

**National Institute for Health and Care
Excellence**

Suspected sepsis: recognition, assessment and early management

[E] Evidence review for clinical and cost effectiveness of rapid antigen tests (RAT) and polymerase chain reaction (PCR) tests for guiding treatment in people with suspected sepsis.

NICE guideline NG253

Evidence reviews underpinning research recommendation 4 in the NICE guideline

November 2025

Guideline version (Final)

Disclaimer

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or service users. The recommendations in this guideline are not mandatory and the guideline does not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Local commissioners and/or providers have a responsibility to enable the guideline to be applied when individual health professionals and their patients or service users wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with compliance with those duties.

NICE guidelines cover health and care in England. Decisions on how they apply in other UK countries are made by ministers in the [Welsh Government](#), [Scottish Government](#), and [Northern Ireland Executive](#). All NICE guidance is subject to regular review and may be updated or withdrawn.

Copyright

© NICE 2025. All rights reserved. Subject to [Notice of rights](#)..

ISBN: 978-1-4731-7345-3

Contents

1 Rapid antigen tests (RAT) and polymerase chain reaction (PCR) tests for guiding treatment in people with suspected sepsis	4
1.1 Review question	4
1.1.1 Introduction	4
1.1.2 Summary of the protocol.....	4
1.1.3 Methods and process.....	6
1.1.4 Effectiveness evidence	7
1.1.5 Summary of studies included in the effectiveness evidence	7
1.1.6 Summary of the effectiveness evidence.....	7
1.7 Economic evidence	7
1.1.8 The committee's discussion and interpretation of the evidence	8
1.1.9 Recommendations supported by this evidence review	10
1.1.10 References – included studies	10
1.1.11 References – other.....	10
Appendices	12
Appendix A – Review protocols	12
Review protocol for the clinical and cost effectiveness of rapid antigen tests and PCR tests for guiding treatment in people with suspected sepsis.....	12
Appendix B – Literature search strategies	21
Background and development	21
Effectiveness care searches	23
Appendix C- Evidence study selection	45
Appendix D – Economic evidence study selection	46
Appendix E – Excluded studies	47

1 Rapid antigen tests (RAT) and polymerase chain reaction (PCR) tests for guiding treatment in people with suspected sepsis

1.1 Review question

In people aged 16 or over with suspected sepsis, what is the clinical and cost effectiveness of rapid antigen tests (RAT) or polymerase chain reaction (PCR) tests for guiding treatment?

1.1.1 Introduction

Sepsis is defined as a life-threatening organ dysfunction due to a dysregulated host response to infection. It requires early recognition and immediate management to prevent the progression of the condition towards a septic shock (a subset of sepsis in which particularly profound circulatory, cellular, and metabolic abnormalities can occur and substantially increased mortality). With an estimated 918,000 adult sepsis admissions per year, and 66,096 deaths in the UK, sepsis constitutes a major public health concern. Rapid antigen tests (RAT) and polymerase chain reaction (PCR) testing may help in the process of identifying the source of infection, thus helping to guide treatment and improve outcomes for people with suspected sepsis.

The clinical effectiveness (impact on patient outcomes) evidence of RAT and PCR tests are presented in this review (Review E), and the diagnostic accuracy are presented in Review D

1.1.2 Summary of the protocol

Table 1: PICOS inclusion criteria

Population	Inclusion: - Adults aged 16 or over with suspected sepsis and a suspected infection who are symptomatic or asymptomatic Exclusion: - Children under the age of 16
------------	---

	• People who are or have recently been pregnant • Populations outside of acute hospital, virtual wards and ambulance settings • People with neutropenic sepsis
Intervention	Rapid¹ antigen tests taken when a patient is in hospital and investigations for sepsis are ongoing, limited to the following tests relevant to UK practice: • Pneumococcal and legionella urinary antigens • Streptococcus group A throat antigen • Influenza • Respiratory syncytial virus (RSV) rapid tests from nasopharyngeal samples Rapid¹ PCRs • PCR for Streptococcus Group A (throat) (single target) • Multiplex PCR² ¹A rapid test is defined as one where test results can be produced within 6 hours. ²Multiplex PCR must use whole blood sample – not culture. Exclusion: • Studies on rapid antigen tests or PCR tests that take longer than 6 hours to generate test results • Studies on rapid antigen tests for Malaria and Covid-19
Comparator	Microbiological culture
Outcomes	Primary • Length of hospital stay • Admission to ICU • Referral to critical care outreach team • Mortality • Antibiotic use including: ○ reduction in use of antibiotics, ○ length of time on them, ○ dosage, ○ route of administration, ○ antimicrobial resistance, ○ stepping down/reviewing treatment Secondary • HRQOL – (EQ5D, SF36)
Study types	Inclusion • Systematic reviews and meta-analyses of RCTs

	• RCT • Cohort studies (prospective and retrospective) if no RCTs are identified Exclusion • All other study types for example conference abstracts, editorials/letters, studies not published in English and study pre-prints.
--	---

For the full protocol see [Appendix A](#).

1.1.3 Methods and process

This evidence review was developed using the methods and process described in [Developing NICE guidelines: the manual](#). Methods specific to this review question are described in the review protocol in [Appendix A](#).

Declarations of interest were recorded according to [NICE's conflicts of interest policy](#).

1.1.3.1 Search methods

The searches for the effectiveness evidence were run on 23/02/2024. The following databases were searched: MEDLINE (Ovid), Embase (Ovid), the Cochrane Database of Systematic Reviews (Wiley), and Epistemonikos. Full search strategies for each database are provided in [Appendix B](#).

The searches for the cost effectiveness evidence were run on 23 02 2024. The following databases were searched: MEDLINE ALL (Ovid), Embase (Ovid), EconLit (Ovid), and International HTA Database - INAHTA. Full search strategies for each database are provided in [Appendix B](#).

A NICE senior information specialist conducted the searches. The MEDLINE strategy was quality assured by a trained NICE information specialist and all translated search strategies were peer reviewed to ensure their accuracy. Both procedures were adapted from the [2015 PRESS Guideline Statement](#).

1.1.4 Effectiveness evidence

1.1.4.1 Included studies

A systematic search, limited to 1980 onwards (based on discussions with the NICE committee) was carried out to identify studies specified for this evidence review. The search identified 967 records through database searching. After deduplication, 767 records were screened at title and abstract stage. 758 records were excluded as they did not fulfil the review inclusion criteria. 10% of references were screened separately by another reviewer. Discrepancies were resolved by discussion.

The full text of 9 studies were ordered for closer inspection. Of these, 0 studies met the eligibility criteria specified in the review protocol ([Appendix A](#)). The full search strategy is presented in [Appendix B](#). The PRISMA diagram for the study selection process is included in [Appendix C](#).

1.1.4.2 Excluded studies

Details of studies excluded at full text, along with reasons for exclusion are given in [Appendix E](#)

1.1.5 Summary of studies included in the effectiveness evidence

No studies of effectiveness were included following full text review.

1.1.6 Summary of the effectiveness evidence

No studies of effectiveness were included following full text review.

1.7 Economic evidence

The search of economic evidence identified 199 records through database searching (see [Appendix B](#)). 198 records were excluded after screening at title and abstract stage, and the final study was excluded after full text review (see [Appendix D](#)). Therefore, no economic analyses were included for this review question.

1.1.8 The committee's discussion and interpretation of the evidence

This review (Review E, which aimed to review the evidence on clinical effectiveness of rapid antigen tests (RAT) and polymerase chain reaction (PCR) tests for guiding treatment in people with suspected sepsis, did not find any evidence. As there was no evidence found on clinical effectiveness to evaluate the impact on patient outcomes, and the evidence on diagnostic accuracy was limited and of very low confidence (see Review D) the committee decided that more evidence was needed to make any recommendations that would change current practice. The committee have made a research recommendation which is included in Appendix K of Review D

1.1.8.1. The outcomes that matter most

The committee agreed that mortality was the most important outcome when considering the effectiveness of diagnostic tests for infection in the sepsis pathway, however they also agreed that the effect these tests could have on antibiotic use (including reduction in use of antibiotics, length of time on antibiotics, dosage, route of administration, antimicrobial resistance and stepping down/reviewing treatment) was also of interest. The committee agreed that these outcomes were the most clinically meaningful in the context of RAT and PCR tests for guiding treatment in people with suspected sepsis. RAT and PCR testing may help in the process of identifying the source of infection, thus helping to guide treatment and improve outcomes for people with suspected sepsis.

No evidence relating to the clinical effectiveness of RAT and PCR tests for guiding treatment in people with suspected sepsis was identified. The committee considered the results of this review alongside the results of the evidence review investigating the 'Diagnostic accuracy of RAT and PCR tests for guiding treatment in people with suspected sepsis (Review D).

1.1.8.2 The certainty of the evidence

No evidence was identified for the clinical effectiveness of rapid antigen testing (RAT) and rapid polymerase chain reaction (PCR) tests. Due to the absence of clinical effectiveness evidence to demonstrate how diagnostic tests could be utilised in

decision making regarding the management of a suspected sepsis infection or infection in an adult 16 years or older the committee made no recommendations. The committee acknowledged there was a gap in high certainty evidence for the clinical effectiveness (this review) and diagnostic accuracy (Review D) and therefore decided to write a research recommendation to address this gap which is outlined in Review D.

1.1.8.3 Benefits and harms

The committee discussed the potential benefits of administering a diagnostic test to people with suspected sepsis to confirm the presence of infection and pathogen(s) in informing how to manage the infection and practicing good antimicrobial stewardship.

The committee discussed the potential comparable benefits of RAT and PCR in supporting treatment decision making in people with a suspected sepsis infection. They noted that RAT are more limited than multiplex PCR as they can rule out the presence of only one pathogen unlike multiplex PCR tests. Where RATs are being used, they are part of a process of building a clinical picture and are not used for initial clinical decision making.

1.1.8.4 Cost-effectiveness and resource use

No cost effectiveness evidence was identified for rapid antigen tests or rapid multiplex PCR for guiding treatment in people with suspected sepsis. Costs for the proprietary tests identified in the review, such as the BinaxNOW urinary antigen test, were not available in the public domain.

Typically, blood cultures are used to identify infections and guide antibiotic management: while these generally take more time to return results than RATs or rapid multiplex PCRs, they are inexpensive and the committee did not consider that the additional cost of using rapid antigen tests or multiplex PCR to guide initial antibiotic choices was justified. The committee considered that robust cost effectiveness evidence would be needed in order to make a recommendation for using multiplex PCR tests, given the cost associated with the test. Therefore, no

recommendations were made to use RAT or multiplex PCR for influencing early decisions about guiding antimicrobial prescribing.

The committee advised that, at present, it is not standard practice to use tests to guide antibiotic prescribing as soon as sepsis is suspected. Antibiotics are typically prescribed to the person with suspected sepsis. Currently there is no clinical or cost effectiveness evidence to support the use of multiplex PCR compared with blood cultures, to narrow treatment. No recommendations were made from this evidence review and therefore there will be no change in practice.

1.1.9 Recommendations supported by this evidence review

No recommendations were made from this evidence review.

1.1.10 References – included studies

1.1.10.1 Effectiveness

No studies of effectiveness were included for this review question.

1.1.10.2 Economic

No economic analysis studies were included for this review question.

1.1.11 References – other

No other references were utilised in this review question.

Appendices

Appendix A – Review protocols

Review protocol for the clinical and cost effectiveness of rapid antigen tests and PCR tests for guiding treatment in people with suspected sepsis

ID	Field	Content
0.	PROSPERO registration number	CRD42024521759
1.	Review title	Clinical and cost effectiveness of rapid antigen or rapid PCR testing for guiding treatment in people aged 16 or over with suspected sepsis.
2.	Review question	In people aged 16 or over with suspected sepsis, what is the clinical and cost effectiveness of rapid antigen or PCR tests for guiding treatment?
3.	Objective	To determine the clinical and cost effectiveness of rapid antigen or PCR testing for guiding treatment in people aged 16 or over with suspected sepsis. A rapid test is defined as one where test results can be produced within 6 hours.
4.	Searches	The following databases will be searched: • Cochrane Central Register of Controlled Trials (CENTRAL) • Cochrane Database of Systematic Reviews (CDSR) • Embase • Epistemonikos • MEDLINE (Ovid) • Embase (Ovid) • EconLit (Ovid)

		• INAHTA Searches will be restricted by: • 1980 • English Language • Human studies • Conference abstracts excluded • OECD countries Other searches: • Reference searching The full search strategies for MEDLINE database will be published in the final review.
5.	Condition or domain being studied	Any source infection in people with suspected sepsis
6.	Population	Inclusion: • Adults aged 16 or over with suspected sepsis and a suspected infection who are symptomatic or asymptomatic Exclusion: • Children under the age of 16 • People who are or have recently been pregnant • Populations outside of acute hospital, virtual wards and ambulance settings

		• People with neutropenic sepsis
7.	Intervention	Rapid antigen tests taken when a patient is in hospital and investigations for sepsis are ongoing, limited to the following tests relevant to UK practice: • Pneumococcal and legionella urinary antigens • Streptococcus group A throat antigen • Influenza • Respiratory syncytial virus (RSV) rapid tests from nasopharyngeal samples Rapid PCRs • PCR for Streptococcus Group A (throat) (single target) • Multiplex PCR A rapid test is defined as one where test results can be produced within 6 hours. Multiplex PCR must use whole blood sample – not culture.
8.	Comparator	Microbiological culture
9.	Types of study to be included	• Systematic reviews and meta-analyses of RCTs • RCT • Cohort studies (prospective and retrospective) if no RCTs are identified
10.	Other exclusion criteria	• All other study types for example conference abstracts, editorials/letters, studies not published in English and study pre-prints. • Studies reporting data without confidence intervals or data that cannot be used to calculate confidence intervals. • Studies on rapid antigen tests or PCR tests that take longer than 6 hours to generate test results

		Studies on rapid antigen tests for Malaria and Covid-19
11.	Context	The current recommendations in NICE guidance NG51 state that broad-spectrum antibiotics should be given to people with suspected sepsis until the source of infection can be identified, at which point narrow-spectrum antibiotics can be given if appropriate. Rapid Antigen Testing and PCR testing may help in the process of identifying the source of infection, thus helping to guide treatment and improve outcomes for people with suspected sepsis.
12.	Primary outcomes (critical outcomes)	- Length of hospital stay - Admission to ICU - Referral to critical care outreach team - Mortality - Antibiotic use including: reduction in use antibiotics, length of time on them, dosage, route of administration, antimicrobial resistance, stepping down/reviewing treatment
13.	Secondary outcomes (important outcomes)	HRQOL – (EQ5D, SF36)
14.	Data extraction (selection and coding)	All references identified by the searches and from other sources will be uploaded into EPPI-reviewer and de-duplicated. 10% of the abstracts will be reviewed by two reviewers, with any disagreements resolved by discussion or, if necessary, a third independent reviewer. The full text of potentially eligible studies will be retrieved and will be assessed in line with the criteria outlined above. A standardised form will be used to extract data from studies (see Developing NICE guidelines: the manual section 6.2).

		Study investigators may be contacted for missing data where time and resources allow. Where appropriate, this review will make use of the priority screening functionality within the EPPI-reviewer software. At least 50% of the data set will be screened and we will stop screening after that if we screen more than 250 records without an included study.
15.	Risk of bias (quality) assessment	Risk of bias will be assessed using the Cochrane ROB-2 checklist as described in Developing NICE guidelines: the manual.
16.	Strategy for data synthesis	Approach to meta-analysis Pairwise meta-analyses will be performed in Cochrane Review Manager V5.3. A pooled relative risk will be calculated for dichotomous outcomes (using the Mantel–Haenszel method) reporting numbers of people having an event. A pooled mean difference will be calculated for continuous outcomes (using the inverse variance method) when the same scale will be used to measure an outcome across different studies. Where different studies presented continuous data measuring the same outcome but using different numerical scales these outcomes will be all converted to the same scale before meta-analysis is conducted on the mean differences. Where outcomes measured the same underlying construct but used different instruments/metrics, data will be analysed using standardised mean differences (SMDs, Hedges' g).

		Fixed effects models will be fitted unless there is significant statistical heterogeneity in the meta-analysis, defined as $I^2 \geq 50\%$, when random effects models will be used instead. Where 10 or more studies are included as part of a single meta-analysis, a funnel plot will be produced to graphically assess the potential for publication bias. GRADE will be used to assess the quality of any pair-wise analysis of outcomes. Outcomes using evidence from RCTs will be rated as high quality initially and downgraded from this point. Reasons for upgrading the certainty of the evidence will also be considered.														
17.	Analysis of sub-groups	Tests taken in: • ICU • Emergency Department • Hospital ward • Virtual ward														
18.	Type and method of review	<table><tr><td>☒</td><td>Intervention</td></tr><tr><td>☐</td><td>Diagnostic</td></tr><tr><td>☐</td><td>Prognostic</td></tr><tr><td>☐</td><td>Qualitative</td></tr><tr><td>☐</td><td>Epidemiologic</td></tr><tr><td>☐</td><td>Service Delivery</td></tr><tr><td>☐</td><td>Other (please specify)</td></tr></table>	☒	Intervention	☐	Diagnostic	☐	Prognostic	☐	Qualitative	☐	Epidemiologic	☐	Service Delivery	☐	Other (please specify)
☒	Intervention															
☐	Diagnostic															
☐	Prognostic															
☐	Qualitative															
☐	Epidemiologic															
☐	Service Delivery															
☐	Other (please specify)															

19.	Language	English		
20.	Country	England		
21.	Anticipated or actual start date	January 2024		
22.	Anticipated completion date	August 2025		
23.	Stage of review at time of this submission	Review stage	Started	Completed
		Preliminary searches	☒	☒
		Piloting of the study selection process	☒	☒
		Formal screening of search results against eligibility criteria	☒	☒
		Data extraction	☒	☒
		Risk of bias (quality) assessment	☒	☒
		Data analysis	☒	☒
26.	Funding sources/sponsor	This systematic review is being completed by the guideline development team which receives funding from NICE.		
27.	Conflicts of interest	All guideline committee members and anyone who has direct input into NICE guidelines (including the evidence review team and expert witnesses) must declare any potential conflicts of interest in line with NICE's code of practice for declaring and dealing with conflicts of interest. Any relevant interests, or changes to interests, will also be declared publicly at the start of each guideline committee meeting. Before each meeting, any potential conflicts of interest will be considered by the guideline committee Chair and a senior member of the		

		development team. Any decisions to exclude a person from all or part of a meeting will be documented. Any changes to a member's declaration of interests will be recorded in the minutes of the meeting. Declarations of interests will be published with the final guideline.
28.	Collaborators	Development of this systematic review will be overseen by an advisory committee who will use the review to inform the development of evidence-based recommendations in line with section 3 of Developing NICE guidelines: the manual . Members of the guideline committee are available on the NICE website: History Suspected sepsis: recognition, diagnosis and early management Guidance NICE
29.	Other registration details	None
30.	Reference/URL for published protocol	https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID=521759
31.	Dissemination plans	NICE may use a range of different methods to raise awareness of the guideline. These include standard approaches such as: • notifying registered stakeholders of publication • publicising the guideline through NICE's newsletter and alerts • issuing a press release or briefing as appropriate, posting news articles on the NICE website, using social media channels, and publicising the guideline within NICE.
32.	Keywords	Sepsis, Rapid Antigen Testing, PCR, Infection
33.	Details of existing review of same topic by same authors	None
34.	Current review status	☐ Ongoing

FINAL

		☐ Completed but not published ☒ Completed and published ☐ Completed, published and being updated ☐ Discontinued
35..	Additional information	None
36.	Details of final publication	www.nice.org.uk

Appendix B – Literature search strategies

Background and development

Search design and peer review

A NICE Senior Information Specialist (SIS) conducted the literature searches for the evidence review. The searches were run on 23 02 2024.

This search report is compliant with the requirements of the PRISMA Statement for Reporting Literature Searches in Systematic Reviews (for further details see: Rethlefsen M et al. [PRISMA-S](#). *Systematic Reviews*, 10(1), 39).

The MEDLINE strategies below were quality assured (QA) by a trained NICE SIS. All translated search strategies were peer reviewed by another SIS to ensure their accuracy. Both procedures were adapted from the Peer Review of Electronic Search Strategies Guideline Statement (for further details see: McGowan J et al. [PRESS 2015 Guideline Statement](#). *Journal of Clinical Epidemiology*, 75, 40-46).

The principal search strategies were developed in MEDLINE (Ovid interface) and adapted, as appropriate, for use in the other sources listed in the protocol, taking into account their size, search functionality and subject coverage.

Review management

The search results were managed in EPPI-reviewer v5. Duplicates were removed in EPPI-R5 using a two-step process. First, automated deduplication is performed using a high-value algorithm. Second, manual deduplication is used to assess "low-probability" matches. All decisions made for the review can be accessed via the deduplication history.

Prior work

The search terms for the sepsis population from '(A) [Evidence reviews for stratifying risk of severe illness or death from sepsis](#)' in NG51 (Jan 2024) were used to inform the population terms for the search strategy.

Search limits and other restrictions

Formats

Limits were applied in adherence to standard NICE practice and the review protocol to exclude:

- Animal studies
- Conference abstracts and posters
- Registry entries for ongoing clinical trials or those that contain no results
- Theses and dissertations

FINAL

- Papers not published in the English language.

The limit to remove animal studies in the searches was the standard NICE practice, which has been adapted from:

Dickersin K, Scherer R & Lefebvre C. (1994) [Systematic Reviews: Identifying relevant studies for systematic reviews](#). *BMJ*, 309(6964), 1286.

Date limits

A date limit of 1980 to 2024 was applied, as stated in the review protocol.

Search filters and classifiers

Effectiveness searches

Systematic reviews filters:

Lee, E. et al. (2012) [An optimal search filter for retrieving systematic reviews and meta-analyses](#). *BMC Medical Research Methodology*, 12(1), 51.

In MEDLINE, the standard NICE modifications were used: pubmed.tw added; systematic review.pt added from MeSH update 2019.

In Embase, the standard NICE modifications were used: pubmed.tw added to line medline.tw.

Randomised controlled trials filters:

The MEDLINE RCT filter was [McMaster Therapy – Medline - “best balance of sensitivity and specificity” version](#).

The standard NICE modifications were used: the MeSH heading *randomized controlled trial*/, which is equivalent to *randomized controlled trial.pt* was exploded to capture newer, narrower *terms equivalence trial*/ and *pragmatic clinical trial*. The free-text term *randomized.mp* was also changed to the (more inclusive) alternative *randomi?ed.mp*. to capture both UK and US spellings.

Haynes RB et al. (2005) [Optimal search strategies for retrieving scientifically strong studies of treatment from Medline: analytical survey](#). *BMJ*, 330, 1179-1183. The Embase RCT filter was [McMaster Therapy – Embase “best balance of sensitivity and specificity” version](#).

Wong SSL et al. (2006) [Developing optimal search strategies for detecting clinically sound treatment studies in EMBASE](#). *Journal of the Medical Library Association*, 94(1), 41-47.

Cohort studies terms:

Terms for cohort studies were used from the observational studies filters. The terms used for observational studies are standard NICE practice that have been developed in house.

OECD countries geographic search filters:

The OECD countries filters were used without modification: Ayiku, L., Hudson, T., Williams, C., Levay, P., & Jacob, C. (2021). [The NICE OECD countries' geographic search filters: Part 2 - Validation of the MEDLINE and Embase \(Ovid\) filters](#). *Journal of the Medical Library Association*, 109(4), 583–589.

Cost effectiveness searches

In line with the review protocol, the sensitive version of the validated NICE cost utility filter was used in the MEDLINE and Embase strategies without amendment.

Hubbard W et al. (2022) [Development and validation of paired MEDLINE and Embase search filters for cost-utility studies](#). *BMC Medical Research Methodology*, 22(1), 310.

The following search filters were also applied to the search strategies in MEDLINE and Embase to identify cost-effectiveness studies. They were combined to the cost utility search filter with the 'OR' Boolean operator:

Glanville J et al. (2009) [Development and Testing of Search Filters to Identify Economic Evaluations in MEDLINE and EMBASE](#). Alberta: Canadian Agency for Drugs and Technologies in Health (CADTH)

Note: Several modifications have been made to these filters over the years that are standard NICE practice.

Effectiveness searches

Database results

Databases	Date searched	Database platform	Database segment or version	No. of results downloaded
Cochrane Central Register of Controlled Trials (CENTRAL)	23rd Feb 2024	Wiley	Issue 2 of 12, February 2024	91
Cochrane Database of Systematic Reviews (CDSR)	23rd Feb 2024	Wiley	Issue 2 of 12, February 2024	0
Embase	23rd Feb 2024	Ovid	Embase <1974 to 2024 February 22>	398

Epistemonikos	23rd Feb 2024	Epistemonikos	Searched 23rd February 2024	213
MEDLINE	23rd Feb 2024	Ovid	Ovid MEDLINE(R) ALL <1946 to February 22, 2024>	265

Search strategy history

Database name: MEDLINE ALL

Searches
Database: Ovid MEDLINE(R) ALL <1946 to February 22, 2024> Search Strategy: -----
1 exp sepsis/ (144610)
2 sepsis.ti,ab. (122362)
3 blood-borne pathogens/ (3043)
4 (blood* adj2 (pathogen* or poison*)).ti,ab. (3416)
5 exp systemic inflammatory response syndrome/ (152749)
6 'systemic inflammatory response syndrome'.ti,ab. (5973)
7 sirs.ti,ab. (6696)
8 (septicaemi* or septicemi*).ti,ab. (22473)
9 ((septic or cryptic) adj2 shock).ti,ab. (28031)
10 (pyaemi* or pyemi* or pyohemi*).ti,ab. (266)
11 (bacter?emi* or fung?emi* or parasit?emi* or vir?emi*).ti,ab. (73470)
12 (hypotension adj3 induced adj3 hypoperfusion).ti,ab. (7)
13 or/1-12 (288762)
14 Rapid Diagnostic Tests/ (93)
15 Point-of-Care Systems/ (17014)
16 antigen*.tw. (698368)
17 (RADT* or RDT*).tw. (3721)
18 ((rapid* or fast* or quick* or time* or short* or (point adj2 care) or poc or bedside or "bed side") adj3 (diagnos* or detect* or assay* or test*)).tw. (328876)
19 or/14-18 (1021199)
20 Streptococcal Infections/ (35281)
21 (pneumococc* or "S pneumoniae*" or legionel* or streptococc*).tw. (143961)
22 Influenza, Human/ (59077)
23 (influenza* or flu).tw. (148509)
24 Respiratory Syncytial Viruses/ (6380)
25 (syncytial* or "rs virus*" or rsv*).tw. (28166)
26 or/20-25 (320040)

Searches	
27	19 and 26 (36379)
28	exp Polymerase Chain Reaction/ (467535)
29	(Polymerase Chain Reaction* or pcr* or mpcr* or qpcr*).tw. (831042)
30	28 or 29 (1024069)
31	Streptococcal Infections/ (35281)
32	streptococc*.tw. (115326)
33	31 or 32 (125570)
34	30 and 33 (8364)
35	27 or 34 (43518)
36	13 and 35 (1858)
37	(MEDLINE or pubmed).tw. (348999)
38	systematic review.tw. (291869)
39	systematic review.pt. (253163)
40	meta-analysis.pt. (195574)
41	intervention\$.ti. (210266)
42	or/37-41 (727937)
43	36 and 42 (21)
44	exp Randomized Controlled Trial/ (610842)
45	randomi?ed.mp. (1106080)
46	placebo.mp. (254014)
47	or/44-46 (1173312)
48	36 and 47 (36)
49	exp Cohort Studies/ (2575856)
50	(cohort adj (study or studies)).tw. (341426)
51	cohort analy\$.tw. (12723)
52	(follow up adj (study or studies)).tw. (57660)
53	longitudinal.tw. (339026)
54	prospective.tw. (744597)
55	retrospective.tw. (792527)
56	or/49-55 (3254679)
57	36 and 56 (307)
58	43 or 48 or 57 (350)
59	afghanistan/ or africa/ or africa, northern/ or africa, central/ or africa, eastern/ or "africa south of the sahara"/ or africa, southern/ or africa, western/ or albania/ or algeria/ or andorra/ or angola/ or "antigua and barbuda"/ or argentina/ or armenia/ or azerbaijan/ or bahamas/ or bahrain/ or bangladesh/ or barbados/ or belize/ or benin/ or bhutan/ or bolivia/ or borneo/ or "bosnia and herzegovina"/ or botswana/ or brazil/ or brunei/ or bulgaria/ or burkina faso/ or burundi/ or cabo verde/ or cambodia/ or cameroon/ or central african republic/ or chad/ or exp china/ or comoros/ or congo/ or cote d'ivoire/ or croatia/ or cuba/ or "democratic republic of the congo"/ or cyprus/ or djibouti/ or dominica/ or dominican republic/ or ecuador/ or egypt/ or el salvador/ or equatorial guinea/ or eritrea/ or eswatini/ or ethiopia/ or fiji/ or gabon/ or gambia/ or "georgia (republic)"/ or ghana/ or grenada/ or guatemala/ or guinea/ or guinea-bissau/ or guyana/ or haiti/ or honduras/ or independent state of samoa/ or exp india/ or indian ocean islands/ or indochina/ or indonesia/ or iran/ or iraq/ or jamaica/ or jordan/ or kazakhstan/ or kenya/ or kosovo/ or kuwait/ or kyrgyzstan/ or laos/ or lebanon/ or liechtenstein/ or lesotho/ or liberia/ or libya/ or madagascar/ or malaysia/

Searches	
	or malawi/ or mali/ or malta/ or mauritania/ or mauritius/ or mekong valley/ or melanesia/ or micronesia/ or monaco/ or mongolia/ or montenegro/ or morocco/ or mozambique/ or myanmar/ or namibia/ or nepal/ or nicaragua/ or niger/ or nigeria/ or oman/ or pakistan/ or palau/ or exp panama/ or papua new guinea/ or paraguay/ or peru/ or philippines/ or qatar/ or "republic of belarus"/ or "republic of north macedonia"/ or romania/ or exp russia/ or rwanda/ or "saint kitts and nevis"/ or saint lucia/ or "saint vincent and the grenadines"/ or "sao tome and principe"/ or saudi arabia/ or serbia/ or sierra leone/ or senegal/ or seychelles/ or singapore/ or somalia/ or south africa/ or south sudan/ or sri lanka/ or sudan/ or suriname/ or syria/ or taiwan/ or tajikistan/ or tanzania/ or thailand/ or timor-leste/ or togo/ or tonga/ or "trinidad and tobago"/ or tunisia/ or turkmenistan/ or uganda/ or ukraine/ or united arab emirates/ or uruguay/ or uzbekistan/ or vanuatu/ or venezuela/ or vietnam/ or west indies/ or yemen/ or zambia/ or zimbabwe/ (1327853)
60	"organisation for economic co-operation and development"/ (589)
61	australasia/ or exp australia/ or austria/ or baltic states/ or belgium/ or exp canada/ or chile/ or colombia/ or costa rica/ or czech republic/ or exp denmark/ or estonia/ or europe/ or finland/ or exp france/ or exp germany/ or greece/ or hungary/ or iceland/ or ireland/ or israel/ or exp italy/ or exp japan/ or korea/ or latvia/ or lithuania/ or luxembourg/ or mexico/ or netherlands/ or new zealand/ or north america/ or exp norway/ or poland/ or portugal/ or exp "republic of korea"/ or "scandinavian and nordic countries"/ or slovakia/ or slovenia/ or spain/ or sweden/ or switzerland/ or turkey/ or exp united kingdom/ or exp united states/ (3533516)
62	european union/ (17915)
63	developed countries/ (21489)
64	or/60-63 (3549747)
65	59 not 64 (1237389)
66	58 not 65 (297)
67	limit 66 to english language (271)
68	animals/ not humans/ (5164074)
69	67 not 68 (265)
70	limit 69 to yr="1980 -Current" (265)

Database name: Embase

Searches	
Database: Embase <1974 to 2024 February 22>	
Search Strategy:	

1	exp sepsis/ (346994)
2	sepsis.ti,ab. (191171)
3	bloodborne bacterium/ (2169)
4	(blood* adj2 (pathogen* or poison*).ti,ab. (4448)
5	exp systemic inflammatory response syndrome/ (360627)
6	'systemic inflammatory response syndrome'.ti,ab. (8819)
7	sirs.ti,ab. (11898)
8	(septicaemi* or septicemi*).ti,ab. (26336)
9	((septic or cryptic) adj2 shock).ti,ab. (45770)
10	(pyaemi* or pyemi* or pyohemi*).ti,ab. (134)

Searches	
11	(bacter?emi* or fung?emi* or parasit?emi* or vir?emi*).ti,ab. (101504)
12	(hypotension adj3 induced adj3 hypoperfusion).ti,ab. (8)
13	or/1-12 (480851)
14	rapid test/ (8750)
15	"point of care testing"/ (22429)
16	antigen*.tw. (854316)
17	(RADT* or RDT*).tw. (5763)
18	((rapid* or fast* or quick* or time* or short* or (point adj2 care) or poc or bedside or "bed side") adj3 (diagnos* or detect* or assay* or test*)).tw. (478026)
19	or/14-18 (1322856)
20	streptococcus infection/ or exp group a streptococcal infection/ (35018)
21	pneumococcal infection/ or pneumococcal bacteremia/ (11474)
22	(pneumococc* or "S pneumoniae*" or legionel* or streptococc*).tw. (167744)
23	exp influenza/ (110523)
24	(influenza* or flu).tw. (174863)
25	pneumovirus/ or exp human respiratory syncytial virus/ (9770)
26	(syncytial* or "rs virus*" or rsv* or pneumovir*).tw. (35903)
27	or/20-26 (397520)
28	19 and 27 (45605)
29	exp polymerase chain reaction/ (1257469)
30	(Polymerase Chain Reaction* or pcr* or mpcr* or qpcr*).tw. (1160126)
31	29 or 30 (1604312)
32	streptococcus infection/ or exp group a streptococcal infection/ (35018)
33	streptococc*.tw. (132090)
34	32 or 33 (149693)
35	31 and 34 (13074)
36	28 or 35 (56776)
37	13 and 36 (3529)
38	(MEDLINE or pubmed).tw. (432358)
39	exp systematic review/ or systematic review.tw. (537426)
40	meta-analysis/ (306575)
41	intervention\$.ti. (275795)
42	or/38-41 (1014098)
43	37 and 42 (70)
44	random:.tw. (2034866)
45	placebo:.mp. (533693)
46	double-blind:.tw. (249531)
47	or/44-46 (2316370)
48	37 and 47 (103)
49	Cohort analysis/ (1119700)
50	(cohort adj (study or studies)).tw. (491245)
51	cohort analy\$.tw. (20484)
52	Longitudinal study/ (206891)

Searches	
53	Retrospective study/ (1570530)
54	Prospective study/ (905767)
55	(follow up adj (study or studies)).tw. (75345)
56	longitudinal.tw. (458132)
57	prospective.tw. (1139012)
58	retrospective.tw. (1313900)
59	or/49-58 (4126529)
60	37 and 59 (603)
61	43 or 48 or 60 (740)
62	afghanistan/ or africa/ or "africa south of the sahara"/ or albania/ or algeria/ or andorra/ or angola/ or argentina/ or "antigua and barbuda"/ or armenia/ or exp azerbaijan/ or bahamas/ or bahrain/ or bangladesh/ or barbados/ or belarus/ or belize/ or benin/ or bhutan/ or bolivia/ or borneo/ or exp "bosnia and herzegovina"/ or botswana/ or exp brazil/ or brunei darussalam/ or bulgaria/ or burkina faso/ or burundi/ or cambodia/ or cameroon/ or cape verde/ or central africa/ or central african republic/ or chad/ or exp china/ or comoros/ or congo/ or cook islands/ or cote d'ivoire/ or croatia/ or cuba/ or cyprus/ or democratic republic congo/ or djibouti/ or dominica/ or dominican republic/ or ecuador/ or el salvador/ or egypt/ or equatorial guinea/ or eritrea/ or eswatini/ or ethiopia/ or exp "federated states of micronesia"/ or fiji/ or gabon/ or gambia/ or exp "georgia (republic)"/ or ghana/ or grenada/ or guatemala/ or guinea/ or guinea-bissau/ or guyana/ or haiti/ or honduras/ or exp india/ or exp indonesia/ or iran/ or exp iraq/ or jamaica/ or jordan/ or kazakhstan/ or kenya/ or kiribati/ or kosovo/ or kuwait/ or kyrgyzstan/ or laos/ or lebanon/ or liechtenstein/ or lesotho/ or liberia/ or libyan arab jamahiriya/ or madagascar/ or malawi/ or exp malaysia/ or maldives/ or mali/ or malta/ or mauritania/ or mauritius/ or melanesia/ or moldova/ or monaco/ or mongolia/ or "montenegro (republic)"/ or morocco/ or mozambique/ or myanmar/ or namibia/ or nauru/ or nepal/ or nicaragua/ or niger/ or nigeria/ or niue/ or north africa/ or oman/ or exp pakistan/ or palau/ or palestine/ or panama/ or papua new guinea/ or paraguay/ or peru/ or philippines/ or polynesia/ or qatar/ or "republic of north macedonia"/ or romania/ or exp russian federation/ or rwanda/ or sahel/ or "saint kitts and nevis"/ or "saint lucia"/ or "saint vincent and the grenadines"/ or saudi arabia/ or senegal/ or exp serbia/ or seychelles/ or sierra leone/ or singapore/ or "sao tome and principe"/ or solomon islands/ or exp somalia/ or south africa/ or south asia/ or south sudan/ or exp southeast asia/ or sri lanka/ or sudan/ or suriname/ or syrian arab republic/ or taiwan/ or tajikistan/ or tanzania/ or thailand/ or timor-leste/ or togo/ or tonga/ or "trinidad and tobago"/ or tunisia/ or turkmenistan/ or tuvalu/ or uganda/ or exp ukraine/ or exp united arab emirates/ or uruguay/ or exp uzbekistan/ or vanuatu/ or venezuela/ or viet nam/ or western sahara/ or yemen/ or zambia/ or zimbabwe/ (1743512)
63	exp "organisation for economic co-operation and development"/ (2865)
64	exp australia/ or "australia and new zealand"/ or austria/ or baltic states/ or exp belgium/ or exp canada/ or chile/ or colombia/ or costa rica/ or czech republic/ or denmark/ or estonia/ or europe/ or exp finland/ or exp france/ or exp germany/ or greece/ or hungary/ or iceland/ or ireland/ or israel/ or exp italy/ or japan/ or korea/ or latvia/ or lithuania/ or luxembourg/ or exp mexico/ or netherlands/ or new zealand/ or north america/ or exp norway/ or poland/ or exp portugal/ or scandinavia/ or sweden/ or slovakia/ or slovenia/ or south korea/ or exp spain/ or switzerland/ or "Turkey (republic)"/ or exp united kingdom/ or exp united states/ or western europe/ (3838365)
65	european union/ (31830)
66	developed country/ (36037)
67	or/63-66 (3872617)
68	62 not 67 (1587027)

Searches	
69	61 not 68 (662)
70	limit 69 to english language (628)
71	nonhuman/ not human/ (5386407)
72	70 not 71 (608)
73	(conference abstract* or conference review or conference paper or conference proceeding).db,pt,su. (5844635)
74	72 not 73 (399)
75	limit 74 to yr="1980 -Current" (398)

Database name: Cochrane CENTRAL

Searches	
#1	MeSH descriptor: [Sepsis] explode all trees 6439
#2	sepsis:ti,ab,kw 13843
#3	MeSH descriptor: [Blood-Borne Pathogens] this term only 38
#4	(blood* near/2 (pathogen* or poison*)):ti,ab,kw 369
#5	MeSH descriptor: [Systemic Inflammatory Response Syndrome] explode all trees 6965
#6	'systemic inflammatory response syndrome':ti,ab,kw 1760
#7	sirs:ti,ab,kw 907
#8	(septicaemi* or septicemi*):ti,ab,kw 1050
#9	((septic or cryptic) near/2 shock):ti,ab,kw 3955
#10	(pyaemi* or pyemi* or pyohemi*):ti,ab,kw 9
#11	(bacter?emi* or fung?emi* or parasit?emi* or vir?emi*):ti,ab,kw 6696
#12	(hypotension near/3 induced near/3 hypoperfusion):ti,ab,kw 2
#13	{or #1-#12} 24344
#14	MeSH descriptor: [Rapid Diagnostic Tests] this term only 1
#15	MeSH descriptor: [Point-of-Care Systems] this term only 687
#16	antigen*:ti,ab,kw 28646
#17	(RADT* or RDT*):ti,ab,kw 557
#18	((rapid* or fast* or quick* or time* or short* or (point adj2 care) or poc or bedside or "bed side") near/3 (diagnos* or detect* or assay* or test*)):ti,ab,kw 37108
#19	{or #14-#18} 65218
#20	MeSH descriptor: [Streptococcal Infections] this term only 769
#21	(pneumococc* or pneumoniae* or legionel* or streptococc*):ti,ab,kw 9782
#22	MeSH descriptor: [Influenza, Human] this term only 3545
#23	(influenza* or flu):ti,ab,kw 13062
#24	MeSH descriptor: [Respiratory Syncytial Viruses] this term only 142
#25	(syncytial* or (rs NEXT virus*) or rsv*):ti,ab,kw 1626
#26	{or #20-#25} 22530
#27	#19 and #26 2848
#28	MeSH descriptor: [Polymerase Chain Reaction] explode all trees 2834
#29	(Polymerase Chain Reaction* or pcr* or mpcr* or qpcr*):ti,ab,kw 21901
#30	#28 or #29 21910

Searches		
#31	MeSH descriptor: [Streptococcal Infections] this term only	769
#32	streptococc*:ti,ab,kw	6812
#33	#31 or #32	6812
#34	#30 and #33	351
#35	#27 or #34	3148
#36	#13 and #35	129
#37	"conference":pt or (clinicaltrials or trialsearch):so	726755
#38	#36 not #37 with Publication Year from 1980 to 2024, with Cochrane Library publication date Between Jan 1980 and Feb 2024, in Trials	91

Database name: Epistemonikos

Searches
(title:((title:(sepsis OR systemic inflammatory response syndrome* OR sirs OR septi* OR crypti* OR pyaemi* OR pyemi* OR pyohemi* OR bacteremi* OR bacteraemi* OR fungemi* OR fungaemi* OR parasitemi* OR parasitaemi* OR viremi* OR viraemi* OR hypoperfusion* OR pathogen* OR poison*) OR abstract:(sepsis OR systemic inflammatory response syndrome* OR sirs OR septi* OR crypti* OR pyaemi* OR pyemi* OR pyohemi* OR bacteremi* OR bacteraemi* OR fungemi* OR fungaemi* OR parasitemi* OR parasitaemi* OR viremi* OR viraemi* OR hypoperfusion* OR pathogen* OR poison*)) AND (title:(antigen* OR RADT* OR RDT* OR diagnos* OR detect* OR assay* OR test* OR pneumococc* OR "S pneumoniae*" OR legionel* OR streptococc* OR influenza* OR flu OR syncytial* OR "rs virus*" OR rsv* OR Polymerase Chain Reaction* OR pcr* OR mpcr* OR qpcr*) OR abstract:(antigen* OR RADT* OR RDT* OR diagnos* OR detect* OR assay* OR test* OR pneumococc* OR "S pneumoniae*" OR legionel* OR streptococc* OR influenza* OR flu OR syncytial* OR "rs virus*" OR rsv* OR Polymerase Chain Reaction* OR pcr* OR mpcr* OR qpcr*))) OR abstract:((title:(sepsis OR systemic inflammatory response syndrome* OR sirs OR septi* OR crypti* OR pyaemi* OR pyemi* OR pyohemi* OR bacteremi* OR bacteraemi* OR fungemi* OR fungaemi* OR parasitemi* OR parasitaemi* OR viremi* OR viraemi* OR hypoperfusion* OR pathogen* OR poison*) OR abstract:(sepsis OR systemic inflammatory response syndrome* OR sirs OR septi* OR crypti* OR pyaemi* OR pyemi* OR pyohemi* OR bacteremi* OR bacteraemi* OR fungemi* OR fungaemi* OR parasitemi* OR parasitaemi* OR viremi* OR viraemi* OR hypoperfusion* OR pathogen* OR poison*)) AND (title:(antigen* OR RADT* OR RDT* OR diagnos* OR detect* OR assay* OR test* OR pneumococc* OR "S pneumoniae*" OR legionel* OR streptococc* OR influenza* OR flu OR syncytial* OR "rs virus*" OR rsv* OR Polymerase Chain Reaction* OR pcr* OR mpcr* OR qpcr*) OR abstract:(antigen* OR RADT* OR RDT* OR diagnos* OR detect* OR assay* OR test* OR pneumococc* OR "S pneumoniae*" OR legionel* OR streptococc* OR influenza* OR flu OR syncytial* OR "rs virus*" OR rsv* OR Polymerase Chain Reaction* OR pcr* OR mpcr* OR qpcr*))))

Cost-effectiveness searches

Database results

Databases	Date searched	Database platform	Database segment or version	No. of results downloaded
EconLit	23rd Feb 2024	OVID	Econlit <1886 to February 15, 2024>	0
Embase	23rd Feb 2024	Ovid	Embase <1974 to 2024 February 22>	136
INAHTA	23rd Feb 2024	INAHTA	Searched 23rd Feb 2024	31
MEDLINE	23rd Feb 2024	Ovid	Ovid MEDLINE(R) ALL <1946 to February 22, 2024>	89

Search strategy history

Database name: MEDLINE ALL

Searches
1 exp sepsis/ (144610)
2 sepsis.ti,ab. (122362)
3 blood-borne pathogens/ (3043)
4 (blood* adj2 (pathogen* or poison*)).ti,ab. (3416)
5 exp systemic inflammatory response syndrome/ (152749)
6 'systemic inflammatory response syndrome*.ti,ab. (5973)
7 sirs.ti,ab. (6696)
8 (septicaemi* or septicemi*).ti,ab. (22473)
9 ((septic or cryptic) adj2 shock).ti,ab. (28031)
10 (pyaemi* or pyemi* or pyohemi*).ti,ab. (266)
11 (bacter?emi* or fung?emi* or parasit?emi* or vir?emi*).ti,ab. (73470)
12 (hypotension adj3 induced adj3 hypoperfusion).ti,ab. (7)
13 or/1-12 (288762)

Searches
14 Rapid Diagnostic Tests/ (93)
15 Point-of-Care Systems/ (17014)
16 antigen*.tw. (698368)
17 (RADT* or RDT*).tw. (3721)
18 ((rapid* or fast* or quick* or time* or short* or (point adj2 care) or poc or bedside or "bed side") adj3 (diagnos* or detect* or assay* or test*)).tw. (328876)
19 or/14-18 (1021199)
20 Streptococcal Infections/ (35281)
21 (pneumococc* or "S pneumoniae*" or legionel* or streptococc*).tw. (143961)
22 Influenza, Human/ (59077)
23 (influenza* or flu).tw. (148509)
24 Respiratory Syncytial Viruses/ (6380)
25 (syncytial* or "rs virus*" or rsv*).tw. (28166)
26 or/20-25 (320040)
27 19 and 26 (36379)
28 exp Polymerase Chain Reaction/ (467535)
29 (Polymerase Chain Reaction* or pcr* or mpcr* or qpcr*).tw. (831042)
30 28 or 29 (1024069)
31 Streptococcal Infections/ (35281)
32 streptococc*.tw. (115326)
33 31 or 32 (125570)
34 30 and 33 (8364)
35 27 or 34 (43518)
36 13 and 35 (1858)
37 Economics/ (27525)
38 exp "Costs and Cost Analysis"/ (268916)
39 Economics, Dental/ (1921)
40 exp Economics, Hospital/ (25797)
41 exp Economics, Medical/ (14425)

Searches
42 Economics, Nursing/ (4013)
43 Economics, Pharmaceutical/ (3126)
44 Budgets/ (11786)
45 exp Models, Economic/ (16263)
46 Markov Chains/ (16084)
47 Monte Carlo Method/ (32684)
48 Decision Trees/ (12167)
49 econom\$.tw. (424163)
50 cba.tw. (11294)
51 cea.tw. (27517)
52 cua.tw. (1489)
53 markov\$.tw. (32706)
54 (monte adj carlo).tw. (60654)
55 (decision adj3 (tree\$ or analys\$)).tw. (30655)
56 (cost or costs or costing\$ or costly or costed).tw. (773003)
57 (price\$ or pricing\$).tw. (55233)
58 budget\$.tw. (36901)
59 expenditure\$.tw. (70722)
60 (value adj3 (money or monetary)).tw. (3311)
61 (pharmacoeconomic\$ or (pharmaco adj economic\$)).tw. (4586)
62 or/37-61 (1485944)
63 "Quality of Life"/ (282832)
64 quality of life.tw. (391811)
65 "Value of Life"/ (5822)
66 Quality-Adjusted Life Years/ (16170)
67 quality adjusted life.tw. (18044)
68 (qaly\$ or qald\$ or qale\$ or qtime\$).tw. (15085)
69 disability adjusted life.tw. (5789)

Searches
70 daly\$.tw. (5201) 71 Health Status Indicators/ (24106) 72 (sf36 or sf 36 or short form 36 or shortform 36 or sf thirtysix or sf thirty six or shortform thirtysix or shortform thirty six or short form thirtysix or short form thirty six).tw. (31334) 73 (sf6 or sf 6 or short form 6 or shortform 6 or sf six or sfsix or shortform six or short form six).tw. (2717) 74 (sf12 or sf 12 or short form 12 or shortform 12 or sf twelve or sftwelve or shortform twelve or short form twelve).tw. (7907) 75 (sf16 or sf 16 or short form 16 or shortform 16 or sf sixteen or sfsixteen or shortform sixteen or short form sixteen).tw. (41) 76 (sf20 or sf 20 or short form 20 or shortform 20 or sf twenty or sftwenty or shortform twenty or short form twenty).tw. (467) 77 (euroqol or euro qol or eq5d or eq 5d).tw. (17629) 78 (qol or hql or hqol or hrqol).tw. (76499) 79 (hye or hyes).tw. (77) 80 health\$ year\$ equivalent\$.tw. (40) 81 utilit\$.tw. (279381) 82 (hui or hui1 or hui2 or hui3).tw. (2049) 83 disutili\$.tw. (662) 84 rosser.tw. (108) 85 quality of wellbeing.tw. (49) 86 quality of well-being.tw. (496) 87 qwb.tw. (219) 88 willingness to pay.tw. (9032) 89 standard gamble\$.tw. (912) 90 time trade off.tw. (1423) 91 time tradeoff.tw. (266) 92 tto.tw. (1443) 93 or/63-92 (779801) 94 Cost-Benefit Analysis/ (94101)

Searches
95 Quality-Adjusted Life Years/ (16170)
96 Markov Chains/ (16084)
97 exp Models, Economic/ (16263)
98 cost*.ti. (148147)
99 (cost* adj2 utilit*).tw. (7951)
100 (cost* adj2 (effective* or assess* or evaluat* or analys* or model* or benefit* or threshold* or quality or expens* or saving* or reduc*)).tw. (285781)
101 (economic* adj2 (evaluat* or assess* or analys* or model* or outcome* or benefit* or threshold* or expens* or saving* or reduc*)).tw. (48660)
102 (qualit* adj2 adjust* adj2 life*).tw. (18411)
103 QALY*.tw. (14926)
104 (incremental* adj2 cost*).tw. (17992)
105 ICER.tw. (6302)
106 utilities.tw. (9697)
107 markov*.tw. (32706)
108 (dollar* or USD or cents or pound or pounds or GBP or sterling* or pence or euro or euros or yen or JPY).tw. (55458)
109 ((utility or effective*) adj2 analys*).tw. (25789)
110 (willing* adj2 pay*).tw. (10217)
111 (EQ5D* or EQ-5D*).tw. (14032)
112 ((euroqol or euro-qol or euroquol or euro-quol or eurocol or euro-col) adj3 ("5" or five)).tw. (4071)
113 (european* adj2 quality adj3 ("5" or five)).tw. (743)
114 or/94-113 (515398)
115 62 or 93 or 114 (2192618)
116 36 and 115 (118)
117 limit 116 to english language (113)
118 animals/ not humans/ (5164074)
119 117 not 118 (99)
120 limit 119 to yr="1980 - 2024" (99)

Searches
121 afghanistan/ or africa/ or africa, northern/ or africa, central/ or africa, eastern/ or "africa south of the sahara"/ or africa, southern/ or africa, western/ or albania/ or algeria/ or andorra/ or angola/ or "antigua and barbuda"/ or argentina/ or armenia/ or azerbaijan/ or bahamas/ or bahrain/ or bangladesh/ or barbados/ or belize/ or benin/ or bhutan/ or bolivia/ or borneo/ or "bosnia and herzegovina"/ or botswana/ or brazil/ or brunei/ or bulgaria/ or burkina faso/ or burundi/ or cabo verde/ or cambodia/ or cameroon/ or central african republic/ or chad/ or exp china/ or comoros/ or congo/ or cote d'ivoire/ or croatia/ or cuba/ or "democratic republic of the congo"/ or cyprus/ or djibouti/ or dominica/ or dominican republic/ or ecuador/ or egypt/ or el salvador/ or equatorial guinea/ or eritrea/ or eswatini/ or ethiopia/ or fiji/ or gabon/ or gambia/ or "georgia (republic)"/ or ghana/ or grenada/ or guatemala/ or guinea/ or guinea-bissau/ or guyana/ or haiti/ or honduras/ or independent state of samoa/ or exp india/ or indian ocean islands/ or indochina/ or indonesia/ or iran/ or iraq/ or jamaica/ or jordan/ or kazakhstan/ or kenya/ or kosovo/ or kuwait/ or kyrgyzstan/ or laos/ or lebanon/ or liechtenstein/ or lesotho/ or liberia/ or libya/ or madagascar/ or malaysia/ or malawi/ or mali/ or malta/ or mauritania/ or mauritius/ or mekong valley/ or melanesia/ or micronesia/ or monaco/ or mongolia/ or montenegro/ or morocco/ or mozambique/ or myanmar/ or namibia/ or nepal/ or nicaragua/ or niger/ or nigeria/ or oman/ or pakistan/ or palau/ or exp panama/ or papua new guinea/ or paraguay/ or peru/ or philippines/ or qatar/ or "republic of belarus"/ or "republic of north macedonia"/ or romania/ or exp russia/ or rwanda/ or "saint kitts and nevis"/ or saint lucia/ or "saint vincent and the grenadines"/ or "sao tome and principe"/ or saudi arabia/ or serbia/ or sierra leone/ or senegal/ or seychelles/ or singapore/ or somalia/ or south africa/ or south sudan/ or sri lanka/ or sudan/ or suriname/ or syria/ or taiwan/ or tajikistan/ or tanzania/ or thailand/ or timor-leste/ or togo/ or tonga/ or "trinidad and tobago"/ or tunisia/ or turkmenistan/ or uganda/ or ukraine/ or united arab emirates/ or uruguay/ or uzbekistan/ or vanuatu/ or venezuela/ or vietnam/ or west indies/ or yemen/ or zambia/ or zimbabwe/ (1327853) 122 "organisation for economic co-operation and development"/ (589) 123 australasia/ or exp australia/ or austria/ or baltic states/ or belgium/ or exp canada/ or chile/ or colombia/ or costa rica/ or czech republic/ or exp denmark/ or estonia/ or europe/ or finland/ or exp france/ or exp germany/ or greece/ or hungary/ or iceland/ or ireland/ or israel/ or exp italy/ or exp japan/ or korea/ or latvia/ or lithuania/ or luxembourg/ or mexico/ or netherlands/ or new zealand/ or north america/ or exp norway/ or poland/ or portugal/ or exp "republic of korea"/ or "scandinavian and nordic countries"/ or slovakia/ or slovenia/ or spain/ or sweden/ or switzerland/ or turkey/ or exp united kingdom/ or exp united states/ (3533516) 124 european union/ (17915) 125 developed countries/ (21489) 126 or/122-125 (3549747) 127 121 not 126 (1237389) 128 120 not 127 (89)

Database name: Embase

Searches
1 exp sepsis/ (346994)
2 sepsis.ti,ab. (191171)
3 bloodborne bacterium/ (2169)
4 (blood* adj2 (pathogen* or poison*)).ti,ab. (4448)
5 exp systemic inflammatory response syndrome/ (360627)
6 'systemic inflammatory response syndrome*.ti,ab. (8819)
7 sirs.ti,ab. (11898)
8 (septicaemi* or septicemi*).ti,ab. (26336)
9 ((septic or cryptic) adj2 shock).ti,ab. (45770)
10 (pyaemi* or pyemi* or pyohemi*).ti,ab. (134)
11 (bacter?emi* or fung?emi* or parasit?emi* or vir?emi*).ti,ab. (101504)
12 (hypotension adj3 induced adj3 hypoperfusion).ti,ab. (8)
13 or/1-12 (480851)
14 rapid test/ (8750)
15 "point of care testing"/ (22429)
16 antigen*.tw. (854316)
17 (RADT* or RDT*).tw. (5763)
18 ((rapid* or fast* or quick* or time* or short* or (point adj2 care) or poc or bedside or "bed side") adj3 (diagnos* or detect* or assay* or test*)).tw. (478026)
19 or/14-18 (1322856)
20 streptococcus infection/ or exp group a streptococcal infection/ (35018)
21 pneumococcal infection/ or pneumococcal bacteremia/ (11474)
22 (pneumococc* or "S pneumoniae*" or legionel* or streptococc*).tw. (167744)
23 exp influenza/ (110523)
24 (influenza* or flu).tw. (174863)
25 pneumovirus/ or exp human respiratory syncytial virus/ (9770)
26 (syncytial* or "rs virus*" or rsv* or pneumovir*).tw. (35903)
27 or/20-26 (397520)

Searches
28 19 and 27 (45605)
29 exp polymerase chain reaction/ (1257469)
30 (Polymerase Chain Reaction* or pcr* or mpcr* or qpcr*).tw. (1160126)
31 29 or 30 (1604312)
32 streptococcus infection/ or exp group a streptococcal infection/ (35018)
33 streptococc*.tw. (132090)
34 32 or 33 (149693)
35 31 and 34 (13074)
36 28 or 35 (56776)
37 13 and 36 (3529)
38 exp Health Economics/ (1058720)
39 exp "Health Care Cost"/ (348967)
40 exp Pharmacoeconomics/ (238619)
41 Monte Carlo Method/ (52653)
42 Decision Tree/ (23468)
43 econom\$.tw. (514132)
44 cba.tw. (14428)
45 cea.tw. (42436)
46 cua.tw. (1928)
47 markov\$.tw. (41052)
48 (monte adj carlo).tw. (63073)
49 (decision adj3 (tree\$ or analys\$)).tw. (40911)
50 (cost or costs or costing\$ or costly or costed).tw. (1025546)
51 (price\$ or pricing\$).tw. (75528)
52 budget\$.tw. (48682)
53 expenditure\$.tw. (93235)
54 (value adj3 (money or monetary)).tw. (4438)
55 (pharmacoeconomic\$ or (pharmaco adj economic\$)).tw. (9828)

Searches
56 or/38-55 (2319872) 57 "Quality of Life"/ (649689) 58 Quality Adjusted Life Year/ (36722) 59 Quality of Life Index/ (3253) 60 Short Form 36/ (40941) 61 Health Status/ (155849) 62 quality of life.tw. (613383) 63 quality adjusted life.tw. (27437) 64 (qaly\$ or qald\$ or qale\$ or qtime\$).tw. (27893) 65 disability adjusted life.tw. (6921) 66 daly\$.tw. (6665) 67 (sf36 or sf 36 or short form 36 or shortform 36 or sf thirtysix or sf thirty six or shortform thirtysix or shortform thirty six or short form thirtysix or short form thirty six).tw. (50927) 68 (sf6 or sf 6 or short form 6 or shortform 6 or sf six or sfsix or shortform six or short form six).tw. (3035) 69 (sf12 or sf 12 or short form 12 or shortform 12 or sf twelve or sftwelve or shortform twelve or short form twelve).tw. (12547) 70 (sf16 or sf 16 or short form 16 or shortform 16 or sf sixteen or sfsixteen or shortform sixteen or short form sixteen).tw. (72) 71 (sf20 or sf 20 or short form 20 or shortform 20 or sf twenty or sftwenty or shortform twenty or short form twenty).tw. (536) 72 (euroqol or euro qol or eq5d or eq 5d).tw. (31688) 73 (qol or hql or hqol or hrqol).tw. (135923) 74 (hye or hyes).tw. (187) 75 health\$ year\$ equivalent\$.tw. (41) 76 utilit\$.tw. (388847) 77 (hui or hui1 or hui2 or hui3).tw. (3255) 78 disutili\$.tw. (1331) 79 rosser.tw. (141) 80 quality of wellbeing.tw. (77)

Searches
81 quality of well-being.tw. (578)
82 qwb.tw. (273)
83 willingness to pay.tw. (13538)
84 standard gamble\$.tw. (1207)
85 time trade off.tw. (2123)
86 time tradeoff.tw. (318)
87 tto.tw. (2300)
88 or/57-87 (1343484)
89 cost utility analysis/ (12744)
90 quality adjusted life year/ (36722)
91 cost*.ti. (198428)
92 (cost* adj2 utilit*).tw. (13099)
93 (cost* adj2 (effective* or assess* or evaluat* or analys* or model* or benefit* or threshold* or quality or expens* or saving* or reduc*)).tw. (393848)
94 (economic* adj2 (evaluat* or assess* or analys* or model* or outcome* or benefit* or threshold* or expens* or saving* or reduc*)).tw. (68126)
95 (qualit* adj2 adjust* adj2 life*).tw. (28082)
96 QALY*.tw. (27620)
97 (incremental* adj2 cost*).tw. (29499)
98 ICER.tw. (13498)
99 utilities.tw. (15482)
100 markov*.tw. (41052)
101 (dollar* or USD or cents or pound or pounds or GBP or sterling* or pence or euro or euros or yen or JPY).tw. (74008)
102 ((utility or effective*) adj2 analys*).tw. (38771)
103 (willing* adj2 pay*).tw. (15206)
104 (EQ5D* or EQ-5D*).tw. (26971)
105 ((euroqol or euro-qol or euroquol or euro-quol or eurocol or euro-col) adj3 ("5" or five)).tw. (5446)
106 (european* adj2 quality adj3 ("5" or five)).tw. (1029)

Searches
107 or/89-106 (647973)
108 56 or 88 or 107 (3494738)
109 37 and 108 (285)
110 limit 109 to english language (277)
111 nonhuman/ not human/ (5386407)
112 110 not 111 (234)
113 limit 112 to yr="1980 -Current" (231)
114 afghanistan/ or africa/ or "africa south of the sahara"/ or albania/ or algeria/ or andorra/ or angola/ or argentina/ or "antigua and barbuda"/ or armenia/ or exp azerbaijan/ or bahamas/ or bahrain/ or bangladesh/ or barbados/ or belarus/ or belize/ or benin/ or bhutan/ or bolivia/ or borneo/ or exp "bosnia and herzegovina"/ or botswana/ or exp brazil/ or brunei darussalam/ or bulgaria/ or burkina faso/ or burundi/ or cambodia/ or cameroon/ or cape verde/ or central africa/ or central african republic/ or chad/ or exp china/ or comoros/ or congo/ or cook islands/ or cote d'ivoire/ or croatia/ or cuba/ or cyprus/ or democratic republic congo/ or djibouti/ or dominica/ or dominican republic/ or ecuador/ or el salvador/ or egypt/ or equatorial guinea/ or eritrea/ or eswatini/ or ethiopia/ or exp "federated states of micronesia"/ or fiji/ or gabon/ or gambia/ or exp "georgia (republic)"/ or ghana/ or grenada/ or guatemala/ or guinea/ or guinea-bissau/ or guyana/ or haiti/ or honduras/ or exp india/ or exp indonesia/ or iran/ or exp iraq/ or jamaica/ or jordan/ or kazakhstan/ or kenya/ or kiribati/ or kosovo/ or kuwait/ or kyrgyzstan/ or laos/ or lebanon/ or liechtenstein/ or lesotho/ or liberia/ or libyan arab jamahiriya/ or madagascar/ or malawi/ or exp malaysia/ or maldives/ or mali/ or malta/ or mauritania/ or mauritius/ or melanesia/ or moldova/ or monaco/ or mongolia/ or "montenegro (republic)"/ or morocco/ or mozambique/ or myanmar/ or namibia/ or nauru/ or nepal/ or nicaragua/ or niger/ or nigeria/ or niue/ or north africa/ or oman/ or exp pakistan/ or palau/ or palestine/ or panama/ or papua new guinea/ or paraguay/ or peru/ or philippines/ or polynesia/ or qatar/ or "republic of north macedonia"/ or romania/ or exp russian federation/ or rwanda/ or sahel/ or "saint kitts and nevis"/ or "saint lucia"/ or "saint vincent and the grenadines"/ or saudi arabia/ or senegal/ or exp serbia/ or seychelles/ or sierra leone/ or singapore/ or "sao tome and principe"/ or solomon islands/ or exp somalia/ or south africa/ or south asia/ or south sudan/ or exp southeast asia/ or sri lanka/ or sudan/ or suriname/ or syrian arab republic/ or taiwan/ or tajikistan/ or tanzania/ or thailand/ or timor-leste/ or togo/ or tonga/ or "trinidad and tobago"/ or tunisia/ or turkmenistan/ or tuvalu/ or uganda/ or exp ukraine/ or exp united arab emirates/ or uruguay/ or exp uzbekistan/ or vanuatu/ or venezuela/ or viet nam/ or western sahara/ or yemen/ or zambia/ or zimbabwe/ (1743512)
115 exp "organisation for economic co-operation and development"/ (2865)
116 exp australia/ or "australia and new zealand"/ or austria/ or baltic states/ or exp belgium/ or exp canada/ or chile/ or colombia/ or costa rica/ or czech republic/ or denmark/ or estonia/ or europe/ or exp finland/ or exp france/ or exp germany/ or

Searches
greece/ or hungary/ or iceland/ or ireland/ or israel/ or exp italy/ or japan/ or korea/ or latvia/ or lithuania/ or luxembourg/ or exp mexico/ or netherlands/ or new zealand/ or north america/ or exp norway/ or poland/ or exp portugal/ or scandinavia/ or sweden/ or slovakia/ or slovenia/ or south korea/ or exp spain/ or switzerland/ or "Turkey (republic)"/ or exp united kingdom/ or exp united states/ or western europe/ (3838365)
117 european union/ (31830)
118 developed country/ (36037)
119 or/115-118 (3872617)
120 114 not 119 (1587027)
121 113 not 120 (207)
122 (conference abstract* or conference review or conference paper or conference proceeding).db,pt,su. (5844635)
123 121 not 122 (136)

Database name: EconLit

Searches
1 [exp sepsis/] (0)
2 sepsis.ti,ab. (24)
3 [blood-borne pathogens/] (0)
4 (blood* adj2 (pathogen* or poison*)).ti,ab. (0)
5 [exp systemic inflammatory response syndrome/] (0)
6 'systemic inflammatory response syndrome*.ti,ab. (0)
7 sirs.ti,ab. (16)
8 (septicaemi* or septicemi*).ti,ab. (2)
9 ((septic or cryptic) adj2 shock).ti,ab. (2)
10 (pyaemi* or pyemi* or pyohemi*).ti,ab. (0)
11 (bacter?emi* or fung?emi* or parasit?emi* or vir?emi*).ti,ab. (8)
12 (hypotension adj3 induced adj3 hypoperfusion).ti,ab. (0)
13 or/1-12 (50)
14 [Rapid Diagnostic Tests/] (0)
15 [Point-of-Care Systems/] (0)

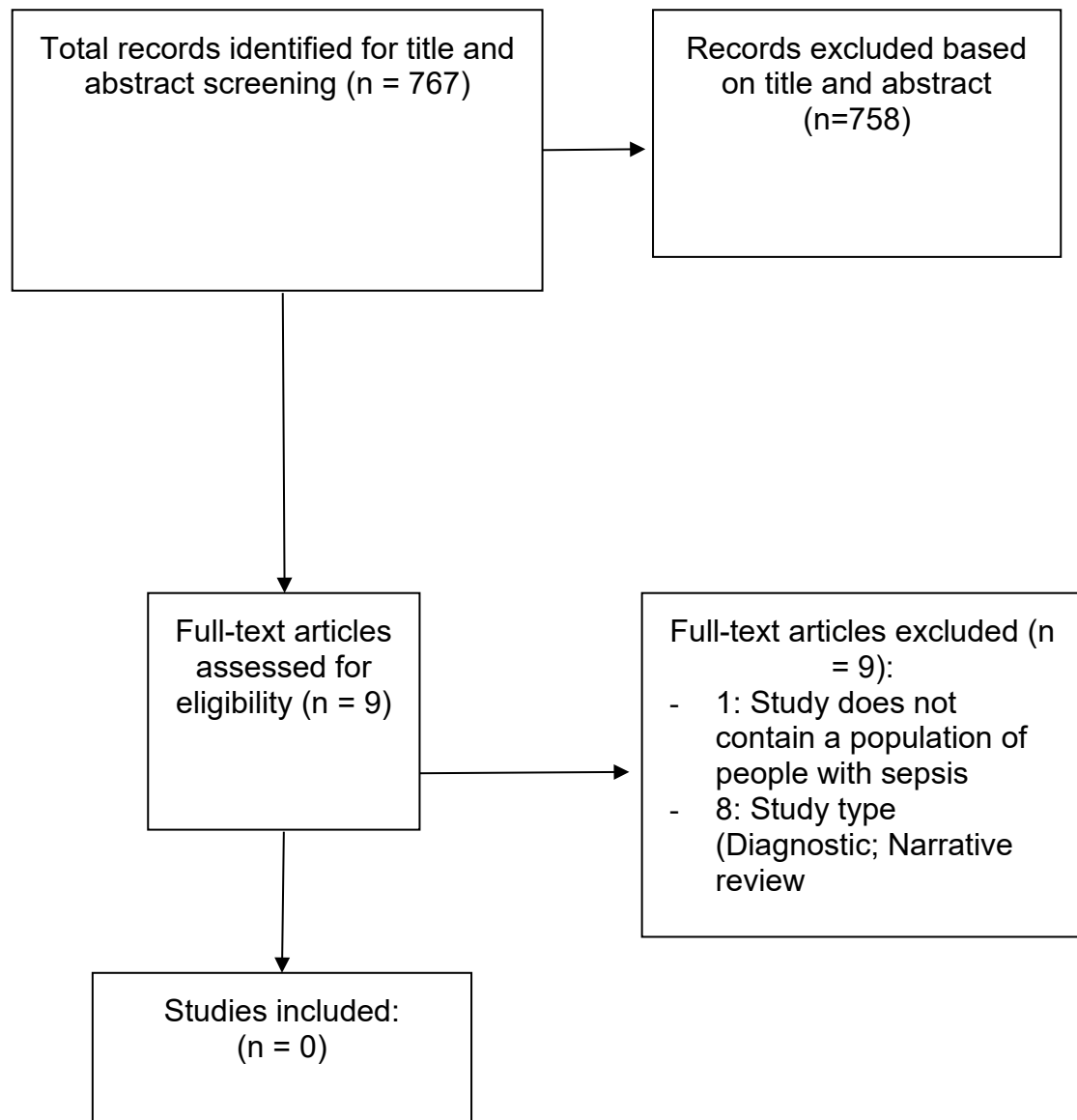
Searches
16 antigen*.tw. (46)
17 (RADT* or RDT*).tw. (49)
18 ((rapid* or fast* or quick* or time* or short* or (point adj2 care) or poc or bedside or "bed side") adj3 (diagnos* or detect* or assay* or test*)).tw. (2615)
19 or/14-18 (2694)
20 [Streptococcal Infections/] (0)
21 (pneumococc* or "S pneumoniae*" or legionel* or streptococc*).tw. (43)
22 [Influenza, Human/] (0)
23 (influenza* or flu).tw. (727)
24 [Respiratory Syncytial Viruses/] (0)
25 (syncytial* or "rs virus*" or rsv*).tw. (29)
26 or/20-25 (788)
27 19 and 26 (9)
28 [exp Polymerase Chain Reaction/] (0)
29 (Polymerase Chain Reaction* or pcr* or mpcr* or qpcr*).tw. (140)
30 28 or 29 (140)
31 [Streptococcal Infections/] (0)
32 streptococc*.tw. (7)
33 31 or 32 (7)
34 30 and 33 (0)
35 27 or 34 (9)
36 13 and 35 (0)
37 limit 36 to yr="1980 -Current" (0)

Database name: INAHTA

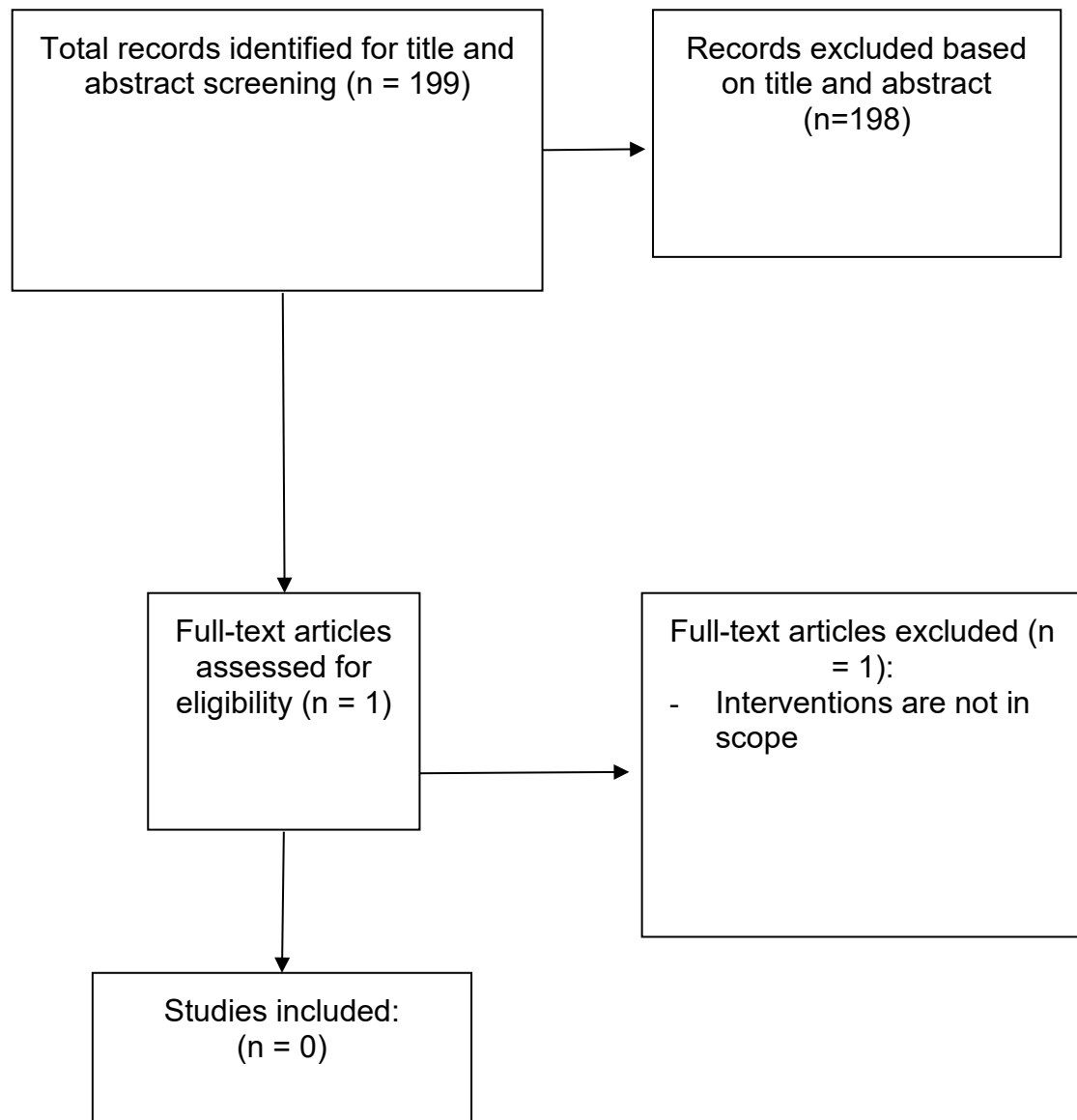
Searches

(antigen* or RADT* or RDT* or ((rapid* or fast* or quick* or time* or short* or (point adj2 care) or poc or bedside or "bed side") and (diagnos* or detect* or assay* or test*)) or influenza* or flu) or syncytial* or "rs virus*" or rsv*) AND (sepsis or (blood* and (pathogen* or poison*)) or systemic inflammatory response syndrome* or sirs or septicaemi* or septicemi* or ((septic or cryptic) and shock) or pyaemi* or pyemi* or pyohemi* or bacteremi* OR bacteriaemi* OR fungemi* OR fungaemi* OR parasitemi* OR parasitaemi* OR viremi* OR viraemi* OR hypoperfusion* OR pathogen* OR poison*)

Appendix C- Evidence study selection



Appendix D – Economic evidence study selection



Appendix E – Excluded studies

Study	Reason for exclusion
Buehler, SS, Madison, B, Snyder, SR et al. (2016) Effectiveness of Practices To Increase Timeliness of Providing Targeted Therapy for Inpatients with Bloodstream Infections: a Laboratory Medicine Best Practices Systematic Review and Meta-analysis. Clinical microbiology reviews 29(1): 59-103	- Does not contain a population of people with Sepsis (Population)
Chang, SS, Hsieh, WH, Liu, TS et al. (2013) Multiplex PCR system for rapid detection of pathogens in patients with presumed sepsis - a systemic review and meta-analysis. PloS one 8(5): e62323	- Diagnostic accuracy (Study design)
Li, Y, Ma, M, Xu, X et al. (2022) Value of digital PCR in the early diagnosis of sepsis: A systematic review and meta-analysis. Journal of critical care 72: 154138	- Diagnostic accuracy (Study design)
Ljungstrom, L R, Jacobsson, G, Claesson, B E B et al. (2017) Respiratory viral infections are underdiagnosed in patients with suspected sepsis. European journal of clinical microbiology & infectious diseases : official publication of the European Society of Clinical Microbiology 36(10): 1767-1776	- Diagnostic accuracy (Study design)
Póvoa, P and Coelho, L (2021) Which Biomarkers Can Be Used as Diagnostic Tools for Infection in Suspected Sepsis?. Seminars in respiratory and critical care medicine 42(5): 662-671	- Narrative review (Study design)
Rahsepar, S, Sanie Jahromi, MS, Abiri, S et al. (2022) Point-of-Care Tests' Role in Time Metrics of Urgent Interventions in Emergency Department; a Systematic Review of Literature. Archives of academic emergency medicine 10(1): e82	- Narrative review (Study design)
Rutanga, J.P. and Nyirahabimana, T. (2016) Clinical Significance of Molecular Diagnostic Tools for Bacterial Bloodstream Infections: A Systematic Review. Interdisciplinary Perspectives on Infectious Diseases 2016(nopagination): 6412085	- Diagnostic accuracy review (Study design)
Schreiber, J, Nierhaus, A, Braune, S A et al. (2013) Comparison of three different	- Diagnostic accuracy (Study design)

Study	Reason for exclusion
commercial PCR assays for the detection of pathogens in critically ill sepsis patients. Medizinische Klinik, Intensivmedizin und Notfallmedizin 108(4): 311-8	
Wang, H.-Y., Kim, J., Kim, S. et al. (2015) Performance of PCR-REBA assay for screening and identifying pathogens directly in whole blood of patients with suspected sepsis. Journal of Applied Microbiology 119(5): 1433-1442	- Diagnostic accuracy (Study design)

Economic studies

Study	Reason for exclusion
Stevenson, M, Pandor, A, Martyn-St James, M, et al. (2016) Sepsis: the LightCycler SeptiFast Test MGRADE®, SepsisTest™ and IRIDICA BAC BSI assay for rapidly identifying bloodstream bacteria and fungi – a systematic review and economic evaluation. Health Technology Assessment 20(46):1-246	- Interventions are not in scope (either not on the UK market or return results out of the 6-hour window)