This process document guides the Task Force chair and lead Task Force member on how to complete an Evidence Update based on an approved PICOST. The Evidence Update updates an existing search for a current PICOST or creates a new search for a new PICOST, using limited databases (eg. Pub Med **only**) primarily to see if there is sufficient information to merit the Task Force undertaking either a systematic or scoping review. The task force chair or their delegate submits the final version of the Evidence Update to the Scientific Advisory Committee (SAC) representative on the Task Force or delegate. The SAC rep completes the Evidence Update checklist prior to submitting the Evidence Update and the checklist to the SAC chair. The SAC chair or delegate may assign the Evidence Update to a SAC member who is not involved in the writing group or taskforce(s) to independently review the Evidence Update. This process provides independent peer review prior to upload to ILCOR.org and formative peer feedback to members of SAC. The SAC chair or delegate will post the approved Evidence Update on ILCOR.org. The various councils may use the Evidence Updates when updating their guidelines.

User Instructions:
Please maintain header size (14) and font Calibri size (10) and bolded as per the template and the references should be formatted as per the ILCOR pre-specifications. Examples are italicized in the template however it not necessary to italicize when completing the sections in the template.

Overview of the process of creating an Evidence Update

1. The Task Force lead prepares and submits the PICOST using the PICOST template for Intervention or Diagnostic Test for approval by the Scientific Advisory Committee (SAC) representative on the Task Force. Once the Task Force and SAC representative have approved the PICOST the SAC representative will submit it to the SAC chair for acknowledgement and to allow tracking of the PICOST.
2. Complete the Evidence Update template using the approved PICOST.
3. Where an existing search strategy exists and the PICOST wording has not been revised, a single reviewer re-runs this search strategy using at least one database (eg. Medline or Pub Med). If the PICOST was revised or a search strategy does not exist or needs to be created please liaise with SAC representative to facilitate Information Specialist/Librarian support. Examples of potential search strategy components for checking or revising search strategies are included below.
4. Identify relevant studies: based on PICOST
5. Review reference lists of identified articles for any other eligible articles
6. Summarise key information on the Evidence Update template from relevant articles on study summary table for systematic reviews and guidelines, RCT studies or Non-RCT studies. (see Sample Tables below)
7. Provide an opinion on whether any of the new studies identified contain information which may benefit from a scoping review or a systematic review
8. It is expected that new evidence updates should be able to be completed within 8 weeks of SAC acknowledgement of the PICOST (time zero). Any delays should be communicated early to Task Force chair and SAC rep.
9. Prior to publication (e.g. in the annual CoSTR) all searches >6 months old will need to be rerun

General Search Strategy for new searchers

PUBMED (using advanced search with the operators: AND, OR, NOT)

1. Your specific topic words: *"xx" [MESH] OR "xxx" [TIAB]*
2. Population:
    a. If Cardiac Arrest: *"life support care" [MESH] OR "life support" [TIAB] OR cardiopulmonary resuscitation [MESH] OR "cardiopulmonary resuscitation" [TIAB] OR ROSC [TIAB] OR "return of spontaneous circulation" [TIAB] OR heart arrest [MESH] OR "cardiac arrest [TIAB]*
    b. If no CA: *NOT (heart arrest [MESH] OR "cardiac arrest [TIAB])*
    c. Critical illness terminology: *"Critical Illness"[Mesh] OR "Critical Illness"[tiab] OR emergenc* [TIAB] OR emergencies [MESH] OR emergency medicine [MESH] OR acute disease [MESH]*
3. To exclude animal studies: *NOT (animals [mh] NOT humans [mh])*
4. Optional: *NOT "respiration, artificial"[MESH]*
5. Optional limiting to articles with children or adolescent data, broadest search:
   infan OR baby OR baby* OR babies OR toddler* OR minors OR minors* OR kid OR kids OR child OR child* OR children* OR schoolchild* OR schoolchild OR school child[tiab] OR school child*[tiab] OR adolescen* OR juvenil* OR youth* OR teen* OR under*age* OR pubescen* OR pediatrics[mh] OR pediatric* OR paediatric* OR peadiatric* OR school[tiab] OR school*[tiab]*
    a. Optional exclude neonatal papers by
       NOT (newborn OR new-born* OR perinat* OR neonat* OR prematur* OR preterm*)*

The above is a predefined BMI block (reference due: https://blocks.bmi-online.nl)

6. A wish to limit to guidelines and reviews (or excluding), can be further adapted as needed:
    a. *"Guidelines as Topic"[Mesh] OR "Guideline"[Publication Type] OR guideline*[tiab] OR recommendation*[tiab] OR cpg[tiab]*
    b. *review[tiab] OR "Review"[Publication Type] OR "Meta-Analysis as Topic"[Mesh] OR meta-analysis[tiab] OR "Meta-Analysis "[Publication Type]*
    c. *NOT "Letter"[Publication Type] OR "Editorial"[Publication Type] OR "Comment"[Publication Type])*

Example of completed row for data from RCT

2019 ACC/AHA Guideline on Primary Prevention of Cardiovascular Disease Data Supplements

Data Supplement 1. RCTs of Patient-Centered Approaches for Providing Comprehensive ASCVD Prevention (Section 2.1)

Study Acronym; Author; Year Published	Aim of Study; Study Type; Study Size (N)	Patient Population	Study Intervention (# patients) / Study Comparator (# patients)	Endpoint Results (Absolute Event Rates, P value; OR or RR; & 95% CI)	Relevant 2° Endpoint (if any); Study Limitations; Adverse Events
Carter BL, et al., 2009 (1) 19858431	**Study Aim:** To determine the potency of interventions for blood pressure involving nurses or pharmacists **Study type:** Systematic review and meta analysis N=37 controlled clinical trials	**Inclusion criteria:** • Quasi-randomized trials, controlled before-after studies, interrupted time-series studies, patient-randomized trials, cluster randomized trials • Published January 1, 1970 through February 5, 2009 • Intervention of team based care of hypertension involving pharmacists or nurses	**Intervention:** Team based care of hypertension involving pharmacists or nurses. Because components varied, reviewers assigned a potency score of the predicted potency of the combination of effects of the interventions **Comparison:** Not specified	**1° endpoint:** Net change in BP Net change in BP Control (control was BP lower than 140/90 mm Hg for uncomplicated BP and lower than 130/80 mm Hg for those with diabetes mellitus or chronic kidney disease) A significant predicted reduction in SBP was found in interventions including pharmacist recommended medication to physician (-27.21 mm Hg, p=0.002), counseling about lifestyle modification (-12.63 mm Hg, p=0.03), pharmacist performed intervention (-11.70 mm Hg, p=0.03), use of a treatment algorithm (-8.46 mm Hg, p<0.001), completion of a drug profile and/or medication history (-8.28 mm Hg, p-0.01), and overall intervention potency score assigned by reviewers (p<0.001). A significant predicted reduction in DBP was found for interventions including: referral made to a specialist (-19.61 mm Hg, p0.04), providing patient education about BP medications (-17.60 mm Hg, p=0.003), completion of a drug profile and/or medication history (-7.27 mm Hg, p=0.006), pharmacist performed intervention (-4.03 mm Hg, p=0.04), nurse performed intervention (-3.94 mm Hg, p=0.04).	**Study Limitations:** The analysis included studies with varying trial designs and varying interventions There was no formal test of heterogeneity, but at least one study had an extremely high OR (OR=29.71), though sensitivity analysis revealed potential for a change to the OR for community pharmacy intervention to 1.8
				In a non-parametric analysis, the only intervention component significantly associated with a reduction in BP was education about BP medications, which was associated with a median 8.75 mm Hg reduction in SBP (IQR: -11.90 to -4.25) and a median 3.60 reduction in DBP (IQR: -7.03 to -1.00). In meta regressions examining the outcome of controlled BP, there were significant effects of team-based interventions regardless of whether they involved nurses, community pharmacies, or primary care clinic pharmacists, though the strongest effect was in community pharmacies. In trials of nurse-led interventions, the overall OR for control of SBP in the intervention vs. control group=1.69 (95% CI 1.48-1.93). In trials of community pharmacies, the OR=2.89 (95% CI 1.83-4.55), and in pharmacists in primary care clinics OR=2.17 (95% CI 1.75-2.68). In nonparametric analyses, in nursing studies, the mean reduction in SBP=5.84 mm Hg compared to 7.76 in pharmacists in primary care clinics and 9.31 mm Hg in interventions with community pharmacists. Comparable reductions in DBP were 3.46 mm Hg, 4.18 mm Hg, and 4.59 mm Hg, respectively.	

Example of completed row for data from Non-RCT/Systematic Reviews

Data Supplement 2. Nonrandomized Trials, Observational Studies, and/or Registries of Patient-Centered Approaches for Providing Comprehensive ASCVD Prevention (Section 2.1)

Study Acronym; Author; Year Published	Study Type/Design; Study Size (N)	Patient Population	Primary Endpoint and Results (include P value; OR or RR; & 95% CI)	Summary/Conclusion Comment(s)
Chen EH, et al., 2010 (11) 20737236	Study Aim To implement and evaluate the Teamlet Model, which uses health coaches working with primary care physicians to improve care for patients with diabetes and/or hypertension in an academic practice Study type: Non-randomized intervention N=541	Inclusion criteria • Transferred from graduating third year resident to an incoming first year resident (control group had and kept second or third year resident providers) • Had at least one visit in prior 2 years • Spoke English, Spanish, Cantonese, or Mandarin Diagnosed with diabetes and/or hypertension	1° endpoint Intervention vs. control comparisons of mean daytime, nighttime, and overall 24-hour ambulatory SBP and control rates *Change in intervention group from the year prior to the intervention year:* BP ≤goal: 48.7% vs. 56.5%, p=0.22 HbA1c≤ goal: 26.7% vs. 36.7%, p=0.12 LDL ≤ goal: 49.1% vs. 58.6%, p=0.07 HbA1c measured: 86.9% vs. 88.9%, p=0.82 LDL measured: 74.0% vs. 84.9%, p=0.02 BMI measured: 3.4% vs. 88.4%, p<0.001 Smoking status assessed: 4.1% vs. 86.9%, p<0.001 Self-management plan made: 19.9% vs. 55.5%, p<0.001 *Difference in change between intervention group and control group for year prior vs. year of intervention:* BP ≤goal: +3.8%, p=0.06 HbA1c≤ goal: +1.8%, p=0.83 LDL ≤ goal: +3.2%, p=0.79 HbA1c measured: +5.6%, p=0.17 LDL measured: -5.8%, p=0.001 2° endpoint First year residents provided an average of 146 patient visits during the year compared to 136 on average for the previous residency class	Summary Teamlet model was implemented without decreases in efficiency

Examples of potential search strategy components (for checking or revising search strategies)

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1. Your specific topic words: “xx” [MESH] OR “xxx” [TIAB]

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b. If no CA: NOT (heart arrest [MESH] OR “cardiac arrest [TIAB])

c. Critical illness terminology: "Critical Illness"[Mesh] OR "Critical Illness"[tiab] OR emergenc* [TIAB] OR emergencies [MESH] OR emergency medicine [MESH] OR acute disease [MESH]

3. To exclude animal studies: NOT (animals [mh] NOT humans [mh])

4. Optional: NOT “respiration, artificial”[MESH]

5. Optional limiting to articles with children or adolescent data, broadest search:

infan* OR baby OR baby* OR babies OR toddler* OR minors OR minors* OR kid OR kids OR child OR child* OR children* OR schoolchild* OR schoolchild OR school child[tiab] OR school child*[tiab] OR adolescen* OR juvenil* OR youth* OR teen* OR under*age* OR pubescen* OR pediatrics[mh] OR pediatric* OR paediatric* OR peadiatric* OR school[tiab] OR school*[tiab]

a. Optional exclude neonatal papers by

NOT (newborn* OR new-born* OR perinat* OR neonat* OR prematur* OR preterm*)

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b. review[tiab] OR "Review"[Publication Type] OR "Meta-Analysis as Topic"[Mesh] OR meta-analysis[tiab] OR "Meta-Analysis "[Publication Type]

c. NOT "Letter"[Publication Type] OR "Editorial"[Publication Type] OR “Comment"[Publication Type])