Each PQAQ question stands alone. When scoring, do not take responses to other questions into account unless the decision rule or original PQAQ indicates to do so.

ALWAYS REFER FIRST TO INSTRUCTIONS PANEL ON LEFT SIDE OF QUESTIONNAIRE

Domain	Decision Rule
Economic Evaluation	
1. Research question in terms of costs and consequences?	**1** if <u>any mention</u> of cost AND utility or QALYs.
2. Specific type of economic analysis technique?	**1** if authors indicate it specifically
3. Type of technique according to authors	
Comparators	
4. Rationale for intervention(s) investigated?	
5. Rationale for alternative program(s) or intervention(s) used for comparison?	**1** if authors state anything that suggests "usual care," usual care standard. Need to have a minimum of one statement of what the usual practice or usual care is AND the rationale should be reasonable. If the alternative is described as a "do nothing" when there is a standard treatment/procedures/test, then it should be 3. You may suspect that authors chose "do nothing" mainly because of poor study design and not because there is no standard treatment.
6. Alternatives described in adequate detail?	
7. Description of event pathway?	**1** if course of treatment and care are provided. **1** If branches of a decision tree are labeled in WORDS, **2** if tree not labeled. **2** if resource use items in a table.
8. Formal decision analysis?	**1** Decision analysis = Markov = State transition = discrete event simulation
Target Population	
9. Target population for the intervention?	
10. Subjects representative of population targeted by the intervention? Important for clinical studies, this is trying to identify whether the clinical study is done well. Answer can be found in the discussion, where they address generalizability. Commonly found in the limitations section. Sample gathered from own institution that may or may not be representative of target population.	**1** Is there a justification of the sample and do they indicate that the results are meaningful for other populations? **1** If use a decision model (gather data from various published studies) and it is explicit that the multiple populations are representative of the targeted population. **1** Is it clear that the intended population was the one the authors studied? Do the authors lean towards generalizability? **5** If a decision analysis and they say they modeled the outcomes for a cohort (using data from multiple sources) then is considered hypothetical.
Time Horizon	
11. Time horizon for both costs and consequences?	**1** If a <u>chronic disease</u> (like hearing loss) and they say "lifetime" or mention life expectancy. Both costs and health consequences (survival, utility, QALYs) have to be explicitly measured over the time horizon to be scored as 1.
12. Justify time horizon? Most often the problem is a short time horizon when a "lifetime" should be used. Need to justify short horizons	**1** If a <u>chronic disease</u> (like hearing loss) and they say "lifetime" or mention life expectancy. **2** If state lifetime but do not justify the use of lifetime in

(i.e., pharmaceutical studies that use RCT data with short time horizon. The RCT uses a short time horizon because uses a surrogate marker that they link to life/survival).	the case of an acute condition. If there is an implication of long-term sequelae then 2, but If there is no justification, then score as 3.
Perspective	
13. Perspective given?	**1** needs to be explicitly stated
14. Societal (alone or with other perspectives?)	
15. Results of each perspective presented separately?	
Costs and Resource Use	
16. All relevant costs for each alternative?	**1** If described in the methods section, all cost items. **2** If only presented in a table and described within the body of the paper.
17. Opportunity costs of lost care giver/parent time?	Question stands alone – independent of stated analytic perspective. Applicable if societal or family perspective is taken. Can be applicable if healthcare system perspective taken (see below): If state societal perspective then should measure parent/caregiver costs. (it's possible they may equal zero but this needs to be stated.) Even if healthcare system perspective, need to include parents when required (when parents are involved in providing care or miss work time to care for child).
18. Cost item and identification extend beyond health system to include school and community resources when necessary?	SEE ORIGINAL (LEFT-SIDE) DECISION RULE. Determine if authors are using the correct perspective. If they refer to education then they need to discuss those costs. Do costs extend beyond the health care system when they should? This is especially relevant for behavioural and learning conditions (i.e., ADHD, Autism, etc.).
19. Future salary and productivity changes in child (when appropriate)?	SEE ORIGINAL (LEFT-SIDE) DECISION RULE. When a chronic condition (e.g. deafness), then these future salary and productivity costs should be taken into account. If mentioned in the discussion/conclusion it is not enough to get a **1** or **2**, has to actually be measured as part of reference case or sensitivity analysis
20. Sources for volume of resources?	
21. Sources of unit costs?	
Outcomes	
22. Primary health outcome?	Utility (for CUA) or should it be an actual health outcome? Yes, measurement of utilities or survival or mortality or QALYs or DALYs should be stated as the health outcome or consequence if the primary research question is to do a CUA. However, CUA may not be the primary research question. It is sometimes secondary to a CEA reporting life years gained or some other health status measure. Apply questions 22-27 to the utilities/survival/QALY measurement exclusively even if a CEA is clearly the primary research question..
23. Justification of primary health outcome?	If it's logical for what was answered in question 22, i.e. justification for utilities or survival or mortality or QALYs

	or DALYs
24. Is effectiveness rather than efficacy assessed?	This applies to above mentioned outcome measures. If survival or utility was measured in a RCT with many exclusion criteria, then external validity may be reduced as efficacy is measured. Need to look at an actual population (from clinic, hospital, etc.). May need to source RCT reference.
25. NOT SCORED	
26. Details of design of efficacy/effectiveness study?	**1** if done in study and details provided and also if details provided if inputs from previous published study is used.. **3** if only gives results but no details.
27. Results of efficacy/effectiveness study?	**1** if actual results from present study or previous study(ies) provided.
28. School/day care absences considered?	**Almost always coded 3, NO**
29. Intermediate outcome variables linked by evidence or reference to end benefit?	**Most applicable to CEA.** If study doesn't measure survival then it may use an intermediate outcome to estimate life years for the QALY calculation. For example, linking genetic status to mortality risk. Relevant if projecting life expectancy based on an intermediate measure, such as linking lab test result to survival (link via a reference). **N/A when notes on left of PQAQ do not apply.**
Quality of Life ascertain what will need to be collected to update figure 1.	
30. NOT SCORED	May need to collect for extra tables
31. NOT SCORED	May need to collect for extra tables
32. NOT SCORED	May need to collect for extra tables
Analysis	
33. Costs AND outcomes in appropriate units for type of study?	QALY, DALY, need a utility measure.
34. NOT SCORED	
35. NOT SCORED	
36. NOT SCORED	
37. Costs valued appropriately?	
38. Valuation of outcomes appropriate?	**1** Must use an instrument within the study or if the utility estimate used was from a previous study, must provide strong evidence that those estimates are appropriate, e.g. collected as part of previous study using appropriate methods in the same patient population or in the same study sample **3** if Expert opinion
39. NOT SCORED	
40. Quantities reported separately from unit costs?	
41. Costs aggregated correctly?	
42. Statistical tests and confidence intervals?	Stochastic data are empirical data that are measured over multiple individuals or repeated measures. Can then apply statistical tests (e.g. change from baseline or between groups) with some type of measure of variance (standard deviation, standard error, CI). **1** if explicit in the methods, but also okay if formula explicitly given in table **2** If only appears in a table and not explicit in the methods. Maybe 4 (not applicable) if CUA is based on hypothetical patients and modeled.

PEDE Quality Appraisal Questionnaire – Supplemental Decision Rules (2011)

Discounting	
43. When required, costs and consequences discounted to present time?	Both need to be discounted for time horizons > 1 year, but may be at different rates.
44. Explanation if no discounting when it should have been done?	
Incremental Analysis	
45. Incremental estimates of costs & outcomes?	**1** Need both cost and outcomes to be incremental. **2** if only one of costs or outcomes is given incrementally. If incremental explicitly in a formula in a table then this is explicit. Look for words like **gain, difference, marginal, or savings** to indicate an incremental estimate within the body of the article (this is inferred = 2).
46. Summarized as incremental ratios?	Not always in a table. Can be in the text of the discussion or results sections. Studies will usually state these incremental ratios. If dominant, then N/A.
47. Confidence intervals/limits calculated for incremental ratios or incremental estimates of costs and outcomes?	Note: Watch for probabilistic sensitivity analysis (PSA or PA), Monte Carlo or microsimulations, or "bootstrapping." Sometimes an upper or lower bound is given along with an ICER – this is equivalent to a confidence interval. May be called a "credible interval." Bootstrapping is a method to produce confidence or credible intervals.
Sensitivity Analysis	
48. Important assumptions given?	Some important assumptions include when adult values are used for children, imputation is used for missing data, there is reliance on expert opinion, and/or reliance on other adult data.
49. Sensitivity analysis performed?	
50. Justification of alternative values or ranges for sensitivity analysis?	
51. NOT SCORED	
Conflict of Interest	
52. Relationship with sponsor of study stated?	**1** if funding support mentioned (read the fine print).
53. Authors had independent control?	**Needs to be stated to get a score of 1.** Some journals require this.
Conclusions	
54. Answer to study question provided?	**1** if there is an ICER. This is considered explicit.
55. Most important limitations discussed?	**1** If includes paragraph addressing limitations. **2** No paragraph but inferred from rest of text.
56. Conclusions generalized to other settings or patient/client groups?	**1** if they are specific (generalizable to broader population or to another area) **2** if they refer to general population to which intervention is directed but not explicitly about the results being generalizable. **3** if NO mention of generalizability.
57. Global impression	