**Checklist Table. Mark ✓ to indicate that the issue has been addressed satisfactorily, and ✗ if there is any cause for concern on the item. The Comments column should be used to answer the question (YES, NO, NA: not applicable) and/or to spell out the reasons for any concerns, the need for sensitivity analyses etc.**

| | | Item satisfactory? | Comments |
|---|---|---|---|
| **A. DEFINITION OF THE DECISION PROBLEM** | | | |
| ***A1. Target population for decision*** | | | |
| *A1.1* | *Has the target patient population for decision been clearly defined?* | | |
| ***A2. Comparators*** | | | |
| *A2.1* | *Decision Comparator Set: Have all the appropriate treatments in the decision been identified?* | | |
| *A2.2* | *Synthesis Comparator Set: Are there additional treatments in the Synthesis Comparator Set, which are not in the Decision Comparator Set? If so, is this adequately justified?* | | |
| ***A3 Trial inclusion / exclusion*** | | | |
| *A3.1* | *Is the search strategy technically adequate and appropriately reported?* | | |
| *A3.2* | *Have all trials involving at least two of the treatments in the Synthesis Comparator Set been included?* | | |
| *A3.3* | *Have all trials reporting relevant outcomes been included?* | | |

| | | Item satisfactory? | Comments |
|---|---|---|---|
| *A3.4* | *Have additional trials been included? If so, is this adequately justified?* | | |
| ***A4 Treatment Definition*** | | | |
| *A4.1* | *Are all the treatment options restricted to specific doses and co-treatments, or have different doses and co-treatments been "lumped" together? If the latter, is it adequately justified?* | | |
| *A4.2* | *Are there any additional modelling assumptions?* | | |
| ***A5 Trial outcomes and scale of measurement chosen for the synthesis*** | | | |
| *A5.1* | *Where alternative outcomes are available, has the choice of outcome measure used in the synthesis been justified?* | | |
| *A5.2* | *Have the assumptions behind the choice of scale been justified?* | | |
| ***A6 Patient population: trials with patients outside the target population*** | | | |
| *A6.1* | *Do some trials include patients outside the target population? If so, is this adequately justified?* | | |
| *A6.2* | *What assumptions are made about the impact, or lack of impact this may have on the relative treatment effects? Are they adequately justified?* | | |
| *A6.3* | *Has an adjustment been made to account for these differences? If so, comment on the adequacy of the evidence presented in support of this adjustment, and on the need for a sensitivity analysis.* | | |
| ***A7 Patient population: heterogeneity within the target population*** | | | |
| *A7.1* | *Has there been a review of the literature concerning potential modifiers of treatment effect?* | | |
| *A7.2* | *Are there apparent or potential differences between trials in their patient populations, albeit* | | |

| | | Item satisfactory? | Comments |
|---|---|---|---|
| | *within the target population? If so, has this been adequately taken into account?* | | |
| ***A8 Risk of Bias*** | | | |
| *A8.1* | *Is there a discussion of the biases to which these trials, or this ensemble of trials, are vulnerable?* | | |
| *A8.2* | *If a bias risk was identified, was any adjustment made to the analysis and was this adequately justified?* | | |
| ***A9. Presentation of the data*** | | | |
| *A9.1* | *Is there a clear table or diagram showing which data have been included in the base-case analysis?* | | |
| *A9.2* | *Is there a clear table or diagram showing which data have been excluded and why?* | | |
| **B. METHODS OF ANALYSIS AND PRESENTATION OF RESULTS**<br>***B1 Meta-analytic methods*** | | | |
| *B1.1* | *Is the statistical model clearly described?* | | |
| *B1.2* | *Has the software implementation been documented?* | | |
| ***B2. Heterogeneity in the relative treatment effects*** | | | |
| *B2.1* | *Have numerical estimates been provided of the degree of heterogeneity in the relative treatment effects?* | | |
| *B2.2* | *Has a justification been given for choice of random or fixed effect models? Should sensitivity analyses be considered?* | | |
| *B2.3* | *Has there been adequate response to heterogeneity?* | | |
| *B2.4* | *Does the extent of unexplained variation in relative treatment effects threaten the robustness of* | | |

| | | Item satisfactory? | Comments |
|---|---|---|---|
| | *conclusions?* | | |
| *B2.5* | *Has the statistical heterogeneity between baseline arms been discussed?* | | |
| ***B3 Baseline model for trial outcomes*** | | | |
| *B3.1* | *Are baseline effects and relative effects estimated in the same model? If so, has this been justified?* | | |
| *B3.2* | *Has the choice of studies to inform the baseline model been explained?* | | |
| ***B4 Presentation of results of analyses of trial data*** | | | |
| *B4.1* | *Are the relative treatment effects (relative to a placebo or "standard" comparator) tabulated, alongside measures of between-study heterogeneity if a RE model is used?* | | |
| *B4.2* | *Are the absolute effects on each treatment, as they are used in the CEA, reported?* | | |
| ***B5 Synthesis in other parts of the natural history model*** | | | |
| *B5.1* | *Is the choice of data sources to inform the other parameters in the natural history model adequately described and justified?* | | |
| *B5.2* | *In the natural history model, can the longer-term differences between treatments be explained by their differences on randomised trial outcomes?* | | |
| **C. ISSUES SPECIFIC TO NETWORK SYNTHESIS**<br>***C1 Adequacy of information on model specification and software implementation*** | | | |
| ***C2. Multi-arm trials*** | | | |
| *C2.1* | *If there are multi-arm trials, have the correlations between the relative treatment effects been taken into account?* | | |
| ***C3 Connected and disconnected networks*** | | | |

| | | Item satisfactory? | Comments |
|---|---|---|---|
| *C3.1* | *Is the network of evidence based on randomised trials connected?* | | |
| ***C4 Inconsistency*** | | | |
| *C4.1* | *How many inconsistencies could there be in the network?* | | |
| *C4.2* | *Are there any a priori reasons for concern that inconsistency might exist, due to systematic clinical differences between the patients in trials comparing treatments A and B, and the patients in trials comparing treatments A and C, etc?* | | |
| *C4.3* | *Have adequate checks for inconsistency been made?* | | |
| *C4.4* | *If inconsistency was detected, what adjustments were made to the analysis, and how was this justified?* | | |
| **D EMBEDDING THE SYNTHESIS IN A PROBABILISTIC COST EFFECTIVENESS ANALYSIS**<br>***D1. Uncertainty Propagation*** | | | |
| *D1.1* | *Has the uncertainty in parameter estimates been propagated through the CEA model?* | | |
| ***D2 Correlations*** | | | |
| *D2.1* | *Are there correlations between parameters? If so, have the correlations been propagated through the CEA model?* | | |