**Search Strategies Methods Section**

An experienced health sciences librarian (Ms. Blevins) ran extensive literature searches in MEDLINE via Ovid, Cochrane Database of Systematic Reviews via Wiley (CDSR), Database of Abstracts of Reviews of Effects via Wiley (DARE), Cochrane Central Register of Controlled Trials via Wiley (CENTRAL), NHSEED via Wiley, Scopus, and Web of Science. Some terms included subject headings and keywords for vancomycin resistance, enterococcus, adverse events, incidence, prevalence, and economics. The original searches were run in 10/16/2014 and then re-run in 6/8/2015 to identify recent studies. Limits for language, sex, age, etc. were not applied to the searches, but studies published prior to 2000 were excluded. Search terms included subject headings and keywords for vancomycin resistance, enterococcus, adverse events, incidence, prevalence, and economics. The search hedge used for economics is the NHS Economic Evaluation Database Filter published in <http://www.cadth.ca/media/pdf/H0490_Search_Filters_for_Economic_Evaluations_mg_e.pdf>**.** Full search strategies from all databases are listed below.

**Adverse Effects Searches**

**MEDLINE via Ovid** (Run on October 8, 2014, 3680 results. Rerun June 8, 2015, 3952 results)

1. (Vancomycin resistant enterococc\* or VRE).tw.
2. exp Vancomycin Resistance/ and exp Enterococcus/
3. 1 or 2
4. exp Vancomycin/
5. (vancomycin or Vancocin or Vancocine).tw.
6. 4 or 5
7. exp Drug Resistance, Bacterial/
8. (Resistan\* or Nonsusceptab\*).tw.
9. 7 or 8
10. Enterococc\*.tw. OR exp Enterococcus/
11. 4 and 6 and 10
12. 3 or 11
13. exp morbidity/ or exp mortality/
14. exp Epidemiology/
15. exp Epidemiologic Studies/
16. (ae or co or de or ct).fs.
17. (adverse adj2 (effect or effects or reaction or reactions or event or events or outcome or outcomes)).tw.
18. (morbidit\* or mortalit\* or incidence or prevalence or "length of stay" or readmission or readmit\* or "cause of death" or "fatal outome\*" or survival or safe or safety or "side effect\*" or "undesirable effect\*" or "treatment emergent" or tolerability or toxicity or adrs).tw.
19. (occur\* or frequenc\* or proportion\* or rate\* or number\* or percent\*).ti,ab.
20. exp "Length of Stay"/
21. exp Patient Readmission/
22. or/13-21
23. 12 and 22
24. limit 23 to yr="2000 -Current"
25. limit 24 to animals
26. limit 24 to humans
27. 25 and 26
28. 25 not 27
29. 24 not 28

**CINAHL via EBSCO** (Run on October 8, 2014, 648 results. Rerun on June 8, 2015, 930 results)

1. MH "Morbidity+" OR MH "Mortality+" OR MH "Epidemiological Research+" OR MH "Epidemiology+" OR MH "Length of Stay" OR MH "Readmission"
2. MW “ae” OR MW “co” OR MW “ct” OR MW “de”
3. adverse N2 (effect OR effects OR reaction OR reactions OR event OR events OR outcome OR outcomes)
4. morbidit\* OR mortalit\* OR incidence OR prevalence OR “length of stay” OR readmission OR readmit\* OR “cause of death” OR “fatal outome\*” OR survival OR safe OR safety OR side effect\* OR “undesirable effect\*” OR “treatment emergent” OR tolerability OR toxicity OR adrs
5. TI ( occur\* OR frequenc\* OR proportion\* OR rate\* OR number\* OR percent\* ) OR AB ( occur\* OR frequenc\* OR proportion\* OR rate\* OR number\* OR percent\* )
6. S1 OR S2 OR S3 OR S4 OR S5
7. “Vancomycin resistant enterococc\*” OR VRE
8. (MH "Vancomycin Resistance")  AND (MH "Enterococcus+")
9. S7 OR S8
10. (MH "Vancomycin")
11. vancomycin OR Vancocin OR Vancocine
12. S10 OR S11
13. (MH "Drug Resistance, Microbial+")
14. Resistan\* OR Nonsusceptab\*
15. S13 or S14
16. Enterococc\* OR (MH "Enterococcus+")
17. S12 and S15 and S16
18. S9 OR S17
19. S6 AND S18

**Cochrane Library via Wiley** (Run on October 8, 2014, CDSR 2, DARE 3, CENTRAL 62. Rerun on June 8, 2015, CDSR 1, DARE 3, CENTRAL 86)

1. MeSH descriptor: [Morbidity] explode all trees
2. MeSH descriptor: [Mortality] explode all trees
3. MeSH descriptor: [Epidemiology] explode all trees
4. MeSH descriptor: [Epidemiologic Studies] explode all trees
5. MeSH descriptor: [Length of Stay] explode all trees
6. MeSH descriptor: [Patient Readmission] explode all trees
7. adverse near/2 (effect or effects or reaction or reactions or event or events or outcome or outcomes):ti,ab,kw (Word variations have been searched)
8. morbidit\* or mortalit\* or incidence or prevalence or "length of stay" or readmission or readmit\* or "cause of death" or "fatal outome\*" or survival or safe or safety or "side effect\*" or "undesirable effect\*" or "treatment emergent" or tolerability or toxicity or adrs:ti,ab,kw (Word variations have been searched)
9. (occur\* or frequenc\* or proportion\* or rate\* or number\* or percent\*):ti or (occur\* or frequenc\* or proportion\* or rate\* or number\* or percent\*):ab (Word variations have been searched)
10. #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9
11. "Vancomycin resistant enterococc\*" or VRE:ti,ab,kw (Word variations have been searched)
12. MeSH descriptor: [Vancomycin Resistance] explode all trees
13. MeSH descriptor: [Enterococcus] explode all trees
14. #12 AND #13
15. #11 OR #14
16. MeSH descriptor: [Vancomycin] explode all trees
17. vancomycin or Vancocin or Vancocine:ti,ab,kw (Word variations have been searched)
18. #16 OR #17
19. MeSH descriptor: [Drug Resistance, Microbial] explode all trees
20. Resistan\* or Nonsusceptab\*:ti,ab,kw (Word variations have been searched)
21. #19 OR #20
22. Enterococc\*:ti,ab,kw (Word variations have been searched)
23. MeSH descriptor: [Enterococcus] explode all trees
24. #22 OR #23
25. #18 AND #21 AND #24
26. #25 OR #15
27. #10 AND #26

**Web of Science** (All searches run in Topic Search. Run on October 10, 2014, 2951 results. Run on June 10, 2015, 3719 results.)

1. "Vancomycin resistant enterococc\*" or VRE
2. vancomycin or Vancocin or Vancocine

AND

Resistan\* or Nonsusceptab\*

AND

Enterococc\*

1. 1 OR 2
2. adverse Near/2 (effect or effects or reaction or reactions or event or events or outcome or outcomes)

OR

 morbidit\* or mortalit\* or incidence or prevalence or “length of stay” or readmission or readmit\* or “cause of death” or “fatal outome\*” OR survival OR safe or safety or “side effect\*” or “undesirable effect\*” or “treatment emergent” or tolerability or toxicity or adrs

OR

(occur\* OR frequenc\* OR proportion\* OR rate\* OR number\* OR percent\*)

1. 3 AND 4

**Scopus** (Run on October 10, 2014, 4723 results. Rerun June 10, 2015, 5915 results.)

1. (adverse W/2 (effect or effects or reaction or reactions or event or events or outcome or outcomes)) OR (morbidit\* or mortalit\* or incidence or prevalence or “length of stay” or readmission or readmit\* or “cause of death” or “fatal outome\*” OR survival OR safe or safety or “side effect\*” or “undesirable effect\*” or “treatment emergent” or tolerability) OR toxicity or adrs
2. (occur\* OR frequenc\* OR proportion\* OR rate\* OR number\* OR percent\*) – in title abstract only
3. 1 OR 2
4. "Vancomycin resistant enterococc\*" or VRE
5. vancomycin or Vancocin or Vancocine

AND

Resistan\* or Nonsusceptab\*

AND

Enterococc\*

1. 4 OR 5
2. 3 AND 6

**Economics Searches**

**Ovid MEDLINE** (Run on October 8, 2014, 208 results. Rerun June 8, 2015, 244 results.)

1. (Vancomycin resistant enterococc\* or VRE).tw.
2. exp Vancomycin Resistance/ and exp Enterococcus/
3. 1 or 2
4. exp Vancomycin/
5. (vancomycin or Vancocin or Vancocine).tw.
6. 4 or 5
7. exp Drug Resistance, Bacterial/
8. (Resistan\* or Nonsusceptab\*).tw.
9. 7 or 8
10. Enterococc\*.tw. or exp Enterococcus/
11. 6 and 9 and 10
12. 3 or 11
13. economics/
14. exp "costs and cost analysis"/
15. economics, dental/
16. exp "economics, hospital"/
17. economics, medical/
18. economics, nursing/
19. economics, pharmaceutical/
20. (economic$ or cost or costs or costly or costing or price or prices or pricing or pharmacoeconomic$).ti,ab.
21. (expenditure$ not energy).ti,ab.
22. (value adj1 money).ti,ab.
23. budget$.ti,ab.
24. or/13-23
25. ((energy or oxygen) adj cost).ti,ab.
26. (metabolic adj cost).ti,ab.
27. ((energy or oxygen) adj expenditure).ti,ab.
28. or/25-27
29. 24 not 28
30. 12 and 29
31. limit 30 to yr="2000 -Current"
32. limit 31 to animals
33. limit 31 to humans
34. 32 and 33
35. 32 not 34
36. 31 not 35

**CINAHL via EBSCO** (Run on October 8, 2014, 230 results. Rerun on June 10, 2015, 281 results.)

1. MH "Economics+" OR MH "Costs and Cost Analysis+"
2. Economic\* or cost or costs or costly or costing or price or prices or pricing or pharmacoeconomic\* [have to use title field and also OR with the abstract field]
3. expenditure\* not energy [have to use title field and also OR with the abstract field]
4. value N1 money [search in title or abstract)
5. budget\* (Search in Title or Abstract)
6. S1 OR S2 OR S3 OR S4 OR S5
7. “Energy cost\*” OR “oxygen cost\*” OR “metabolic cost\*” OR “Energy expenditure\*” OR “oxygen expenditure\*”
8. S6 NOT S7
9. Vancomycin resistant enterococc\* OR VRE
10. (MH "Vancomycin Resistance")  AND (MH "Enterococcus+")
11. S9 OR S10
12. (MH "Vancomycin")
13. vancomycin OR Vancocin OR Vancocine
14. S12 OR S13
15. (MH "Drug Resistance, Microbial+")
16. Resistan\* OR Nonsusceptab\*
17. S15 OR S16
18. Enterococc\* OR (MH "Enterococcus+")
19. S14 AND S17 AND S18
20. S11 OR S19
21. S8 AND S20

**Cochrane Library via Wiley** (Run on October 8, 2014, CDSR 1, DARE 0, CENTRAL, 10 results. Rerun on June 10, 2015, CDSR 0, DARE 0, CENTRAL 10 results.)

1. MeSH descriptor: [Economics] explode all trees
2. MeSH descriptor: [Costs and Cost Analysis] explode all trees
3. Economic\* or cost or costs or costly or costing or price or prices or pricing or pharmacoeconomic\* OR ( expenditure\* not energy)
4. value near/2 money
5. budget\*
6. #1 OR #2 OR #3 OR #4 OR #5
7. “Energy cost\*” OR “oxygen cost\*” OR “metabolic cost\*” OR “Energy expenditure\*” OR “oxygen expenditure\*”
8. #6 NOT 7
9. "Vancomycin resistant enterococc\*" or VRE:ti,ab,kw (Word variations have been searched)
10. MeSH descriptor: [Vancomycin Resistance] explode all trees
11. MeSH descriptor: [Enterococcus] explode all trees
12. #10 AND #11
13. #9 OR #12
14. MeSH descriptor: [Vancomycin] explode all trees
15. vancomycin or Vancocin or Vancocine:ti,ab,kw (Word variations have been searched)
16. #14 OR #15
17. MeSH descriptor: [Drug Resistance, Microbial] explode all trees
18. Resistan\* or Nonsusceptab\*:ti,ab,kw (Word variations have been searched)
19. #17 OR #18
20. Enterococc\*:ti,ab,kw (Word variations have been searched)
21. MeSH descriptor: [Enterococcus] explode all trees
22. #20 OR #21
23. #16 AND #19 AND #22
24. #13 OR #23
25. #8 AND #24

**NHS EED** (Run on October 8, 2014, 5 result found. Rerun on June 10, 2015, 5 results)

1. "Vancomycin resistant enterococc\*" or VRE:ti,ab,kw (Word variations have been searched)
2. MeSH descriptor: [Vancomycin Resistance] explode all trees
3. MeSH descriptor: [Enterococcus] explode all trees
4. #2 AND #3
5. #1 OR #4
6. MeSH descriptor: [Vancomycin] explode all trees
7. vancomycin or Vancocin or Vancocine:ti,ab,kw (Word variations have been searched)
8. #6 OR #7
9. MeSH descriptor: [Drug Resistance, Microbial] explode all trees
10. Resistan\* or Nonsusceptab\*:ti,ab,kw (Word variations have been searched)
11. #9 OR #10
12. Enterococc\*:ti,ab,kw (Word variations have been searched)
13. MeSH descriptor: [Enterococcus] explode all trees
14. #12 OR #13
15. #8 AND #11 AND #14
16. #5 OR #15

**Web of Science Economics** (All searches run in Topics Search. Run on October 16, 2014, 283 results. Rerun on June 10, 2015, 352 results.)

1. ((Economic\* or cost or costs or costly or costing or price or prices or pricing or pharmacoeconomic\* OR (expenditure\* not energy) OR (value Near/2 money) OR budget\*)) NOT (“Energy cost\*” OR “oxygen cost\*” OR “metabolic cost\*” OR “Energy expenditure\*” OR “oxygen expenditure\*”)
2. "Vancomycin resistant enterococc\*" or VRE
3. (vancomycin or Vancocin or Vancocine) AND (Resistan\* or Nonsusceptab\*) AND

Enterococc\*

1. 2 OR 3
2. 1 AND 4

**Scopus Economics Search** (Run on October 16, 2014, 602 results. Rerun on June 10, 2015, 747 results.)

1. (Economic\* or cost or costs or costly or costing or price or prices or pricing or pharmacoeconomic\* OR budget\* OR (expenditure\* not energy) OR (value W/2 money)) NOT (“Energy cost\*” OR “oxygen cost\*” OR “metabolic cost\*” OR “Energy expenditure\*” OR “oxygen expenditure\*”)
2. "Vancomycin resistant enterococc\*" or VRE
3. (vancomycin or Vancocin or Vancocine) AND (Resistan\* or Nonsusceptab\*) AND Enterococc\*
4. 2 OR 3
5. 1 AND 4