

Appendix I. Search strategy for MEDLINE/PubMed database

Research question	How effective is foot temperature monitoring in preventing ulcers in individuals with diabetes mellitus				
	P	I	C	O	S
Extraction	Individuals with diabetes	Foot temperature monitoring	Other types of treatment	Preventive interventions	Systematic review studies with or without meta-analysis
Conversion	diabetes mellitus / diabetic patient	temperature / temperature measurement / body temperature monitoring / thermography/ thermometers / thermometry --- foot/foot ulcer / diabetic foot	-	prevention / primary prevention / primary medical care / prophylaxis / preventive medicine / preventive health care	review / systematic review / meta analysis
Combination	diabetes mellitus; diabetes; diabetic; diabetic patient; diabetic patients; diabetic people; diabetic person; diabetic subject; diabetic population; diabetes patient; ; diabetes patients; diabetes population; diabetes subject; diabetes mellitus patient; diabetes mellitus patients; diabetes mellitus population; diabetes mellitus person; diabetes mellitus	temperature; temperatures; temperature measurement; body temperature detection; body temperature determination; body temperature recording; body temperature thermometry; body temperature monitoring; temperature monitoring; temperature recording; thermal measurement; thermal monitoring; thermal recording; thermo-monitoring; thermo-recording; thermography; temperature mapping; temperature mappings; emi thermoscan; infra-red imaging; infra-red thermography; infra-red thermometry; infrared imaging; infrared scanning;	Identification by reading documents	prevention; preventive; preventive care; disease prevention; wellness initiatives; proactive healthcare; health maintenance; preventative medicine; prevent ulceration; ulcer avoidance; ulcer avoidance strategies; ulcer prevention; avoiding ulcer formation; ulceration prevention; preventing ulcer development;	review; systematic review; systematic literature review; meta analysis; meta-analysis; metaanalysis; overview

	subject	infrared thermography; infrared thermometry; IR imaging; IR scanning; IR thermometry; IRT; temperature scanning; thermal imaging; thermal scanning; thermal video; thermogram; thermographic imaging; thermology; thermoscanning; thermography; thermometers; thermometer; thermorecording; thermomeasurement; thermometry -- foot; feet; foot ulcer; feet ulcer; diabetic foot; diabetic feet; diabetic foot syndrome; diabetic foot ulcer; diabetic foot;		anti-ulcer measures; preventing ulcers; ulceration avoidance; measures to prevent ulcers; strategies for ulcer prevention; anti-ulcer strategies; ulcer risk reduction; preventive medicine; preventive health care; health preservation; risk reduction; primary prevention; primary medical care; primary care; primary intervention; primary interventions; prophylaxis; prophylaxy; disease prevention; disease; health protection; preventive medication; preventive therapy; preventive treatment; prophylactic institution; prophylactic management; prophylactic medication; prophylactic therapy; prophylactic	
--	---------	---	--	--	--

				treatment; preventive interventions; prophylactic measures; early detection strategies	
Construction	("diabetes mellitus" OR diabetes OR diabetic OR "diabetic patient" OR "diabetic patients" OR "diabetic people" OR "diabetic person" OR "diabetic subject" OR "diabetic population" OR "diabetes patient" OR "diabetes patients" OR "diabetes population" OR "diabetes subject" OR "diabetes mellitus patient" OR "diabetes mellitus patients" OR "diabetes mellitus population" OR "diabetes mellitus person" OR "diabetes mellitus subject")	(temperature OR temperatures OR "temperature measurement" OR "body temperature detection" OR "body temperature determination" OR "body temperature recording" OR "body temperature thermometry" OR "body temperature monitoring" OR "temperature monitoring" OR "temperature recording" OR "thermal measurement" OR "thermal monitoring" OR "thermal recording" OR "thermo-monitoring" OR "thermo-recording" OR thermography OR "temperature mapping" OR "temperature mappings" OR "emi thermoscan" OR "infra-red imaging" OR "infra-red thermography" OR "infra-red thermometry" OR "infrared imaging" OR "infrared scanning" OR "infrared thermography" OR "infrared thermometry" OR "IR imaging" OR "IR scanning" OR "IR thermometry" OR IRT OR "temperature scanning" OR "thermal imaging" OR "thermal scanning" OR "thermal video" OR thermogram OR "thermographic	Identification by reading documents	(prevention OR preventive OR "preventive care" OR "disease prevention" OR "wellness initiatives" OR "proactive healthcare" OR "health maintenance" OR "preventative medicine" OR "prevent ulceration" OR "ulcer avoidance" OR "ulcer avoidance strategies" OR "ulcer prevention" OR "avoiding ulcer formation" OR "ulceration prevention" OR "preventing ulcer development" OR "anti-ulcer measures" OR "preventing ulcers" OR "ulceration avoidance" OR "measures to prevent ulcers" OR "strategies for ulcer prevention" OR "anti-ulcer	(review OR "systematic review" OR "systematic literature review" OR "meta analysis" OR "meta-analysis" OR metaanalysis OR overview)

		<p>imaging" OR thermology OR thermoscanning OR thermography OR thermometers OR thermometer OR thermogram OR thermorecording OR thermomeasurement OR thermometry)</p> <p>-- (foot OR feet OR "foot ulcer" OR "feet ulcer" OR "diabetic foot" OR "diabetic feet" OR "diabetic foot syndrome" OR "diabetic foot ulcer" OR "diabetic foot ulcers")</p>		<p>strategies" OR "ulcer risk reduction" OR "preventive medicine" OR "preventive health care" OR "health preservation" OR "risk reduction" OR "primary prevention" OR "primary medical care" OR "primary care" OR "primary intervention" OR "primary interventions" OR prophylaxis OR prophylaxy OR "disease prevention" OR "disease prophylaxis" OR "health protection" OR "preventive medication" OR "preventive therapy" OR "preventive treatment" OR "prophylactic institution" OR "prophylactic management" OR "prophylactic medication" OR "prophylactic therapy" OR "prophylactic treatment" OR "preventive interventions" OR</p>	
--	--	--	--	---	--

				"prophylactic measures" OR "early detection strategies")	
Use	<p>("diabetes mellitus" OR diabetes OR diabetic OR "diabetic patient" OR "diabetic patients" OR "diabetic people" OR "diabetic person" OR "diabetic subject" OR "diabetic population" OR "diabetes patient" OR "diabetes patients" OR "diabetes population" OR "diabetes subject" OR "diabetes mellitus patient" OR "diabetes mellitus patients" OR "diabetes mellitus population" OR "diabetes mellitus person" OR "diabetes mellitus subject") AND (temperature OR temperatures OR "temperature measurement" OR "body temperature detection" OR "body temperature determination" OR "body temperature recording" OR "body temperature thermometry" OR "body temperature monitoring" OR "temperature monitoring" OR "temperature recording" OR "thermal measurement" OR "thermal monitoring" OR "thermal recording" OR "thermo-monitoring" OR "thermo-recording" OR thermography OR "temperature mapping" OR "temperature mappings" OR "emi thermoscan" OR "infra-red imaging" OR "infra-red thermography" OR "infra-red thermometry" OR "infrared imaging" OR "infrared scanning" OR "infrared thermography" OR "infrared thermometry" OR "IR imaging" OR "IR scanning" OR "IR thermometry" OR IRT OR "temperature scanning" OR "thermal imaging" OR "thermal scanning" OR "thermal video" OR thermogram OR "thermographic imaging" OR thermology OR thermoscanning OR thermography OR thermometers OR thermometer OR thermogram OR thermorecording OR thermomeasurement OR thermometry) AND (foot OR feet OR "foot ulcer" OR "feet ulcer" OR "diabetic foot" OR "diabetic feet" OR "diabetic foot syndrome" OR "diabetic foot ulcer" OR "diabetic foot ulcers") AND (prevention OR preventive OR "preventive care" OR "disease prevention" OR "wellness initiatives" OR "proactive healthcare" OR "health maintenance" OR "preventative medicine" OR "prevent ulceration" OR "ulcer avoidance" OR "ulcer avoidance strategies" OR "ulcer prevention" OR "avoiding ulcer formation" OR "ulceration prevention" OR "preventing ulcer development" OR "anti-ulcer measures" OR "preventing ulcers" OR "ulceration avoidance" OR "measures to prevent ulcers" OR "strategies for ulcer prevention" OR "anti-ulcer strategies" OR "ulcer risk reduction" OR "preventive medicine" OR "preventive health care" OR "health preservation" OR "risk reduction" OR "primary prevention" OR "primary medical care" OR "primary care" OR "primary intervention" OR "primary interventions" OR prophylaxis OR prophylaxy OR "disease prevention" OR "disease prophylaxis" OR "health protection" OR "preventive medication" OR "preventive therapy" OR "preventive treatment" OR "prophylactic institution" OR "prophylactic management" OR "prophylactic medication" OR "prophylactic therapy" OR "prophylactic treatment" OR "preventive interventions" OR "prophylactic measures" OR "early detection strategies") AND (review OR "systematic review" OR "systematic literature review" OR "meta analysis" OR "meta-analysis" OR metaanalysis OR overview)</p>				

Source: Adapted from Araújo (2022).

Appendix II: Search strategy used in PubMed

SEARCH	QUERY	RECORDS RETRIEVED
#1	(diabetes mellitus[MeSH Terms]) OR ("diabetes mellitus"[Title/Abstract] OR diabetes[Title/Abstract] OR diabetic[Title/Abstract] OR "diabetic patient"[Title/Abstract] OR "diabetic patients"[Title/Abstract] OR "diabetic people"[Title/Abstract] OR "diabetic person"[Title/Abstract] OR "diabetic subject"[Title/Abstract] OR "diabetic population"[Title/Abstract] OR "diabetes patient"[Title/Abstract] OR "diabetes patients"[Title/Abstract] OR "diabetes population"[Title/Abstract] OR "diabetes subject"[Title/Abstract] OR "diabetes mellitus patient"[Title/Abstract] OR "diabetes mellitus patients"[Title/Abstract] OR "diabetes mellitus population"[Title/Abstract] OR "diabetes mellitus person"[Title/Abstract] OR "diabetes mellitus subject"[Title/Abstract])	86,243
#2	(((temperature[MeSH Terms]) OR (thermometers[MeSH Terms])) OR (thermography[MeSH Terms]) OR (thermometry[MeSH Terms])) OR (temperature[Title/Abstract] OR temperatures[Title/Abstract] OR "temperature measurement"[Title/Abstract] OR "body temperature detection"[Title/Abstract] OR "body temperature determination"[Title/Abstract] OR "body temperature recording"[Title/Abstract] OR "body temperature thermometry"[Title/Abstract] OR "body temperature monitoring"[Title/Abstract] OR "temperature monitoring"[Title/Abstract] OR "temperature recording"[Title/Abstract] OR "thermal measurement"[Title/Abstract] OR "thermal monitoring"[Title/Abstract] OR "thermal recording"[Title/Abstract] OR "thermo-monitoring"[Title/Abstract] OR "thermo-recording"[Title/Abstract] OR thermography[Title/Abstract] OR "temperature mapping"[Title/Abstract] OR "temperature mappings"[Title/Abstract] OR "emi thermoscan"[Title/Abstract] OR "infra-red imaging"[Title/Abstract] OR "infra-red thermography"[Title/Abstract] OR "infra-red thermometry"[Title/Abstract] OR "infrared imaging"[Title/Abstract] OR "infrared scanning"[Title/Abstract] OR "infrared thermography"[Title/Abstract] OR "infrared thermometry"[Title/Abstract] OR "IR imaging"[Title/Abstract] OR "IR scanning"[Title/Abstract] OR "IR thermometry"[Title/Abstract] OR IRT[Title/Abstract] OR "temperature scanning"[Title/Abstract] OR "thermal imaging"[Title/Abstract] OR "thermal scanning"[Title/Abstract] OR "thermal video"[Title/Abstract] OR thermogram[Title/Abstract] OR "thermographic imaging"[Title/Abstract] OR thermology[Title/Abstract] OR thermoscanning[Title/Abstract] OR thermography[Title/Abstract] OR thermometers[Title/Abstract] OR thermometer[Title/Abstract] OR thermogram[Title/Abstract] OR thermorecording[Title/Abstract] OR thermomeasurement[Title/Abstract] OR	107,252

	thermometry[Title/Abstract])	
#3	(((foot[MeSH Terms]) OR (foot ulcer[MeSH Terms])) OR (diabetic foot[MeSH Terms])) OR (foot[Title/Abstract] OR feet[Title/Abstract] OR "foot ulcer"[Title/Abstract] OR "feet ulcer"[Title/Abstract] OR "diabetic foot"[Title/Abstract] OR "diabetic feet"[Title/Abstract] OR "diabetic foot syndrome"[Title/Abstract] OR "diabetic foot ulcer"[Title/Abstract] OR "diabetic foot ulcers"[Title/Abstract])	16,937
#4	(((primary prevention[MeSH Terms]) OR (preventive medicine[MeSH Terms])) OR (prevention and control[MeSH Subheading])) OR (prevention[Title/Abstract] OR preventive[Title/Abstract] OR "preventive care"[Title/Abstract] OR "disease prevention"[Title/Abstract] OR "wellness initiatives"[Title/Abstract] OR "proactive healthcare"[Title/Abstract] OR "health maintenance"[Title/Abstract] OR "preventative medicine"[Title/Abstract] OR "prevent ulceration"[Title/Abstract] OR "ulcer avoidance"[Title/Abstract] OR "ulcer avoidance strategies"[Title/Abstract] OR "ulcer prevention"[Title/Abstract] OR "avoiding ulcer formation"[Title/Abstract] OR "ulceration prevention"[Title/Abstract] OR "preventing ulcer development"[Title/Abstract] OR "anti-ulcer measures"[Title/Abstract] OR "preventing ulcers"[Title/Abstract] OR "ulceration avoidance"[Title/Abstract] OR "measures to prevent ulcers"[Title/Abstract] OR "strategies for ulcer prevention"[Title/Abstract] OR "anti-ulcer strategies"[Title/Abstract] OR "ulcer risk reduction"[Title/Abstract] OR "preventive medicine"[Title/Abstract] OR "preventive health care"[Title/Abstract] OR "health preservation"[Title/Abstract] OR "risk reduction"[Title/Abstract] OR "primary prevention"[Title/Abstract] OR "primary medical care"[Title/Abstract] OR "primary care"[Title/Abstract] OR "primary intervention"[Title/Abstract] OR "primary interventions"[Title/Abstract] OR prophylaxis[Title/Abstract] OR prophylaxy[Title/Abstract] OR "disease prevention"[Title/Abstract] OR "disease prophylaxis"[Title/Abstract] OR "health protection"[Title/Abstract] OR "preventive medication"[Title/Abstract] OR "preventive therapy"[Title/Abstract] OR "preventive treatment"[Title/Abstract] OR "prophylactic institution"[Title/Abstract] OR "prophylactic management"[Title/Abstract] OR "prophylactic medication"[Title/Abstract] OR "prophylactic therapy"[Title/Abstract] OR "prophylactic treatment"[Title/Abstract] OR "preventive interventions"[Title/Abstract] OR "prophylactic measures"[Title/Abstract] OR "early detection strategies"[Title/Abstract])	233,887
#5	(((review[Publication Type]) OR (systematic review[Publication Type])) OR (meta analysis[Publication Type])) OR (review[Title/Abstract] OR "systematic review"[Title/Abstract] OR "systematic literature review"[Title/Abstract] OR "meta	425,002

	analysis"[Title/Abstract] OR "meta-analysis"[Title/Abstract] OR metaanalysis[Title/Abstract] OR overview[Title/Abstract])	
	#1 AND #2 AND #3 AND #4 AND #5	
#6	<p>(((diabetes mellitus[MeSH Terms]) OR ("diabetes mellitus"[Title/Abstract] OR diabetes[Title/Abstract] OR diabetic[Title/Abstract] OR "diabetic patient"[Title/Abstract] OR "diabetic patients"[Title/Abstract] OR "diabetic people"[Title/Abstract] OR "diabetic person"[Title/Abstract] OR "diabetic subject"[Title/Abstract] OR "diabetic population"[Title/Abstract] OR "diabetes patient"[Title/Abstract] OR "diabetes patients"[Title/Abstract] OR "diabetes population"[Title/Abstract] OR "diabetes subject"[Title/Abstract] OR "diabetes mellitus patient"[Title/Abstract] OR "diabetes mellitus patients"[Title/Abstract] OR "diabetes mellitus population"[Title/Abstract] OR "diabetes mellitus person"[Title/Abstract] OR "diabetes mellitus subject"[Title/Abstract])) AND (((temperature[MeSH Terms]) OR (thermometers[MeSH Terms])) OR (thermography[MeSH Terms])) OR (temperature[Title/Abstract] OR temperatures[Title/Abstract] OR "temperature measurement"[Title/Abstract] OR "body temperature detection"[Title/Abstract] OR "body temperature determination"[Title/Abstract] OR "body temperature recording"[Title/Abstract] OR "body temperature thermometry"[Title/Abstract] OR "body temperature monitoring"[Title/Abstract] OR "temperature monitoring"[Title/Abstract] OR "temperature recording"[Title/Abstract] OR "thermal measurement"[Title/Abstract] OR "thermal monitoring"[Title/Abstract] OR "thermal recording"[Title/Abstract] OR "thermo-monitoring"[Title/Abstract] OR "thermo-recording"[Title/Abstract] OR thermography[Title/Abstract] OR "temperature mapping"[Title/Abstract] OR "temperature mappings"[Title/Abstract] OR "emi thermoscan"[Title/Abstract] OR "infra-red imaging"[Title/Abstract] OR "infra-red thermography"[Title/Abstract] OR "infra-red thermometry"[Title/Abstract] OR "infrared imaging"[Title/Abstract] OR "infrared scanning"[Title/Abstract] OR "infrared thermography"[Title/Abstract] OR "infrared thermometry"[Title/Abstract] OR "IR imaging"[Title/Abstract] OR "IR scanning"[Title/Abstract] OR "IR thermometry"[Title/Abstract] OR IRT[Title/Abstract] OR "temperature scanning"[Title/Abstract] OR "thermal imaging"[Title/Abstract] OR "thermal scanning"[Title/Abstract] OR "thermal video"[Title/Abstract] OR thermogram[Title/Abstract] OR "thermographic imaging"[Title/Abstract] OR thermology[Title/Abstract] OR thermoscanning[Title/Abstract] OR thermography[Title/Abstract] OR thermometers[Title/Abstract] OR thermometer[Title/Abstract] OR thermogram[Title/Abstract] OR thermorecording[Title/Abstract] OR thermomeasurement[Title/Abstract] OR</p>	47

thermometry[Title/Abstract])) AND (((foot[MeSH Terms]) OR (foot ulcer[MeSH Terms])) OR (diabetic foot[MeSH Terms])) OR (foot[Title/Abstract] OR feet[Title/Abstract] OR "foot ulcer"[Title/Abstract] OR "feet ulcer"[Title/Abstract] OR "diabetic foot"[Title/Abstract] OR "diabetic feet"[Title/Abstract] OR "diabetic foot syndrome"[Title/Abstract] OR "diabetic foot ulcer"[Title/Abstract] OR "diabetic foot ulcers"[Title/Abstract])) AND (((primary prevention[MeSH Terms]) OR (preventive medicine[MeSH Terms])) OR (prevention and control[MeSH Subheading])) OR (prevention[Title/Abstract] OR preventive[Title/Abstract] OR "preventive care"[Title/Abstract] OR "disease prevention"[Title/Abstract] OR "wellness initiatives"[Title/Abstract] OR "proactive healthcare"[Title/Abstract] OR "health maintenance"[Title/Abstract] OR "preventative medicine"[Title/Abstract] OR "prevent ulceration"[Title/Abstract] OR "ulcer avoidance"[Title/Abstract] OR "ulcer avoidance strategies"[Title/Abstract] OR "ulcer prevention"[Title/Abstract] OR "avoiding ulcer formation"[Title/Abstract] OR "ulceration prevention"[Title/Abstract] OR "preventing ulcer development"[Title/Abstract] OR "anti-ulcer measures"[Title/Abstract] OR "preventing ulcers"[Title/Abstract] OR "ulceration avoidance"[Title/Abstract] OR "measures to prevent ulcers"[Title/Abstract] OR "strategies for ulcer prevention"[Title/Abstract] OR "anti-ulcer strategies"[Title/Abstract] OR "ulcer risk reduction"[Title/Abstract] OR "preventive medicine"[Title/Abstract] OR "preventive health care"[Title/Abstract] OR "health preservation"[Title/Abstract] OR "risk reduction"[Title/Abstract] OR "primary prevention"[Title/Abstract] OR "primary medical care"[Title/Abstract] OR "primary care"[Title/Abstract] OR "primary intervention"[Title/Abstract] OR "primary interventions"[Title/Abstract] OR prophylaxis[Title/Abstract] OR prophylaxy[Title/Abstract] OR "disease prevention"[Title/Abstract] OR "disease prophylaxis"[Title/Abstract] OR "health protection"[Title/Abstract] OR "preventive medication"[Title/Abstract] OR "preventive therapy"[Title/Abstract] OR "preventive treatment"[Title/Abstract] OR "prophylactic institution"[Title/Abstract] OR "prophylactic management"[Title/Abstract] OR "prophylactic medication"[Title/Abstract] OR "prophylactic therapy"[Title/Abstract] OR "prophylactic treatment"[Title/Abstract] OR "preventive interventions"[Title/Abstract] OR "prophylactic measures"[Title/Abstract] OR "early detection strategies"[Title/Abstract])) AND (((review[Publication Type]) OR (systematic review[Publication Type])) OR (meta analysis[Publication Type])) OR (review[Title/Abstract] OR "systematic review"[Title/Abstract] OR "systematic literature review"[Title/Abstract] OR "meta analysis"[Title/Abstract] OR "meta-analysis"[Title/Abstract] OR metaanalysis[Title/Abstract] OR overview[Title/Abstract]))

Appendix III: Data extraction instrument

Study details	
Author/year	
Objectives	
Participants (characteristics/number)	
Setting/context	
Description of interventions/phenomena	
Search details	
Sources searched	
Range (years) of studies included	
Number of studies included	
Study designs	
Country of studies included	
Appraisal	
Appraisal instruments used	
Appraisal rating	
Analysis	
Methods of analysis	
Outcomes assessed	
Findings	
Significances	
Heterogeneity	
Comments	

Appendix IV: Analysis of the degree of overlap in primary studies

Step 1: Create a Citation Matrix (CM)

The citation matrix (CM) allows you to assess the amount of overlap at the review level, as opposed to the outcome level. The CM lists all primary studies (r = rows) included for each review (c = columns). Duplicate rows are removed to ensure that a primary study that appears in reviews is noted on one row. The first occurrence of a primary study is defined as the index publication (see Table A).

The citation matrix (CM) allows you to assess the amount of overlap at the review level, as opposed to the outcome level. The CM lists all primary studies (r = rows) included for each review (c = columns). Duplicate rows are removed to ensure that a primary study that appears in reviews is noted on one row. The first occurrence of a primary study is defined as the index publication (see Table A).

	Review 1	Review 2	Review 3
Primary study 1	x		x
Primary study 2	x	x	
Primary study 3	x		x
Primary study 4	x	x	x

Step 2: Calculate the Corrected Coverage Area (CCA) in the matrix

The overlap of studies in the matrix is calculated using the CCA14 method, where the frequency of repeated occurrences of the index publication in other reviews is divided by the product of the index publications and the reviews, minus the number of index publications (see below).

$$CCA (\text{Corrected Covered Area}) = \frac{N-r}{rc-r}$$

N is the number of publications included in the evidence synthesis (regardless of overlap) (this is the sum of the checked boxes in the citation matrix); r is the number of rows (number of index publications), and c is the number of columns (number of revisions).

The degree of overlap in the matrix can range from 0 to 5% low overlap, 6 to 10% moderate overlap, 11 to 15% high overlap, and >15% very high overlap. Depending on the value of the CCA, a decision tree developed by Hennessy and Johnson (2020) will be used to guide our next steps.¹⁵

Step 3: Scan the CM for reviews with complete/near complete overlap

Reviews with complete/near complete overlap will be screened for reasons of high overlap and considered for deletion; higher quality (e.g., Cochrane reviews) and/or more recent reviews (if ratings are similar) will be retained.

Appendix V: Analysis of the degree of overlap in primary studies

JBI Critical Appraisal Checklist for Systematic Reviews and Research Syntheses

Reviewer _____ Date _____
 Author _____ Year _____ Record Number _____

	Yes	No	Unclear	Not applicable
1. Is the review question clearly and explicitly stated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Were the inclusion criteria appropriate for the review question?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Was the search strategy appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were the sources and resources used to search for studies adequate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Were the criteria for appraising studies appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Was critical appraisal conducted by two or more reviewers independently?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were there methods to minimize errors in data extraction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were the methods used to combine studies appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Was the likelihood of publication bias assessed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Were recommendations for policy and/or practice supported by the reported data?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Were the specific directives for new research appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall appraisal:	Include <input type="checkbox"/>	Exclude <input type="checkbox"/>	Seek further info <input type="checkbox"/>	

Appendix VI: AMSTAR 2

AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both

<p>1. Did the research questions and inclusion criteria for the review include the components of PICO?</p>		
<p>For Yes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Population <input type="checkbox"/> Intervention <input type="checkbox"/> Comparator group <input type="checkbox"/> Outcome 	<p>Optional (recommended)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Timeframe for follow-up 	<ul style="list-style-type: none"> <input type="checkbox"/> Yes <input type="checkbox"/> No
<p>2. Did the report of the review contain an explicit statement that the review methods were established prior to the conduct of the review and did the report justify any significant deviations from the protocol?</p>		
<p>For Partial Yes: The authors state that they had a written protocol or guide that included ALL the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> review question(s) <input type="checkbox"/> a search strategy <input type="checkbox"/> inclusion/exclusion criteria <input type="checkbox"/> a risk of bias assessment 	<p>For Yes: As for partial yes, plus the protocol should be registered and should also have specified:</p> <ul style="list-style-type: none"> <input type="checkbox"/> a meta-analysis/synthesis plan, if appropriate, <i>and</i> <input type="checkbox"/> a plan for investigating causes of heterogeneity <input type="checkbox"/> justification for any deviations from the protocol 	<ul style="list-style-type: none"> <input type="checkbox"/> Yes <input type="checkbox"/> Partial Yes <input type="checkbox"/> No
<p>3. Did the review authors explain their selection of the study designs for inclusion in the review?</p>		
<p>For Yes, the review should satisfy ONE of the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Explanation for</i> including only RCTs <input type="checkbox"/> OR <i>Explanation for</i> including only NRSI <input type="checkbox"/> OR <i>Explanation for</i> including both RCTs and NRSI 		
<p>4. Did the review authors use a comprehensive literature search strategy?</p>		
<p>For Partial Yes (all the following):</p> <ul style="list-style-type: none"> <input type="checkbox"/> searched at least 2 databases (relevant to research question) <input type="checkbox"/> provided key word and/or search strategy <input type="checkbox"/> justified publication restrictions (e.g. language) 	<p>For Yes, should also have (all the following):</p> <ul style="list-style-type: none"> <input type="checkbox"/> searched the reference lists / bibliographies of included studies <input type="checkbox"/> searched trial/study registries <input type="checkbox"/> included/consulted content experts in the field <input type="checkbox"/> where relevant, searched for grey literature <input type="checkbox"/> conducted search within 24 months of completion of the review 	<ul style="list-style-type: none"> <input type="checkbox"/> Yes <input type="checkbox"/> Partial Yes <input type="checkbox"/> No
<p>5. Did the review authors perform study selection in duplicate?</p>		
<p>For Yes, either ONE of the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> at least two reviewers independently agreed on selection of eligible studies and achieved consensus on which studies to include <input type="checkbox"/> OR two reviewers selected a sample of eligible studies <u>and</u> achieved good agreement (at least 80 percent), with the remainder selected by one reviewer. 		

AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both

<p>6. Did the review authors perform data extraction in duplicate?</p>		
<p>For Yes, either ONE of the following:</p>		
<p><input type="checkbox"/> at least two reviewers achieved consensus on which data to extract from included studies</p>		<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p><input type="checkbox"/> OR two reviewers extracted data from a sample of eligible studies <u>and</u> achieved good agreement (at least 80 percent), with the remainder extracted by one reviewer.</p>		
<p>7. Did the review authors provide a list of excluded studies and justify the exclusions?</p>		
<p>For Partial Yes:</p>	<p>For Yes, must also have:</p>	
<p><input type="checkbox"/> provided a list of all potentially relevant studies that were read in full-text form but excluded from the review</p>	<p><input type="checkbox"/> Justified the exclusion from the review of each potentially relevant study</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> Partial Yes <input type="checkbox"/> No</p>
<p>8. Did the review authors describe the included studies in adequate detail?</p>		
<p>For Partial Yes (ALL the following):</p>	<p>For Yes, should also have ALL the following:</p>	
<p><input type="checkbox"/> described populations</p>	<p><input type="checkbox"/> described population in detail</p>	<p><input type="checkbox"/> Yes</p>
<p><input type="checkbox"/> described interventions</p>	<p><input type="checkbox"/> described intervention in detail (including doses where relevant)</p>	<p><input type="checkbox"/> Partial Yes</p>
<p><input type="checkbox"/> described comparators</p>	<p><input type="checkbox"/> described comparator in detail (including doses where relevant)</p>	<p><input type="checkbox"/> No</p>
<p><input type="checkbox"/> described outcomes</p>	<p><input type="checkbox"/> described study's setting</p>	
<p><input type="checkbox"/> described research designs</p>	<p><input type="checkbox"/> timeframe for follow-up</p>	
<p>9. Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?</p>		
<p>RCTs</p>		
<p>For Partial Yes, must have assessed RoB from</p>	<p>For Yes, must also have assessed RoB from:</p>	
<p><input type="checkbox"/> unconcealed allocation, <i>and</i></p>	<p><input type="checkbox"/> allocation sequence that was not truly random, <i>and</i></p>	<p><input type="checkbox"/> Yes</p>
<p><input type="checkbox"/> lack of blinding of patients and assessors when assessing outcomes (unnecessary for objective outcomes such as all-cause mortality)</p>	<p><input type="checkbox"/> selection of the reported result from among multiple measurements or analyses of a specified outcome</p>	<p><input type="checkbox"/> Partial Yes <input type="checkbox"/> No <input type="checkbox"/> Includes only NRSI</p>
<p>NRSI</p>		
<p>For Partial Yes, must have assessed RoB:</p>	<p>For Yes, must also have assessed RoB:</p>	
<p><input type="checkbox"/> from confounding, <i>and</i></p>	<p><input type="checkbox"/> methods used to ascertain exposures and outcomes, <i>and</i></p>	<p><input type="checkbox"/> Yes</p>
<p><input type="checkbox"/> from selection bias</p>	<p><input type="checkbox"/> selection of the reported result from among multiple measurements or analyses of a specified outcome</p>	<p><input type="checkbox"/> Partial Yes <input type="checkbox"/> No <input type="checkbox"/> Includes only RCTs</p>
<p>10. Did the review authors report on the sources of funding for the studies included in the review?</p>		
<p>For Yes</p>		
<p><input type="checkbox"/> Must have reported on the sources of funding for individual studies included in the review. Note: Reporting that the reviewers looked for this information but it was not reported by study authors also qualifies</p>		<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>

AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both

<p>11. If meta-analysis was performed did the review authors use appropriate methods for statistical combination of results?</p>	
<p>RCTs For Yes:</p> <p><input type="checkbox"/> The authors justified combining the data in a meta-analysis <input type="checkbox"/> Yes <input type="checkbox"/> AND they used an appropriate weighted technique to combine study results and adjusted for heterogeneity if present. <input type="checkbox"/> No <input type="checkbox"/> AND investigated the causes of any heterogeneity <input type="checkbox"/> No meta-analysis conducted</p>	
<p>For NRSI For Yes:</p> <p><input type="checkbox"/> The authors justified combining the data in a meta-analysis <input type="checkbox"/> Yes <input type="checkbox"/> AND they used an appropriate weighted technique to combine study results, adjusting for heterogeneity if present <input type="checkbox"/> No <input type="checkbox"/> AND they statistically combined effect estimates from NRSI that were adjusted for confounding, rather than combining raw data, or justified combining raw data when adjusted effect estimates were not available <input type="checkbox"/> No meta-analysis conducted <input type="checkbox"/> AND they reported separate summary estimates for RCTs and NRSI separately when both were included in the review</p>	
<p>12. If meta-analysis was performed, did the review authors assess the potential impact of RoB in individual studies on the results of the meta-analysis or other evidence synthesis?</p>	
<p>For Yes:</p> <p><input type="checkbox"/> included only low risk of bias RCTs <input type="checkbox"/> Yes <input type="checkbox"/> OR, if the pooled estimate was based on RCTs and/or NRSI at variable RoB, the authors performed analyses to investigate possible impact of RoB on summary estimates of effect. <input type="checkbox"/> No <input type="checkbox"/> No meta-analysis conducted</p>	
<p>13. Did the review authors account for RoB in individual studies when interpreting/ discussing the results of the review?</p>	
<p>For Yes:</p> <p><input type="checkbox"/> included only low risk of bias RCTs <input type="checkbox"/> Yes <input type="checkbox"/> OR, if RCTs with moderate or high RoB, or NRSI were included the review provided a discussion of the likely impact of RoB on the results <input type="checkbox"/> No</p>	
<p>14. Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?</p>	
<p>For Yes:</p> <p><input type="checkbox"/> There was no significant heterogeneity in the results <input type="checkbox"/> Yes <input type="checkbox"/> OR if heterogeneity was present the authors performed an investigation of sources of any heterogeneity in the results and discussed the impact of this on the results of the review <input type="checkbox"/> No</p>	
<p>15. If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias) and discuss its likely impact on the results of the review?</p>	
<p>For Yes:</p> <p><input type="checkbox"/> performed graphical or statistical tests for publication bias and discussed the likelihood and magnitude of impact of publication bias <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No meta-analysis conducted</p>	

AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both

16. Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?

For Yes:

- | | |
|---|------------------------------|
| <input type="checkbox"/> The authors reported no competing interests OR | <input type="checkbox"/> Yes |
| <input type="checkbox"/> The authors described their funding sources and how they managed potential conflicts of interest | <input type="checkbox"/> No |

To cite this tool: Shea BJ, Reeves BC, Wells G, Thuku M, Hamel C, Moran J, Moher D, Tugwell P, Welch V, Kristjansson E, Henry DA. AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. *BMJ*. 2017 Sep 21;358:j4008.

Appendix VII: Quality of evidence across systematic reviews*

Quality of evidence	Criteria
High-quality evidence	One or more updated (published within the last 3 years), high-quality systematic reviews that are based on at least 2 high-quality primary studies with consistent results.
Moderate-quality evidence	One or more updated (published within the last 3 years) systematic reviews of high or moderate quality, based on at least: <ul style="list-style-type: none">• 1 high quality primary study• 2 primary studies of moderate quality with consistent results.
Low-quality evidence	One or more systematic reviews of variable quality, based on: <ul style="list-style-type: none">• primary studies of moderate quality• inconsistent results in the reviews• inconsistent results in primary studies

* Based on the GRADE principles.