

Appendix B

Basically, we used the same search strategy for all databases. But due to different thesauri and syntaxes the search strategy had to be amended to fit with the requirements of each database. Within this appendix the search strategies for all databases are listed.

Medline and Embase

This was the baseline search strategy. This strategy was used to derive the search strategies for all other databases.

- 1 interact*.mp
- 2 coinfect*.mp
- 3 parallel.mp
- 4 simultaneous*2.mp
- 5 coexist*.mp
- 6 multi*.mp
- 7 "more than".mp
- 8 1 or 2 or 3 or 4 or 5 or 6 or 7
- 9 (compart* adj3 model*).mp
- 10 (mathematic* adj3 model*).mp
- 11 (comput* adj3 model*).mp
- 12 *decision support techniques/
- 13 *models, theoretical/
- 14 *models, statistical/
- 15 exp models, economic/
- 16 *nonlinear dynamics/
- 17 "agent based model*".mp
- 18 (decision*1 adj1 support*).mp
- 19 (quant* adj3 model*).mp
- 20 "discrete event".mp
- 21 "markov* model*".mp
- 22 STDSIM.mp
- 23 "micro simul*".mp
- 24 "agentbased model*".mp
- 25 "theoretical model*".mp
- 26 "statistical model*".mp
- 27 "economic model*".mp
- 28 "nonlinear dynamics".mp
- 29 microsimul*.mp
- 30 "individual based model*".mp

31 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24
 or 25 or 26 or 27 or 28 or 29 or 30
 32 exp Sexually Transmitted Diseases/
 33 "sexual* transmit* infect*".mp
 34 "sexual* transmit* disease*1".mp
 35 STD*1.mp
 36 STI*1.mp
 37 HIV.mp
 38 "human immunodeficiency virus".mp
 39 Hepatitis.mp
 40 "Genital Herpes".mp
 41 HSV.mp
 42 HSV-1.mp
 43 HSV-2.mp
 44 "acquired immune deficiency syndrome".mp
 45 mycoplasma.mp
 46 gonorrhoea.mp
 47 syphilis.mp
 48 Chlamydia.mp
 49 "Lymphogranuloma Venereum".mp
 50 Chancroid.mp
 51 "Treponema Pallidum".mp
 52 Trichomon*.mp
 53 "Human Papillomavirus".mp
 54 "Genital Warts".mp
 55 "Pelvic Inflammatory Disease".mp
 56 PID.mp
 57 "Condylomata Acuminata".mp
 58 Cervicitis.mp
 59 Epididymitis.mp
 60 Urethritis.mp
 61 Infertility.mp
 62 "vener?al disease*1".mp
 63 "vener?al infect*".mp
 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or
 64 47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58 or 59 or 60 or 61 or
 62 or 63
 65 8 and 31 and 64

Cochrane

Cochrane uses the same thesaurus as Medline and Embase. The syntax is slightly different. Cochrane does not support the limited suffix syntax, e.g. “*2”, which is why these were replaced by unlimited suffix searches. The adjacent operator uses another syntax in Cochrane, therefore all “adj” instances have been replaced by “near”.

- 1 interact*.mp
- 2 coinfect*.mp
- 3 parallel.mp
- 4 simultaneous*.mp
- 5 coexist*.mp
- 6 multi*.mp
- 7 "more than".mp
- 8 #1 or #2 or #3 or #4 or #5 or #6 or #7
- 9 (compart* near model*).mp
- 10 (mathematic* near model*).mp
- 11 (comput* near model*).mp
- 12 *decision support techniques/
- 13 *models, theoretical/
- 14 *models, statistical/
- 15 exp models, economic/
- 16 exp nonlinear dynamics/
- 17 "agent based model*".mp
- 18 (decision* near support*).mp
- 19 (quant* near model*).mp
- 20 "discrete event".mp
- 21 "markov* model*".mp
- 22 STDSIM.mp
- 23 "micro simul*".mp
- 24 "agentbased model*".mp
- 25 "theoretical model*".mp
- 26 "statistical model*".mp
- 27 "economic model*".mp
- 28 "nonlinear dynamics".mp
- 29 microsimul*.mp
- 30 "individual based model*".mp
- 31 #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21
or #22 or #23 or #24 or #25 or #26 or #27 or #28 or #29 or #30
- 32 exp Sexually Transmitted Diseases/
- 33 "sexual* transmit* infect*".mp
- 34 "sexual* transmit* disease*".mp
- 35 STD*.mp

36 STI*.mp
 37 HIV.mp
 38 "human immunodeficiency virus".mp
 39 Hepatitis.mp
 40 "Genital Herpes".mp
 41 HSV.mp
 42 HSV-1.mp
 43 HSV-2.mp
 44 "acquired immune deficiency syndrome".mp
 45 mycoplasma.mp
 46 gonorrhoea.mp
 47 syphilis.mp
 48 Chlamydia.mp
 49 "Lymphogranuloma Venereum".mp
 50 Chancroid.mp
 51 "Treponema Pallidum".mp
 52 Trichomon*.mp
 53 "Human Papillomavirus".mp
 54 "Genital Warts".mp
 55 "Pelvic Inflammatory Disease".mp
 56 PID.mp
 57 "Condylomata Acuminata".mp
 58 Cervicitis.mp
 59 Epididymitis.mp
 60 Urethritis.mp
 61 Infertility.mp
 62 "venereal disease*".mp
 63 "venereal infect*".mp
 #32 or #33 or #34 or #35 or #36 or #37 or #38 or #39 or #40 or #41 or #42 or #43 or #44
 64 or #45 or #46 or #47 or #48 or #49 or #50 or #51 or #52 or #53 or #54 or #55 or #56 or
 #57 or #58 or #59 or #60 or #61 or #62 or #63
 65 #8 and #31 and #64

Dart Europe

Dart Europe is, compared with Embase and Medline, a fairly small database. The search interface is therefore not as sophisticated and does not allow thesaurus searches. The search strategy was therefore held as simple as possible to not accidentally exclude any relevant PhD theses.

1 "sexually transmitted"
 2 "model"
 3 #1 and #2

OpenGrey

Preliminary searches found, that OpenGrey only contains very few articles which could possibly be relevant for the Systematic Review. Considering the simple search user interface this resulted in a very simple search strategy.

1 “sexually transmitted diseases”

PLOS and ProQuest

PLOS does not have any underlying thesaurus to support the search. Furthermore, the syntax does not support the adjacent operator. PLOS allows searching the title, abstract or full text, we decided to search for all terms in the title and abstract only.

ProQuest does not support thesaurus search or advanced syntax, which is why we had to simplify the search strategy as well. We decided to search anywhere but in the full text. We searched for scholarly articles, dissertations, theses, working papers, reports, conference papers, and conference proceedings. We did not search for wire feeds, newspapers, trade journals, magazines, blogs, podcasts, and websites.

Due to the similar requirements we developed one search strategy which was used with PLOS and ProQuest.

```
1 interact*
2 coinfect*
3 parallel
4 simultaneous*
5 coexist*
6 multi*
7 "more than"
8 #1 or #2 or #3 or #4 or #5 or #6 or #7
9 compart* model*
10 mathematic* model*
11 comput* model*
12 "agent based model*"
13 decision support
14 quant* model*
15 "discrete event"
16 "markov* model*"
17 STDSIM
18 "micro simul*"
19 "agentbased model*"
20 "theoretical model*"
21 "statistical model*"
22 "economic model*"
23 "nonlinear dynamics"
24 microsimul*
```

25 "individual based model*"

 26 #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21

 or #22 or #23 or #24 or #25

 27 "sexual* transmit* infect*"

 28 "sexual* transmit* disease*"

 29 STD*

 30 STI*

 31 HIV

 32 "human immunodeficiency virus"

 33 Hepatitis

 34 "Genital Herpes"

 35 HSV

 36 HSV-1

 37 HSV-2

 38 "acquired immune deficiency syndrome"

 39 mycoplasma

 40 gonorrhoea

 41 syphilis

 42 chlamydia

 43 "Lymphogranuloma Venereum"

 44 Chancroid

 45 "Treponema Pallidum"

 46 Trichomon*

 47 "Human Papillomavirus"

 48 "Genital Warts"

 49 "Pelvic Inflammatory Disease"

 50 PID

 51 #27 or #28 or #29 or #30 or #31 or #32 or #33 or #34 or #35 or #36 or #37 or #38 or #39

 or #40 or #41 or #42 or #43 or #44 or #45 or #46 or #47 or #48 or #49 or #50

 52 #8 and #26 and #51

Web of Science

Web of Science does not use a thesaurus. The database does not have a limited suffix search, which is why we replaced those with unlimited suffix searches. The adjacent operator is the same as of the Cochrane search tool. As Web of Science access also non medicinal journals, we decided to not use any abbreviations to decrease the possibility of picking up completely unrelated articles.

1 interact*

 2 coinfect*

 3 parallel

 4 simultaneous*

 5 coexist*

6 multi*
 7 "more than"
 8 #1 or #2 or #3 or #4 or #5 or #6 or #7
 9 (compart* near model*)
 10 (mathematic* near model*)
 11 (comput* near model*)
 12 "agent based model*"

13 (decision* near support*)
 14 (quant* near model*)
 15 "discrete event"
 16 "markov* model*"

17 STDSIM
 18 "micro simul*"

19 "agentbased model*"

20 "theoretical model*"

21 "statistical model*"

22 "economic model*"

23 "nonlinear dynamics"

24 microsimul*

25 "individual based model*"

26 #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21
 or #22 or #23 or #24 or #25

27 "sexual* transmit* infect*"

28 "sexual* transmit* disease*"

29 "human immunodeficiency virus"

30 hepatitis

31 "genital herpes"

32 "acquired immune deficiency syndrome"

33 mycoplasma

34 gonorrhoea

35 syphilis

36 chlamydia

37 "Lymphogranuloma Venereum"

38 Chancroid

39 "Treponema Pallidum"

40 Trichomon*

41 "Human Papillomavirus"

42 "Genital Warts"

43 "Pelvic Inflammatory Disease"

44 "Condylomata Acuminata"

45 Cervicitis

46 Epididymitis

47 Urethritis

48 Infertility

49 "venereal disease"

50 "venereal infect*"

51 #27 or #28 or #29 or #30 or #31 or #32 or #33 or #34 or #35 or #36 or #37 or #38 or #39
or #40 or #41 or #42 or #43 or #44 or #45 or #46 or #47 or #48 or #49 or #50

52 #8 and #26 and #51