** This template is designed to help guide the preparation of a diagnostic test accuracy research question by population intervention comparator outcome study design and timeline (PICOST) to guide a systematic review. This is the most important step in the design of a systematic review (SR). The PICOST is prepared by the task force, approved by the continuous evidence evaluation committee (CEE), edited by the expert systematic reviewer or the knowledge synthesis lead and forwarded by CEE to ILCOR executive and the task force chair(s) for acknowledgement. This acknowledgement determines the time zero or start of the SR workflow.

One of the main roles of the CEE WG is to facilitate the work being performed by the various Task Forces. The CEE WG recognizes and greatly appreciates the content expertise of each Task Force. Our role is neither to create PICOSTS nor to challenge the Task Force recommendations regarding the importance of a given PICOST. However, to ensure efficiency, and fulfill our mandate, the CEE WG requires that submitted PICOSTS are designed to answer the question that was intended by the submitting Task Force. Detailed attention to the content of submitted PICOSTs is a prerequisite for the CEE WG to help fulfill its mandate of assigning the appropriate ILCOR-AHA resources for each PICOST. This helps ensure that resources are distributed appropriately with the intention of maximizing efficiency and productivity. Task Forces are encouraged to provide the rationale for each proposed PICOST in the 'background' section of the proposal as a proactive means of minimizing interpretation issues during review by the CEE WG.

The standard tools for grading evidence were designed to deal with questions that relate to interventions rather than diagnostic tests. However, the overall principles used for the grading of evidence for questions of diagnostic accuracy are similar to those used for questions related to an intervention. “Diagnostic tests” include symptoms and signs as well as the more traditional examples (such as imaging or biochemical assays). New “diagnostic tests” can act as a triage instrument (eg. to minimize the use of invasive or expensive tests), can replace current tests (eg. with a less invasive test, or at a lower cost), or can be an add on (to enhance the accuracy of diagnosis beyond current tests).

The highest level of evidence for the use of diagnostic test, is however where the use of the test is causally linked to improved patient outcome presumably through altered management: diagnostic intervention studies. For all proposed diagnostic questions, task forces should first attempt to identify any diagnostic intervention studies (randomised or observational) with direct assessment of patient-important outcomes. If such studies are identified, these would be dealt with by using the standard ILCOR PICOST template.

Unfortunately these sorts of outcome studies are very rare, so the majority of the literature identified will only deal with the diagnostic accuracy of the test: these would be dealt with by using a diagnostic test accuracy PICOST.

|  |  |
| --- | --- |
| PICOST Short Title *(edit)* | **PICOST for (insert short name of PICOST e.g. Criteria to diagnose Cardiac Arrest in Dispatch Centre)** |

1. Research Question based on PICOST   
   **(Population, Intervention, Control, Outcomes, Study design and Timeframe)**

|  |  |
| --- | --- |
| **PICOST** | **Description** *(with recommended text)* |
| **Population** | Adults and children in any setting (in-hospital or out-of-hospital) with (cardiac arrest) and …….. |
| **Intervention**  **(New criteria of an existing test or testing algorithm or new diagnostic test or testing algorithm)** |  |
| **Comparison**  **“Gold standard” or “reference standard”** |  |
| **Outcomes** | Any diagnostic test outcome. *(preset text)* |
| **Study Design** | Cross sectional or cohort studies are eligible for inclusion. Unpublished studies (e.g., conference abstracts, trial protocols) are excluded.  *(preset text)*  *If it is anticipated that there will be insufficient studies from which to draw a conclusion, diagnostic case-control studies or case series may be included in the initial search. The minimum number of cases for a case series to be included can be set by the ESR after discussion with the priority team or task force.* |
| **Timeframe** | All years and all languages are included as long as there is an English abstract  *(preset text)* |

1. ILCOR Priority Team

**Single TF** **PICOST**

|  |  |  |
| --- | --- | --- |
| **Role** | **Name** | **Notes** |
| Lead Task Force Content Experts (1/2): |  | (preferably TF members\*) |
| Lead Task Force Content Experts (2/2): |  | (preferably TF members\*) |
| Lead Task Force Content Expert Mentee (1) |  | (**ESR assigned PICOST only**, preferably TF members\*) |
| KSU or ESR | CEE assigned | (assigned by CEE) |
| ESR Mentee (1) | CEE assigned | (assigned by CEE from roster **ESR assigned PICOST only**) |
| Domain Lead (1): | CEE assigned | (assigned by CEE) |
| CEE WG representative (1) | CEE assigned | (assigned by CEE) |

**Nodal TF PICOST**

|  |  |  |
| --- | --- | --- |
| **Role** | **Name** | **Notes** |
| Lead Task Force Content Experts (1/2): |  | (preferably TF members\*) |
| Lead Task Force Content Experts (2/2): |  | (preferably TF members\*) |
| Lead Task Force Content Expert Mentee (1) |  | (**ESR assigned PICOST only**, preferably TF members\*) |
| Nodal TF Content Expert(s) |  | (when more than one TF involved, 1 per nodal TF): (preferably TF members\*) |
| KSU or ESR (1) | CEE assigned | (assigned by CEE) |
| ESR Mentee (1) | CEE assigned | (assigned by CEE from roster, **ESR assigned PICOST only**) |
| Domain Leads (1): | CEE assigned | (assigned by CEE) |
| CEE WG representative (1) | CEE assigned | (assigned by CEE) |

\* non TF members must submit COI documentation and be approved prior to assignment

**Back up Content Experts (Optional)**

|  |  |  |
| --- | --- | --- |
| **Role** | **Name** | **Notes** |
| Back up PICOST content expert | Optional | (preferably TF members\*) |
| Back up content expert (Nodal TF) |  | (preferably TF members\*) |

Back Up Content Expert recommended for Lead and Nodal task forces but not mandated

Back up Content Experts (1 per TF): (content experts who step in if a content expert becomes unable to complete the work. They are not on the team, nor eligible for authorship unless they are asked by TF chair to step into the role)

1. Active and Reposed PICOs Related to scope of work for this PICOST**:**

*Insert all PICOs as worded on the master document and include AHA number*

*Please add the categorization and prioritization ranking by lead TF and nodal TF of the PICOs listed above*

*(note: This information is available in the file: ILCOR PICO List on ilcor.org).*

|  |
| --- |
|  |

1. Definitions: *(This should include definitions of all the relevant terms identified in the PICOST and in the body of literature related to this topic identified during task force discussion)*

|  |
| --- |
|  |

1. Background and Rational for this PICOST**:** *(Why is this SR important to complete now and what are the potential clinical implications of completing this review? Include how this new science is anticipated to impact on the existing ILCOR recommendations. References required as per ILCOR format embedded in text (last name first author, year of publication, first page number and list full references at bottom of form).*

|  |
| --- |
|  |

1. Notes: *(the nuances and subtleties of the task force discussion; it is important to include anything that doesn’t fit in any other PICOST section but the task force feels this information is contributory to the question)* If it is anticipated by CEs and task force that there will be insufficient direct evidence, and indirect evidence will be used to answer the question the CE or Taskforce needs to document clearly what they mean by indirect and confirm indirect evidence exists.

|  |
| --- |
|  |

1. Task Force Suggested Outcomes**:** *(Usual outcomes for assessment of Diagnostic Test Accuracy relate to whether the target condition is present or not: True positives, True negatives, False positives, False negatives. Other outcomes to consider include: Inconclusive results, Complications, and Cost). These will be updated/modified after the SR search is performed and the total number of critical or important outcomes should be no more than 7)*

|  |
| --- |
|  |

1. Key recent studies**:** (*sentinel papers that are appropriate to answer this PICO***.** *Please insert full references)*

|  |
| --- |
|  |

1. Recent systematic reviews**:** *(directly or indirectly addressing this PICO. Please insert full references)*

|  |
| --- |
|  |

1. Review for ongoing clinical trials or unpublished work *(Use recommend links below)***:**
2. International Clinical Trials Registry Platform ([www.who.int/ictrp/en/](http://www.who.int/ictrp/en/))
3. US clinical trials registry ([www.clinicaltrials.gov](http://www.clinicaltrials.gov))
4. Cochrane CENTRAL (<http://www.cochranelibrary.com/about/central-landing-page.html>)

|  |
| --- |
| *Please insert ongoing clinical trials or completed trials that are unpublished as identified by the TF members through personal and through web sources. The ESR or KSU lead will repeat the search of the three trial networks after receiving PICOST approval.* |

1. List *A priori* Subgroup analyses**:** *(defined a priori based on expert opinion. Note: number of comparator tables in systematic review = no. of outcomes x no. of comparison x no. of subgroup, consider focusing* ***absolute essential subgroups only****.* *If paediatrics or neonatal TF are involved a neonatal and/or a paediatrics specific subgroup analysis is required*).

|  |
| --- |
|  |

1. Anticipated Workload*(required to guide volume of work estimate for ESR/KSU allocation):*

|  |  |
| --- | --- |
| Approximate number of abstracts to screen based on published SRs or prior ILCOR work | **N=** |
| Approximate number of full manuscripts to review based on published SRs or prior ILCOR work | **N=** |

1. Target Peer Reviewed Journals for SR Publication **(rank by priority if more than one)**

|  |  |
| --- | --- |
| 1. First choice journal |  |
| 1. Second choice |  |
| 1. Third choice |  |

1. References(list references cited by author, year, first page in the Background and Rational )

|  |
| --- |
|  |

1. Confirmation of approval steps (completed by CEE)

|  |  |
| --- | --- |
| **Steps** | **Insert Date (day/month/year)** |
| **Submission to CEE WG** | Completed by CEE |
| **Approved by CEE WG** | Completed by CEE |
| **Acknowledged by ILCOR Board** | Completed by CEE |
| **Acknowledged by task force(s)** | Completed by CEE |
| **Submission to SMH IS** | Completed by CEE |