Appendix 1: Search Strategy

No.	Keywords [TIAB]	MeSH terms
1	(Basic Life Support **OR** BLS **OR** Basic Cardiac Life Support **OR** Life Support **OR** Resuscitation **OR** CPR **OR** Cardio Pulmonary Resuscitation) **OR** (Chest Compressions **OR** Compressions) **OR** (Rescue Breath* **OR** Mouth-to-mouth **OR** Expired Air Resuscitation **OR** Expired Air Ventilation **OR** EAV) **OR (**AED **OR** (Automated External) Defibrillator **OR** Defibrillation)	(Cardiopulmonary Resuscitation **OR** Heart Massage **OR** Respiration, Artificial **OR** Defibrillators)
2	Decay**OR** Loss **OR** Degener* **OR** Deterior* **OR** Impair* **OR** Atrophy **OR** Decline **OR** Decreas* **OR** Depreciat* **OR** Fade **OR** Fading **OR** Faded **OR** Reced* **OR** Rever* **OR** Relaps* **OR** Reduc* **OR** Wors*	n/a
3	Attain* **OR** Retention **OR** Retain* **OR** Increas*	n/a
4	Refresh* **OR** Retrain* **OR** Boost **OR** Update **OR** Renew **OR** Revise **OR** Reteach* **OR** Redo	n/a

To create search:

1. Combine Keyword [TIAB] and MeSH terms for each row using **OR**, and encapsulate in brackets ()
2. Combine rows 2, 3 and 4 using **OR**
3. Combine this search result with row 1 using **AND**
4. Apply limits

Limits: None

Appendix 2: SR1 – Title Screening Form

Tackling skill decay following Basic Life Support training – a systematic review

Date of screening	
Reviewer	Electronic form will have dropdown list of reviewer names
Study details Title, URL, citation	
Any conflicts of interest identified by the reviewer? Eg. Were they involved in the publication?	
Does the study title suggest it may meet the INCLUSION criteria:	Involves individuals who have received BLS training: <u>Y/N</u>
	Assesses BLS skill retention via any means: <u>Y/N</u>
English language copy available?	Yes
	No – refer to project supervisor to assess if commissioned translation is feasible
Comments / other information:	
Decision: (at this stage, only <u>exclude</u> reports which do not meet the inclusion criteria. Quality of reports will be assessed later)	**Include / Exclude**

Appendix 3: SR2 – Abstract Screening Form

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Date of screening	
Reviewer	Electronic form will have dropdown list of reviewer names
Study details Title, URL, citation	
Any conflicts of interest identified by the reviewer? Eg. Were they involved in the publication?	
Does the study abstract suggest it may meet the INCLUSION criteria:	Involves individuals who have received BLS training: <u>Y/N</u>
	Assesses BLS skill retention via any means: <u>Y/N</u>
English language copy available?	Yes
	No – refer to project supervisor to assess if commissioned translation is feasible
Comments / other information:	
Decision: (at this stage, only <u>exclude</u> reports which do not meet the inclusion criteria. Quality of reports will be assessed later)	**Include / Exclude**

Appendix 4: SR3 – Full-text Screening & Data Extraction Form

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1. Full-text screening

Date of screening	
Reviewer	Electronic form will have dropdown list of reviewer names
Study details Title, URL, citation	
Any conflicts of interest identified by the reviewer? Eg. Were they involved in the publication?	
Does full-text review of the study indicate it meets the INCLUSION criteria:	Involves individuals who have received BLS training: <u>Y/N</u>
	Assesses BLS skill retention via any means: <u>Y/N</u>
Comments / other information:	
Decision: At this stage, only <u>exclude</u> reports which obviously do not meet the inclusion criteria. Quality of reports will be assessed later. If excluding, do not complete data extraction section (to follow).	**Include / Exclude**

2. Quality of study assessment

Complete relevant CASP checklist for study type https://casp-uk.net/casp-tools-checklists/	Copy/paste questions and responses
RCT – complete Cochrane 'Risk of Bias' tool https://www.riskofbias.info/welcome/rob-2-0-tool/current-version-of-rob-2	Copy/paste questions and responses
Assess risk of bias, based on CASP checklist +/- Cochrane tool	**Low / high**
Is there methodological flaw so severe that the study should be omitted from review?	**Yes, omit / No, do not omit – studies flagged for omission at this stage will be referred to senior review**

3. Data extraction

a. Background

Study Title	
Study Reference (Vancouver)	
Country where study conducted List all if multiple	

b. Methods

Study design	Randomised Control Trial
	Non-randomised interventional trial
	Observational (cohort/case-control)
	Commentary/Qualitative study
	Systematic review
	Literature/Narrative review
	Other
Population Identify Key characteristics of the population studied	
Intervention(s) If applicable – i.e. was refresher training delivered?	
Comparator If applicable	
Outcome measures used I.e. what did the authors state as the primary, and secondary outcomes?	
Study inclusion criteria	
Study exclusion criteria	
Study duration	
Number of participants	
Details of initial BLS training	
Time elapsed between initial BLS training and assessment of retention	
Was any retraining received by participants <u>not as part of this study?</u>	

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Eg. As part of routine education, re-certification etc.	

c. For studies where refresher training was delivered:

Was there a comparator? Eg. Placebo, another type of refresher training?	
If there was a comparator, how was allocation to groups conducted?	Randomised / non-randomised
If randomised, how was this done?	
Number of study arms Eg. If just one form of refresher training vs comparator, this is 2 arms.	

d. Participant information

Average age Specify statistic – mean / median	
Sex breakdown Specify % male, % female	
Loss to follow up (n, %)	
Differences at baseline Summarise any differences between the studied groups at baseline, before any measurement or intervention took place (if reported).	
Method(s) of recruitment to study Describe / state	
Other characteristics lay-people/healthcare workers, previous BLS experience etc	

e. Participant groups and their outcomes - complete one copy of table e. for each group if multiple interventions. Also complete a copy for the control / comparator group

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Group name	
Description of group, including intervention What was done differently to this group than other participants?	
Number (%) allocated to group	
Method of BLS re-assessment Include any information concerning training of BLS assessors	
Time between training and re-assessment	
Outcomes: where possible use raw numbers in the following format: n(%)	**CPR rate** **CPR depth** **CPR hand position** **CPR hands-off time** **Rescue breath success** **BLS algorithm completeness** **BLS summative assessment – 'pass' or 'fail'**
Other outcomes Give details of other outcome measures reported in the study. Where possible use raw numbers in the following format: n(%)	