

## Appendix

Appendix S1. Characteristics of the included systematic reviews.

Reference	Region	Objective	Setting	Search term period	Intervention(s)	Quality assessment tool	Infection/organism	No. studies included
Aboelela <i>et al.</i> (2006) [34]	-	Review the use of barrier precautions/patient isolation and surveillance cultures to prevent the transmission of MDROs	Hospital	2004-2005	1. IPC bundle 2. Screening	Bespoke tool created by authors	1. MRSA	29, with 7 meeting minimum quality criteria required for synthesis
Allel <i>et al.</i> (2024) [7]	Global	Review economic evidence for pharmaceutical and non-pharmaceutical interventions to reduce, monitor and control antibiotic resistance	Hospital	Up to 2023	1. Screening 2. Surveillance 3. PPE 4. Decolonisation 5. IPC bundle 6. ABS	Drummond checklist for economic evaluation	1. CRO 2. MDRO 3. MRSA 4. VRE	59, with 27 non-pharmaceutical intervention studies
Arefian <i>et al.</i> (2016) [27]	Global	Review the costs and benefits of interventions preventing hospital-acquired infections	Hospital	2009-2014	1. Decolonisation 2. Education and training 3. Hand hygiene 4. IPC bundle	Scottish Intercollegiate Guidelines Network; CHEERS	1. BSI 2. Pneumonia 3. ESBL-KP 4. HCAI 5. SSI 6. UTI	27
Chen <i>et al.</i> (2013) [40]	-	Review whether <i>S. aureus</i> screening and decolonisation reduce SSIs in orthopaedic patients and is cost-effective	Orthopaedics	1968-2012	1. Screening	Bespoke tool created by authors	1. <i>S. aureus</i> SSI, including resistant infections	25, with 19 presented in results table
Cooper <i>et al.</i> (2003) [33]	-	Review evidence for the effectiveness of different isolation policies and screening practices in reducing the incidence of MRSA	Hospital	Up to 2000	1. IPC bundle 2. Screening	Bespoke tool created by authors	1. MRSA	46
D'Onofrio <i>et al.</i> (2020) [42]	-	Review impact on antimicrobial management and patient outcomes of molecular diagnostics for pathogen and resistance gene identification compared with blood cultures	ICU	Up to 2019	1. Screening	Cochrane risk of bias tool	1. Sepsis or suspected BSI	25
Farbman <i>et al.</i> (2013) [31]	-	Review the cost and cost-benefit of infection control interventions against MRSA	Hospital; ICU	Up to 2012	1. Education and training 2. IPC bundle 3. Screening	Quality of Health Economic Studies tool	1. MRSA	36
Halim <i>et al.</i> (2016) [37]	Global	Review the cost and effectiveness of different	Hospital	2005-2015	1. Screening	No quality assessment undertaken	1. MRSA	47

Reference	Region	Objective	Setting	Search term period	Intervention(s)	Quality assessment tool	Infection/organism	No. studies included
		methods of pre-admission MRSA screening						
Ibrahim <i>et al.</i> (2017) [26]	-	Review the cost-effectiveness of implementing ABS in the hospital setting	Hospital	2000-2017	1. ABS	JBIC Critical Appraisal Checklist for Economic Evaluations; CHEERS	1. MDRO	5
Lingervelder <i>et al.</i> (2021) [30]	-	Review the health economic impact of introducing point-of-care testing	Hospital; ICU	2007-2019	1. Screening 2. Diagnostics	CHEERS	1. MRSA 2. Influenza	44
Loveday <i>et al.</i> (2006) [39]	-	Review interventions to prevent and control the transmission of MRSA in hospital settings	Hospital; ICU	1996-2004	1. Screening	Scottish Intercollegiate Guideline Network for study quality assessment; bespoke tool adapted from previous studies; Appraisal of Guidelines for Research and Evaluation instrument for national guidelines	1. MRSA	25
MacDougall <i>et al.</i> (2020) [35]	USA; Canada; Germany	Review evidence on economic evaluation of VRE control practices	Hospital; ICU; oncology	1985-2018	1. IPC bundle 2. Screening	JBIC checklist for economic evaluations	1. VRE	9
McFarland <i>et al.</i> (2020) [28]	-	Review the economic impact of prevention measures for SSI	Hospital; cardiology; maternity; orthopaedics	Up to 2020	1. Decolonisation 2. Screening	Drummond checklist for economic evaluation	1. SSI	32
McGinagle <i>et al.</i> (2008) [38]	Europe; USA; Brazil; Israel	Review the use of active surveillance cultures (ASCs) and control of MRSA	ICU	Up to 2007	1. Screening	US Preventive Services Task Force guidelines	1. MRSA	20
Painter <i>et al.</i> (2023) [8]	Global	Review the value for money of different interventions affecting AMR	Hospital; ICU	2000-2021	1. ABS 2. Decolonisation 3. Education and training 4. Screening 5. Surveillance	Bespoke tool created by authors	1. BSI 2. CRO 3. MDRO 4. MRSA	35
Price <i>et al.</i> (2018) [36]	-	Review evidence on the effectiveness of IPC interventions at the national level	Hospital	2000-2017	1. IPC bundle 2. Screening	Phillips' checklist	1. BSI 2. CDI 3. HCAI 4. MRSA	30
Price <i>et al.</i> (2023) [10]	Argentina; Canada; Italy; UK; USA; Australia	Review available evidence relating to the economic implications of the use of WGS in the surveillance of bacterial pathogens	Hospital	1991-2021	1. Surveillance	Drummond-Jefferson checklist	1. HCAI, including resistant infections	9

Reference	Region	Objective	Setting	Search term period	Intervention(s)	Quality assessment tool	Infection/organism	No. studies included
Ribau <i>et al.</i> (2021) [41]	-	Review which preoperative <i>S. aureus</i> screening/treatment strategy is most cost-effective for total joint arthroplasty	Orthopaedics	Up to 2020	1. Screening	No quality assessment undertaken	1. <i>S. aureus</i> SSI, including resistant infections	32, with 8 included in the cost-effectiveness review
Rice <i>et al.</i> (2023) [9]	Global	Review the cost-effectiveness of interventions to limit the spread of HCAs	Hospital	2009-2022	1. Education and training 2. Environmental cleaning 3. Hand hygiene 4. IPC bundle 5. PPE 6. Screening 7. Surveillance	British Medical Journal checklist for economic submissions	1. HCAI, including resistant infections	73, with 36 meeting minimum quality criteria required for synthesis
Rojas-Garcia <i>et al.</i> (2021) [29]	Global	Review of economic evaluations to analyse the cost-effectiveness of diagnostic methods in sepsis	Hospital	2000-2020	1. Diagnostics	CHEERS	1. Sepsis	16
Shiri <i>et al.</i> (2019) [43]	Global	Review evidence on resource use, costs, health utilities, and cost-effectiveness for pneumococcal disease and associated interventions	Hospital	1990-2016	1. Screening	CHEERS	1. Pneumococcal disease	383, with 178 included in the cost-effectiveness review
Tchouaket Nguemeleu <i>et al.</i> (2020) [32]	OECD countries	Review cost-effectiveness of interventions related to HCAI prevention and control interventions in medical and surgical units	Medical; surgical	2000-2019	1. Hand hygiene 2. IPC bundle 3. Screening	Scottish Intercollegiate Guidelines; Drummond checklist for economic evaluation; Cochrane criteria for economic evaluation	1. MRSA 2. VRE	7
Tolley <i>et al.</i> (2024) [11]	Global	Reviewed which point-of-care tests addressing AMR have undergone economic evaluation in primary and secondary healthcare	Maternity	2000-2023	1. ABS	Consensus of Health Economic Criteria	1. MDRO	20
Tran <i>et al.</i> (2023) [12]	-	Reviewed the economic evidence of WGS implementation for pathogen identification and surveillance	Hospital	No restrictions, date search strategy run unclear	1. Surveillance	Consensus of Health Economic Criteria	1. HCAI, including resistant infections	19

HCAI = healthcare-associated infection. PPE = personal protective equipment. IPC = infection prevention and control. - = unspecified. ABS = antimicrobial stewardship. CRO = carbapenem resistant organism. MDRO = multidrug resistant organism. MRSA = methicillin-resistant *Staphylococcus aureus*. VRE = vancomycin-resistant *Enterococcus*. CHEERS = Consolidated Health Economic Evaluation Reporting Standards. BSI = bloodstream infection. ESBL-KP = extended-spectrum beta-lactamase-producing *Klebsiella pneumoniae*. SSI

= surgical site infection. UTI = urinary tract infection. ICU = intensive care unit. WGS = whole-genome sequencing. CDI = *Clostridioides difficile* infection. AMR = antimicrobial resistance.

## Appendix S2. PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
<b>TITLE</b>			
Title	1	Identify the report as a systematic review.	Page 1
<b>ABSTRACT</b>			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	Page 1
<b>INTRODUCTION</b>			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	Page 1 & 2
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	Page 2
<b>METHODS</b>			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	Page 2, 3 & 4
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	Page 3
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	Appendix S3
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	Page 3
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	Page 3
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	Appendix S4
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	Appendix S4
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	Page 4
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	Page 4
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	Page 3 & 4
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	Page 4 & 5
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	Page 4 & 5
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	Page 4 & 5
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	N/A

Section and Topic	Item #	Checklist item	Location where item is reported
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	N/A
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	N/A
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	Page 4 & 5
<b>RESULTS</b>			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	Page 5 & Figure 1
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	Figure 1
Study characteristics	17	Cite each included study and present its characteristics.	Appendix S1
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	Appendix S5
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	Appendix S6
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	Table 1
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	N/A
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	N/A
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	N/A
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	N/A
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	Table 1 & page 5-10
<b>DISCUSSION</b>			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	Page 10-14
	23b	Discuss any limitations of the evidence included in the review.	Page 10-14
	23c	Discuss any limitations of the review processes used.	Page 14
	23d	Discuss implications of the results for practice, policy, and future research.	Page 10-14
<b>OTHER INFORMATION</b>			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Page 2

Section and Topic	Item #	Checklist item	Location where item is reported
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	Page 2
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	N/A
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	Page 15
Competing interests	26	Declare any competing interests of review authors.	Page 15
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	Page 4 & Appendix S6

### Appendix S3. Search strategy

The following terms were used to search Ovid Medline ALL (1946 to 9 April 2024), Ovid Embase (1974 to 9 April 2024) and EBSCO EconLit (1996 to 3 April 2024) on 10 April 2024.

#### Ovid Medline ALL

1	healthcare associat* infect*.tw,kf.
2	health care associat* infect*.tw,kf.
3	hospital* associat* infect*.tw,kf.
4	hospital acquired infect*.tw,kf.
5	HCAI*.tw,kf.
6	nosocomia*.tw,kf.
7	MRSA.tw,kf.
8	(bacteremia* or bacteraemia*).tw,kf.
9	((staphylococc* adj2 (infect* or aureus)) or S aureus).tw,kf.
10	(clostridium difficile or clostridioides difficile or C difficile or C-difficile or C-diff).tw,kf.
11	(norovirus* or norwalk).tw,kf.
12	carbapenem*.ti,kw.
13	enterobacter*.tw,kf.
14	klebsiella.tw,kf.
15	(escherichia coli or e-coli).tw,kf.
16	citrobacter*.tw,kf.
17	pseudomonas.tw,kf.
18	acinetobacter*.tw,kf.
19	Cross Infection/
20	Methicillin-Resistant Staphylococcus aureus/
21	Bacteremia/
22	exp Staphylococcus aureus/
23	Clostridioides difficile/
24	exp Norovirus/
25	exp Carbapenems/
26	exp enterobacteriaceae/ or exp enterobacter/
27	exp Klebsiella/
28	exp Escherichia coli/
29	exp Citrobacter/
30	exp Pseudomonas/
31	exp Acinetobacter/
32	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 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 or 31
33	(antimicrobial adj2 resist*).tw,kf.
34	(anti-microbial adj2 resist*).tw,kf.
35	(antibiotic* adj2 resist*).tw,kf.
36	(anti-biotic* adj2 resist*).tw,kf.
37	drug resist*.tw,kf.



38	antimicrobial stewardship.tw,kf.
39	anti-microbial stewardship.tw,kf.
40	exp Drug Resistance, Microbial/
41	Antimicrobial Stewardship/
42	33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41
43	economic evaluation*.tw,kf.
44	cost effective*.tw,kf.
45	economic analys*.tw,kf.
46	cost utility analys*.tw,kf.
47	cost benefit analys*.tw,kf.
48	cost minim*.tw,kf.
49	cost-consequence.tw,kf.
50	Cost-Benefit Analysis/
51	Cost-Effectiveness Analysis/
52	"Costs and Cost Analysis"/
53	43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52
54	32 or 42
55	53 and 54
56	Cross Infection/ec [Economics]
57	Antimicrobial Stewardship/ec [Economics]
58	55 or 56 or 57
59	limit 58 to "reviews (maximizes specificity)"
60	limit 58 to "systematic review"
61	59 or 60

#### Ovid Embase

1	healthcare associat* infect*.tw,kf.
2	health care associat* infect*.tw,kf.
3	hospital* associat* infect*.tw,kf.
4	hospital acquired infect*.tw,kf.
5	HCAI*.tw,kf.
6	nosocomia*.tw,kf.
7	MRSA.tw,kf.
8	(bacteremia* or bacteraemia*).tw,kf.
9	((staphylococc* adj2 (infect* or aureus)) or S aureus).tw,kf.
10	(clostridium difficile or clostridioides difficile or C difficile or C-difficile or C-diff).tw,kf.
11	(norovirus* or norwalk).tw,kf.
12	carbapenem*.ti,kw.
13	enterobacter*.tw,kf.
14	klebsiella.tw,kf.
15	(escherichia coli or e-coli).tw,kf.
16	citrobacter*.tw,kf.

17	pseudomonas.tw,kf.
18	acinetobacter*.tw,kf.
19	healthcare associated infection/
20	methicillin resistant Staphylococcus aureus/
21	bacteremia/
22	exp Staphylococcus aureus/
23	exp Clostridioides difficile/
24	exp Norovirus/
25	carbapenem/
26	exp enterobacteriaceae/ or exp Enterobacter/
27	exp Klebsiella/
28	exp Escherichia coli/
29	exp Citrobacter/
30	exp Pseudomonas/
31	exp Acinetobacter/
32	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 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 or 31
33	antimicrobial resistan*.tw,kf.
34	anti-microbial resistan*.tw,kf.
35	(antibiotic* adj2 resistan*).tw,kf.
36	(anti-biotic* adj2 resistan*).tw,kf.
37	drug resistan*.tw,kf.
38	antimicrobial stewardship.tw,kf.
39	anti-microbial stewardship.tw,kf.
40	exp antibiotic resistance/ or drug resistance/ or multidrug resistance/
41	antimicrobial stewardship/
42	33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41
43	economic evaluation*.tw,kf.
44	cost effective*.tw,kf.
45	economic analys*.tw,kf.
46	cost utility analys*.tw,kf.
47	cost benefit analys*.tw,kf.
48	cost minim*.tw,kf.
49	cost-consequence.tw,kf.
50	"cost benefit analysis"/
51	"cost effectiveness analysis"/
52	"cost"/
53	economic evaluation/ or "cost minimization analysis"/ or "cost utility analysis"/
54	43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53
55	32 or 42
56	54 and 55
57	limit 56 to "reviews (maximizes specificity)"

S5	S3 AND S4
S4	TX (review* or meta-analy* or systematic)
S3	S1 OR S2
S2	TX (antimicrobial OR anti-microbial OR antibiotic* OR anti-biotic* OR "drug resist*" OR "multi-drug resistan*")
S1	TX ("healthcare associat* infect*" OR "health care associat* infect*" OR "hospital* associat* infect*" OR HCAI* OR nosocomia or MRSA or bacteremia* or bacteraemia* or staphylococc* or "S aureus" or "clostridium difficile" or "clostridioides difficile" or "C difficile" or C-difficile or C-diff) or norovirus* or norwalk or carbapenem* or enterobacter* or klebsiella or "escherichia coli" or e-coli or citrobacter* or pseudomonas or acinetobacter*)

#### Appendix S4. Data extraction items

- Reviewer initials
- Citation details
- Aim/objective
- Type of review (e.g. systematic review)
- Participant details
- Setting and context (e.g. hospital, ICU)
- Region covered (e.g. Europe)
- Intervention(s) (e.g. IPC, ABS, MDS)
- Infection(s) (e.g. HCAI, MRSA, AMR)
- Whether includes resistant infection(s)
- Number of databases searched
- Date range of search
- Publication year date range of included studies
- Number of included studies
- Synthesis method (e.g. qualitative, meta-analysis)
- Quality assessment tool
- Quality assessment results
- Quantitative results (e.g. ICERs, NMB)
- Qualitative results (e.g. summary of cost-effectiveness evidence by intervention)
- Conclusions

## Appendix S5. JBI Checklist for Systematic Reviews and Research Synthesis quality assessment results

Reference	Research question	Inclusion criteria	Search strategy	Source	Appraisal criteria	2+ appraisers	Data extraction	Combine studies	Publication bias	Recommendations	New research	Total score	Quality
Aboelela <i>et al.</i> (2006) [34]	Yes	Yes	Yes	Yes	Yes	Yes	Unclear	Unclear	N/A	Yes	Yes	80%	High
Allel <i>et al.</i> (2024) [7]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	100%	High
Arefian <i>et al.</i> (2016) [27]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	100%	High
Chen <i>et al.</i> (2013) [40]	Yes	Yes	Yes	Yes	No	Yes	Yes	No	N/A	Yes	Yes	80%	High
Cooper <i>et al.</i> (2003) [33]	Yes	Yes	Yes	Yes	No	Yes	Yes	Unclear	N/A	Yes	Yes	80%	High
D'Onofrio <i>et al.</i> (2020) [42]	Yes	Yes	Yes	No	Yes	Yes	Yes	Unclear	N/A	Yes	Yes	80%	High
Farbman <i>et al.</i> (2013) [31]	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	N/A	Yes	Yes	90%	High
Halim <i>et al.</i> (2016) [37]	Yes	Unclear	Yes	Yes	No	No	Unclear	Unclear	N/A	Yes	Yes	50%	Medium
Ibrahim <i>et al.</i> (2017) [26]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Unclear	N/A	Yes	Yes	90%	High
Lingervelder <i>et al.</i> (2021) [30]	No	Yes	Yes	Yes	Yes	Unclear	Unclear	Unclear	N/A	Yes	Yes	60%	Medium
Loveday <i>et al.</i> (2006) [39]	Yes	Yes	Yes	Yes	Unclear	No	Yes	Yes	N/A	Yes	Yes	80%	High
MacDougall <i>et al.</i> (2020) [35]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	100%	High
McFarland <i>et al.</i> (2020) [28]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	100%	High
McGinagle <i>et al.</i> (2008) [38]	No	Yes	Yes	Yes	Yes	Yes	Unclear	Yes	N/A	Yes	Yes	80%	High
Painter <i>et al.</i> (2023) [8]	Yes	Unclear	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	90%	High

Reference	Research question	Inclusion criteria	Search strategy	Source	Appraisal criteria	2+ appraisers	Data extraction	Combine studies	Publication bias	Recommendations	New research	Total score	Quality
Price <i>et al.</i> (2018) [36]	No	Unclear	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	80%	High
Price <i>et al.</i> (2023) [10]	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	90%	High
Ribau <i>et al.</i> (2021) [41]	Yes	Yes	Yes	Yes	No	No	Yes	Unclear	No	Yes	Yes	64%	Medium
Rice <i>et al.</i> (2023) [9]	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	90%	High
Rojas-Garcia <i>et al.</i> (2021) [29]	No	Yes	Yes	Yes	Yes	Yes	No	No	N/A	Yes	Yes	70%	Medium
Shiri <i>et al.</i> (2019) [43]	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	No	Yes	80%	High
Tchouaket Nguemeleu <i>et al.</i> (2020) [32]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	100%	High
Tolley <i>et al.</i> (2024) [11]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	100%	High
Tran <i>et al.</i> (2023) [12]	No	Yes	Yes	Yes	Yes	Yes	No	Yes	N/A	Yes	Yes	80%	High

Yes = review meets checklist item. Unclear = unclear whether review meets checklist item. No = review does not meet checklist item. N/A = checklist item not applicable.

## References

1. Duce G, Fabry J, Nicolle L. Prevention of hospital acquired infections: a practical guide. World Health Organization, 2002.
2. European Centre for Disease Prevention and Control. Point prevalence survey of healthcare-associated infections and antimicrobial use in European acute care hospitals, 2022-2023. Stockholm: ECDC, 2024.
3. European Centre for Disease Prevention and Control. Point prevalence survey of healthcare-associated infections and antimicrobial use in European acute care hospitals, 2016-2017. Stockholm: ECDC, 2023.
4. European Centre for Disease Prevention and Control. Point prevalence survey of healthcare-associated infections and antimicrobial use in European acute care hospitals, 2011-2012. Stockholm: ECDC, 2013.
5. Cassini A, Högberg LD, Plachouras D, Quattrocchi A, Hoxha A, Simonsen GS, et al. Attributable deaths and disability-adjusted life-years caused by infections with antibiotic-resistant bacteria in the EU and the European Economic Area in 2015: a population-level modelling analysis. *The Lancet infectious diseases*. 2019;19(1):56-66.
6. Prevention ECfD, Control. Assessing the health burden of infections with antibiotic-resistant bacteria in the EU/EEA, 2016–2020. Stockholm: ECDC. 2022.
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