer relapse/ or disease duration/ or disease exacerbation/ or prognosis/ or recurrent disease/ or reinfection/ or relapse/ or remission/ or tumor recurrence/ or tumor regression/ or survival/ or cancer survival/ or disease free survival/ or overall survival/ or survival rate/ or survival time/ or incidence/ or cancer incidence/ or familial incidence/ or morbidity/ or maternal morbidity/ or perinatal morbidity/ or newborn morbidity/ or mortality/ or cancer mortality/ or childhood mortality/ or embryo mortality/ or fetus mortality/ or infant mortality/ or maternal mortality/ or prenatal mortality/ or surgical mortality/ or perinatal mortality/ or newborn mortality/ or death/ or "cause of death"/ or dying/ or heart death/ or sudden death/ or child death/ or newborn death/ or prevalence/ or treatment outcome/ or disease free interval/ or treatment failure/ or drug treatment failure/ or (natural adj2 history).mp.	2 841 321	Prognosis quality filter
9	3 and 8	786	Prognosis results
10	5 or 7 or 9	4 089	All study designs
11	limit 46 to (adult <18 to 64 years> or aged <65+ years>)	1 185	Adult studies - final results

Evidenced-based medicine reviews: Cochrane Central Register of Controlled Trials

The search strategy for OvidSP EBM Reviews - CCTR (May 2012) retrieved 253 references. This database consists exclusively of RCTs; no study design terms were used. We used a combination of primarily MeSH and free-text terms as follows:

Set	History	Results	Comments
1	Probiotics/ or probiotic*.mp. or exp Lactobacillaceae/ or exp Saccharomyces/ or exp Actinobacteria/ or exp Streptococcus/ or exp Clostridium/ or exp Bacillus/	3414	Probiotics terms
2	Clostridium difficile/ or exp Diarrhea/	2140	C-difficile diarrhea terms
3	1 and 2	253	Final set