National Institute for Health and Care Excellence

Final

# Cystic Fibrosis: diagnosis and management

## Appendix M

*Main appendix document*

*Health economics quality assessment*

*25 October 2017*

*FINAL*

*Developed by the National Guideline Alliance, hosted by the Royal College of Obstetricians and Gynaecologist*

**Disclaimer**
The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or service users. The recommendations in this guideline are not mandatory and the guideline does not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Local commissioners and/or providers have a responsibility to enable the guideline to be applied when individual health professionals and their patients or service users wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with compliance with those duties.

NICE guidelines cover health and care in England. Decisions on how they apply in other UK countries are made by ministers in the Welsh Government, Scottish Government, and Northern Ireland Executive. All NICE guidance is subject to regular review and may be updated or withdrawn.

# Contents

# Appendix M: Health economics quality assessment

## M.1 Airway clearance

| **Study identification**<br>M.P. McIlwaine, M. Richmond, J.L. Agnew, N. Alarie, L. Lands, M. Chilvers, F. Ratjen<br>WS5.6 Cost-effectiveness of performing positive expiratory pressure versus high frequency chest wall oscillation. Journal of Cystic Fibrosis, Volume 13, Supplement 2, Page S11 | | |
|---|---|---|
| **Guidance topic: Cystic Fibrosis** | | **Question no: 6** |
| **Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | Yes | PEP & HFCWO |
| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | Yes | Canada |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Unclear | Non-societal and direct heath care inferred |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Partly | HRQoL not considered |
| 1.6 Are all future costs and outcomes discounted appropriately? | NA | Time horizon: 1 year |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above). | No | Outcome measure: cost of therapy & number of exacerbations |
| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Unclear | |
| 1.9 Overall judgement: Partially applicable | | |
| **Other comments:** | | |
| **Section 2: Study limitations (the level of methodological quality)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | NA | Cost-benefit analysis alongside RCT |
| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | Partly | Time horizon: 1 year |
| 2.3 Are all important and relevant outcomes included? | Partly | QoL outcomes not considered |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Yes | From RCT |
| 2.5 Are the estimates of relative intervention effects from the best available source? | Yes | From RCT |
| 2.6 Are all important and relevant costs included? | Partly | Lack of detail |
| 2.7 Are the estimates of resource use from the best available source? | Partly | From RCT |

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| 2.8 Are the unit costs of resources from the best available source? | Unclear | Sources not reported |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | Yes | Difference in cost / difference in exacerbations calculable |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | No | Only point estimates reported |
| 2.11 Is there any potential conflict of interest? | No | |
| 2.12 Overall assessment: Severe limitations | | |
| **Other comments:**<br>Are money-costs and 'benefits' which are savings of future money-costs evaluated? No<br>Have all important and relevant costs and outcomes for each alternative been quantified in money terms? Yes, medical costs appear to include the cost of treating exacerbations, but limited details in conference paper<br>Has at least 1 of net present value, benefit/cost ratio and payback period been estimated? No, only net present value. Equipment does not appear to be annuitised over the lifespan<br>Were any assumptions of materiality made? No, all relevant costs appear to be included, but limited details in conference paper | | |

## M.2 Monitoring pulmonary disease

| **Study identification**<br>Moodie et al. 2014. Costs of Bronchoalveolar Lavage-Directed Therapy in the First 5 Years of Life for Children with Cystic Fibrosis. The Journal of Pediatrics; 165 (3), pages 564–569 | | |
|---|---|---|
| **Guidance topic: Cystic Fibrosis** | | **Question no: 9** |
| **Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5)** | **Yes/partly/no/unclear/NA** | **Comments** |
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | Yes | BAL & standard therapy |
| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | Yes | Australia & New Zealand |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Yes | Health care provider |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Partly | HRQoL and adverse events not considered |
| 1.6 Are all future costs and outcomes discounted appropriately? | NA | Time horizon: 5 years |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above). | No | All outcomes transformed into costs |
| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Unclear | Other sectors not stated |
| 1.9 Overall judgement: Directly applicable | | |
| **Other comments:** This study does not include the preferred measure of effects (QALYs), but is still thought to be useful for decision making given that all other criteria are applicable and the alternative outcome measure reported is unlikely to change the conclusions about cost-effectiveness. | | |

| Section 2: Study limitations (the level of methodological quality) | Yes/partly/no/unclear/NA | Comments |
|---|---|---|
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | NA | Cost benefit analysis alongside RCT |
| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | Yes | Time horizon: 5 years |
| 2.3 Are all important and relevant outcomes included? | Partly | QoL outcomes and adverse events not considered |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Yes | From RCT |
| 2.5 Are the estimates of relative intervention effects from the best available source? | Yes | From RCT |
| 2.6 Are all important and relevant costs included? | Yes | Full details on costs provided |
| 2.7 Are the estimates of resource use from the best available source? | Yes | From RCT |
| 2.8 Are the unit costs of resources from the best available source? | Yes | From national databases |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | No | Cost-benefit analysis |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | Partly | SDs & 95% CIs reported |
| 2.11 Is there any potential conflict of interest? | Partly | Tobramycin provided free by the manufacturer |
| 2.12 Overall assessment: Minor limitations | | |
| **Other comments:**<br>Are money-costs and 'benefits' which are savings of future money-costs evaluated? No<br>Have all important and relevant costs and outcomes for each alternative been quantified in money terms? Yes<br>Has at least 1 of net present value, benefit/cost ratio and payback period been estimated? No, only net present value<br>Were any assumptions of materiality made? No, all relevant costs included and described | | |
| **Study identification**<br>Etherington et al. 2008. Clinical impact of reducing routine susceptibility testing in chronic Pseudomonas aeruginosa infections in cystic fibrosis. Journal of Antimicrobial Chemotherapy; 61, pages 425-7. | | |
| **Guidance topic: Cystic Fibrosis** | | **Question no: 7** |
| **Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5)** | **Yes/partly/no/unclear/NA** | **Comments** |
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | No | Number of routine susceptibility tests conducted on isolates of pseudomonas aeruginosa, frequency is not a comparison in the protocol |

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| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | Yes | UK |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Yes | NHS |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Partly | HRQoL not considered |
| 1.6 Are all future costs and outcomes discounted appropriately? | NA | Time horizon: 6 months |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above). | No | Outcome measure: cost savings from reduced resources |
| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Unclear | |
| 1.9 Overall judgement: Not applicable | | |
| **Other comments:** Still considered relevant for decision making given that the Committee could make recommendations about the frequency of testing | | |
| **Section 2: Study limitations (the level of methodological quality)** | **Yes/partly/no/unclear/NA** | **Comments** |
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | NA | Not a cost-effectiveness analysis |
| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | No | Time horizon: 6 months |
| 2.3 Are all important and relevant outcomes included? | Partly | QoL outcomes not considered |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Partly | Before and after study |
| 2.5 Are the estimates of relative intervention effects from the best available source? | Partly | Before and after study |
| 2.6 Are all important and relevant costs included? | Partly | No detail regarding cost build up |
| 2.7 Are the estimates of resource use from the best available source? | Partly | Before and after study, but resource use not described in detail |
| 2.8 Are the unit costs of resources from the best available source? | Unclear | Sources not reported |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | No | Report cost savings from new protocol from consumable and staff time. Other clinical outcomes also reported. |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | No | Only point estimates reported |
| 2.11 Is there any potential conflict of interest? | No | |
| 2.12 Overall assessment: Very serious limitations | | |
| **Other comments:**<br>Have all important and relevant costs and outcomes for each alternative been quantified, where appropriate? No, not all relevant costs and outcomes included<br>Were any assumptions of materiality made to restrict the number of consequences considered? Unclear, insufficient detail regarding cost build-up | | |

Was an analysis of correlations between consequences carried out to help control for double counting? No

Was there any indication of the relative importance of the difference consequence and suggested weighting of them? No

Were there any theoretical relationships between consequences that could have been taken into account in determining weights? Final outcomes associated with a cost a QoL weight such as the duration of IV antibiotics

Were the consequences considered one by one to see if a decision could be made based on a single consequence or a combination of a small number of consequences? No

Were the consequences considered in subgroups of all consequences in the analysis to see if a decision could be made based on a particular subgroup? No

Was an MCDA (multiple criteria decision analysis) or other published method of aggregation of consequences attempted?

## M.3 Muocactive agents

**Study identification**

Suri R, Grieve R, Normand C, Metcalfe C, Thompson S, Wallis C, Bush A. "Effects of hypertonic saline, alternate day and daily rhDNase on healthcare use, costs and outcomes in children with cystic fibrosis." Thorax. 2002: Oct;57(10):841-6

| **Guidance topic: Cystic Fibrosis** | | **Question no: 11** |
|---|---|---|
| **Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | Yes | rhDNase & HS |
| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | Yes | UK |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Yes | NHS |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Partly | HRQoL and adverse events not considered |
| 1.6 Are all future costs and outcomes discounted appropriately? | NA | Time horizon: 12 weeks |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above). | No | Outcomes associated with a resource use transformed into costs |
| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Unclear | |
| 1.9 Overall judgement: Partially applicable | | |
| **Other comments:** | | |
| **Section 2: Study limitations (the level of methodological quality)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | NA | Cost benefit analysis alongside crossover trial |
| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | Partly | Time horizon: 12 week crossover trial |

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| 2.3 Are all important and relevant outcomes included? | Partly | QoL outcomes and adverse events not considered |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Yes | From randomised crossover trial |
| 2.5 Are the estimates of relative intervention effects from the best available source? | Yes | From randomised crossover trial |
| 2.6 Are all important and relevant costs included? | Yes | Full details on costs provided |
| 2.7 Are the estimates of resource use from the best available source? | Yes | From randomised crossover trial |
| 2.8 Are the unit costs of resources from the best available source? | Yes | UK recognised sources |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | No | Cost-benefit analysis |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | Partly | 95% CIs reported |
| 2.11 Is there any potential conflict of interest? | No | |
| 2.12 Overall assessment: Minor limitations | | |
| **Other comments:**<br>Are money-costs and 'benefits' which are savings of future money-costs evaluated? No<br>Have all important and relevant costs and outcomes for each alternative been quantified in money terms? Yes<br>Has at least 1 of net present value, benefit/cost ratio and payback period been estimated? No, only net present value<br>Were any assumptions of materiality made? No, all relevant costs included and described | | |
| **Study identification**<br>Grieve R, Thompson S, Normand C, Suri R, Bush A, Wallis C. "A cost-effectiveness analysis of rhDNase in children with cystic fibrosis." Int J Technol Assess Health Care. 2003: 19(1):71-9. | | |
| **Guidance topic: Cystic Fibrosis** | | **Question no: 11** |
| **Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | Yes | rhDNase & HS |
| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | Yes | UK |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Yes | NHS |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Partly | HRQoL and adverse effects not considered |
| 1.6 Are all future costs and outcomes discounted appropriately? | NA | Time horizon: 12 weeks |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above). | No | Outcomes associated with a resource use transformed into costs |
| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Unclear | |

| | | |
|---|---|---|
| 1.9 Overall judgement: Directly applicable | | |
| **Other comments:** This study does not include the preferred measure of effects (QALYs), but is still thought to be useful for decision making given that all other criteria are applicable and the alternative outcome measure reported is unlikely to change the conclusions about cost-effectiveness. | | |
| **Section 2: Study limitations (the level of methodological quality)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | NA | Results taken from crossover trial |
| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | Partly | Time horizon: 12 week crossover |
| 2.3 Are all important and relevant outcomes included? | Partly | QoL outcomes and adverse effects not considered |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Yes | From randomised crossover trial |
| 2.5 Are the estimates of relative intervention effects from the best available source? | Yes | From randomised crossover trial |
| 2.6 Are all important and relevant costs included? | Yes | Full details on costs provided |
| 2.7 Are the estimates of resource use from the best available source? | Yes | From randomised crossover trial |
| 2.8 Are the unit costs of resources from the best available source? | Yes | UK recognised sources |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | Yes | ICER £ per 1% gain in FEV1 |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | Yes | PSA |
| 2.11 Is there any potential conflict of interest? | No | |
| 2.12 Overall assessment: Minor limitations | | |
| **Other comments:** | | |
| **Study identification**<br>Christopher F, Chase D, Stein K, Milne R.J. rhDNase therapy for the treatment of cystic fibrosis patients with mild to moderate lung disease. Clin Pharm Ther. 1999 Dec;24(6):415-26. | | |
| **Guidance topic: Cystic Fibrosis** | | **Question no: 11** |
| **Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | Yes | rhDNase |
| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | Partly | UK analysis based on US clinical effectiveness data |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Yes | NHS |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Partly | HRQoL not considered |
| 1.6 Are all future costs and outcomes discounted appropriately? | Yes | Time horizon: lifetime |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and | No | LYG |

| | | |
|---|---|---|
| outcomes used in line with analytical perspectives taken (item 1.4 above). | | |
| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Unclear | |
| 1.9 Overall judgement: Partially applicable | | |
| **Other comments:** | | |
| **Section 2: Study limitations (the level of methodological quality)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | Yes | Risk of death dependent on FEV1 |
| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | Partly | Time horizon: 12 week crossover trial used to inform analysis |
| 2.3 Are all important and relevant outcomes included? | Partly | QoL outcomes not considered |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Partly | From US RCT |
| 2.5 Are the estimates of relative intervention effects from the best available source? | Partly | From US RCT |
| 2.6 Are all important and relevant costs included? | Partly | From US RCT |
| 2.7 Are the estimates of resource use from the best available source? | Partly | From US RCT |
| 2.8 Are the unit costs of resources from the best available source? | Yes | UK recognised sources |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | Yes | ICER cost per LYG |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | Yes | OWSA on FEV1 parameters and subgroup analysis |
| 2.11 Is there any potential conflict of interest? | No | |
| 2.12 Overall assessment: Very serious limitations | | |
| **Other comments:** | | |
| **Study identification**<br>Menzin J, Oster G, Davies L, Drummond MF, Greiner W, Lucioni C, Merot JL, Rossi F, vd Schulenburg JG, Souêtre E. "A multinational economic evaluation of rhDNase in the treatment of cystic fibrosis." Int J Technol Assess Health Care. 1996: 12(1):52-61. | | |
| **Guidance topic: Cystic Fibrosis** | | **Question no: 11** |
| **Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | Yes | rhDNase |
| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | Partly | UK analysis based on US clinical effectiveness data |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Yes | NHS |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Partly | HRQoL not considered |

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| 1.6 Are all future costs and outcomes discounted appropriately? | NA | Time horizon: 24 weeks |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above). | No | Cost-benefit analysis |
| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Unclear | |
| 1.9 Overall judgement: Partially applicable | | |
| **Other comments:** | | |
| **Section 2: Study limitations (the level of methodological quality)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | NA | Cost-benefit analysis |
| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | Partly | Time horizon: 24 weeks |
| 2.3 Are all important and relevant outcomes included? | Partly | QoL outcomes not considered |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Partly | From US RCT |
| 2.5 Are the estimates of relative intervention effects from the best available source? | Partly | From US RCT |
| 2.6 Are all important and relevant costs included? | No | From US RCT adapted to UK setting, insufficient detail reported on translation, cost of rhDNase not included |
| 2.7 Are the estimates of resource use from the best available source? | Partly | From US RCT adapted to UK setting, insufficient detail reported on translation |
| 2.8 Are the unit costs of resources from the best available source? | Unclear | Cost of care taken from 3 UK CF centres |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | No | Cost-benefit analysis |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | No | Not assessed |
| 2.11 Is there any potential conflict of interest? | No | |
| 2.12 Overall assessment: Very serious limitations | | |
| **Other comments:**<br>Are money-costs and 'benefits' which are savings of future money-costs evaluated? No<br>Have all important and relevant costs and outcomes for each alternative been quantified in money terms? Unclear, cost of rhDNase not included<br>Has at least 1 of net present value, benefit/cost ratio and payback period been estimated? No, only net present value<br>Were any assumptions of materiality made? Unclear | | |
| **Study identification**<br>McIntyre AM. "Dornase alpha and survival of patients with cystic fibrosis." Hosp Med. 1999: 60(10):736-9. | | |
| **Guidance topic: Cystic Fibrosis** | | **Question no: 11** |

| Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5) | Yes/partly/no /unclear/NA | Comments |
|---|---|---|
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | Yes | rhDNase |
| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | Partly | UK analysis based on non-UK clinical effectiveness data |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Yes | NHS |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Yes | |
| 1.6 Are all future costs and outcomes discounted appropriately? | Partly | Discount rate: 6%<br>Time horizon: lifetime |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above). | No | Cost-benefit analysis |
| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Unclear | |
| 1.9 Overall judgement: Partially applicable | | |
| **Other comments:** | | |
| **Section 2: Study limitations (the level of methodological quality)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | NA | Cost-benefit analysis |
| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | Yes | Time horizon: lifetime |
| 2.3 Are all important and relevant outcomes included? | Yes | |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Partly | From non-UK studies |
| 2.5 Are the estimates of relative intervention effects from the best available source? | Partly | From non-UK studies |
| 2.6 Are all important and relevant costs included? | Unclear | CF costs categorised into mild, moderate or severe CF |
| 2.7 Are the estimates of resource use from the best available source? | Unclear | From non-UK studies, insufficient detail on how CF care is costed according to severity |
| 2.8 Are the unit costs of resources from the best available source? | Partly | Cost of care taken from a UK study (Robson 1992), based on severity |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | No | Cost-benefit analysis |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | Yes | Improvement with rhDNase varied |
| 2.11 Is there any potential conflict of interest? | No | |
| 2.12 Overall assessment: Very serious limitations | | |

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|---|---|---|
| **Other comments:**<br>Are money-costs and 'benefits' which are savings of future money-costs evaluated? No<br>Have all important and relevant costs and outcomes for each alternative been quantified in money terms? Unclear<br>Has at least 1 of net present value, benefit/cost ratio and payback period been estimated? No, only net present value<br>Were any assumptions of materiality made? Unclear | | |
| **Study identification**<br>Mannitol HTA | | |
| **Guidance topic: Cystic Fibrosis** | | **Question no: 11** |
| **Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | Yes | rhDNase & mannitol |
| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | Yes | UK |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Yes | NHS |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Yes | |
| 1.6 Are all future costs and outcomes discounted appropriately? | Yes | Time horizon: lifetime |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above). | Yes | |
| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Yes | |
| 1.9 Overall judgement: Applicable | | |
| **Other comments:** | | |
| **Section 2: Study limitations (the level of methodological quality)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | Yes | |
| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | Yes | Time horizon: lifetime |
| 2.3 Are all important and relevant outcomes included? | Yes | |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Yes | Patient level data |
| 2.5 Are the estimates of relative intervention effects from the best available source? | Yes | Patient level data, note the effect of mannitol was assumed to be the same in rhDNase users and non-users in the manufacturer's initial submission |
| 2.6 Are all important and relevant costs included? | Yes | Patient level data |
| 2.7 Are the estimates of resource use from the best available source? | Yes | Patient level data |

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| 2.8 Are the unit costs of resources from the best available source? | Yes | UK recognised sources |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | Yes | |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | Yes | PSA |
| 2.11 Is there any potential conflict of interest? | No | |
| 2.12 Overall assessment: No limitations | | |

## M.4 Antimicrobial agents

| **Study identification**<br>Tappenden, P., Harnan, S., Uttley, L., Mildred, M., Walshaw, M., Taylor, C., Brownlee, K., The cost effectiveness of dry powder antibiotics for the treatment of Pseudomonas aeruginosa in patients with cystic fibrosis, Pharmacoeconomics, 32, 159-72, 2014 | | |
|---|---|---|
| **Guidance topic: Cystic Fibrosis** | | **Question no: 13** |
| **Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | Yes | Coli DPI vs. NT<br>Tobi DPI vs. NT |
| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | Yes | UK |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Yes | NHS |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Yes | |
| 1.6 Are all future costs and outcomes discounted appropriately? | Yes | Time horizon: lifetime<br>Discount rate: 3.5% |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above). | Yes | |
| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Yes | |
| 1.9 Overall judgement: Applicable | | |
| **Other comments:** | | |
| **Section 2: Study limitations (the level of methodological quality)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | Yes | Treatment switching occurs in clinical practice but no data on this |
| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | Yes | Time horizon: lifetime and within trial analysis |
| 2.3 Are all important and relevant outcomes included? | Yes | |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Yes | From RCT |

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| 2.5 Are the estimates of relative intervention effects from the best available source? | Yes | From RCT |
| 2.6 Are all important and relevant costs included? | Yes | Full details on costs provided |
| 2.7 Are the estimates of resource use from the best available source? | Yes | From RCT |
| 2.8 Are the unit costs of resources from the best available source? | Yes | From UK recognised sources |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | Yes | |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | Yes | OWSA and PSA |
| 2.11 Is there any potential conflict of interest? | No | |
| 2.12 Overall assessment: No limitations | | |
| **Other comments:** | | |
| **Study identification**<br>Tappenden,P., Harnan,S., Uttley,L., Mildred,M., Carroll,C., Cantrell,A., Colistimethate sodium powder and tobramycin powder for inhalation for the treatment of chronic Pseudomonas aeruginosa lung infection in cystic fibrosis: systematic review and economic model, Health Technology Assessment (Winchester, England), 17, v-xvii, 2013 | | |
| **Guidance topic: Cystic Fibrosis** | | **Question no: 13** |
| **Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | Yes | Coli DPI vs. NT |
| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | Yes | UK |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Yes | NHS |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Yes | |
| 1.6 Are all future costs and outcomes discounted appropriately? | Yes | Time horizon: lifetime<br>Discount rate: 3.5% |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above). | Yes | |
| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Yes | |
| 1.9 Overall judgement: Directly applicable | | |
| **Other comments:** | | |
| **Section 2: Study limitations (the level of methodological quality)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | Yes | Treatment switching occurs in clinical practice but no data on this |
| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | Yes | Time horizon: lifetime and within trial analysis |

| | | |
|---|---|---|
| 2.3 Are all important and relevant outcomes included? | Yes | |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Yes | From RCT |
| 2.5 Are the estimates of relative intervention effects from the best available source? | Yes | From RCT |
| 2.6 Are all important and relevant costs included? | Yes | Full details on costs provided |
| 2.7 Are the estimates of resource use from the best available source? | Yes | From RCT |
| 2.8 Are the unit costs of resources from the best available source? | Yes | From UK recognised sources |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | Yes | |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | Yes | OWSA and PSA |
| 2.11 Is there any potential conflict of interest? | No | |
| 2.12 Overall assessment: No limitations | | |
| **Other comments:** | | |
| **Study identification**<br>Iles, R., Legh-Smith, J., Drummond, M., Prevost, A., Vowler, S., Economic evaluation of Tobramycin nebuliser solution in cystic fibrosis, Journal of Cystic Fibrosis, 2, 120-8, 2003 | | |
| **Guidance topic: Cystic Fibrosis** | | **Question no: 13** |
| **Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | Yes | NT |
| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | Yes | UK |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Yes | NHS |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Partly | HRQoL not considered |
| 1.6 Are all future costs and outcomes discounted appropriately? | NA | Time horizon: 12 months |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above). | No | Outcome measure: cost savings from reduced resources |
| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Unclear | |
| 1.9 Overall judgement: Directly applicable | | |
| **Other comments:** This study does not include the preferred measure of effects (QALYs), but is still thought to be useful for decision making given that all other criteria are applicable and the alternative outcome measure reported is unlikely to change the conclusions about cost-effectiveness. | | |
| **Section 2: Study limitations (the level of methodological quality)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | NA | Cost-benefit analysis |

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| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | Partly | Time horizon: 12 months |
| 2.3 Are all important and relevant outcomes included? | Partly | QoL outcomes not considered |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Partly | Before and after study |
| 2.5 Are the estimates of relative intervention effects from the best available source? | Partly | Before and after study |
| 2.6 Are all important and relevant costs included? | Partly | Insufficient detail |
| 2.7 Are the estimates of resource use from the best available source? | Partly | Before and after study, but resource use not described in detail |
| 2.8 Are the unit costs of resources from the best available source? | Unclear | Not all sources reported |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | No | |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | No | 95% CIs reported |
| 2.11 Is there any potential conflict of interest? | No | |
| 2.12 Overall assessment: Serious limitations | | |
| **Other comments:**<br>Are money-costs and 'benefits' which are savings of future money-costs evaluated? No<br>Have all important and relevant costs and outcomes for each alternative been quantified in money terms? Yes<br>Has at least 1 of net present value, benefit/cost ratio and payback period been estimated? No, only net present value<br>Were any assumptions of materiality made? None implied | | |
| **Study identification**<br>Schechter, M. S., Trueman, D., Farquharson, R., Higuchi, K., Daines, C. L., Inhaled Aztreonam Lysine versus Inhaled Tobramycin in Cystic Fibrosis. An Economic Evaluation, Annals of the American Thoracic Society, 12, 1030-8, 2015 | | |
| **Guidance topic: Cystic Fibrosis** | | **Question no: 13** |
| **Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | Yes | Aztreonam vs. NT |
| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | No | US |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Yes and no | Stated but inappropriate – US third party payer |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Yes | |
| 1.6 Are all future costs and outcomes discounted appropriately? | Yes | Time horizon: lifetime<br>Discount rate: 3.0% |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above). | Yes | |

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| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Unclear | Cost sources not described |
| 1.9 Overall judgement: Partially applicable | | |
| **Other comments:** | | |
| **Section 2: Study limitations (the level of methodological quality)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | Yes | |
| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | Yes | Time horizon: 3 years |
| 2.3 Are all important and relevant outcomes included? | Yes | |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Yes | From RCT with an open label extension |
| 2.5 Are the estimates of relative intervention effects from the best available source? | Yes | But note estimates of effectiveness not reproducible |
| 2.6 Are all important and relevant costs included? | Unclear | Insufficient detail |
| 2.7 Are the estimates of resource use from the best available source? | Unclear | Insufficient detail |
| 2.8 Are the unit costs of resources from the best available source? | Unclear | Insufficient detail and US based sources |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | Yes | |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | Yes | Scenario analysis, univariate and PSA |
| 2.11 Is there any potential conflict of interest? | Partly | Supported by Gilead Sciences |
| 2.12 Overall assessment: Serious limitations | | |
| **Other comments:** | | |

## M.5 Service configuration

| | | |
|---|---|---|
| **Study identification**<br>Wolter, J. M., Bowler, S. D., Nolan, P. J., McCormack, J. G., Home intravenous therapy in cystic fibrosis: a prospective randomized trial examining clinical, quality of life and cost aspects, European Respiratory Journal, 10, 896-900, 1997 | | |
| **Guidance topic: Cystic Fibrosis** | | **Question no: 16** |
| **Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | Yes | Home IV vs. hospital IV |
| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | Yes | Australia |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Partly | Includes costs borne by participants (societal perspective) |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Yes | |

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| 1.6 Are all future costs and outcomes discounted appropriately? | NA | Time horizon: 5 years |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above). | No | Cost-consequence analysis, but quality of life assessed |
| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Unclear | |
| 1.9 Overall judgement: Partially applicable | | |
| **Other comments:** | | |
| **Section 2: Study limitations (the level of methodological quality)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | NA | Cost-consequence analysis alongside RCT |
| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | Unclear | Time horizon not defined, 1 course of IV inferred |
| 2.3 Are all important and relevant outcomes included? | Yes | |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Yes | From small RCT |
| 2.5 Are the estimates of relative intervention effects from the best available source? | Yes | From small RCT |
| 2.6 Are all important and relevant costs included? | Yes | Full details on costs provided |
| 2.7 Are the estimates of resource use from the best available source? | Yes | From small RCT |
| 2.8 Are the unit costs of resources from the best available source? | Yes | From national databases |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | No | Could be calculated from data reported |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | Partly | SDs reported but sensitivity analysis not performed |
| 2.11 Is there any potential conflict of interest? | No | |
| 2.12 Overall assessment: Serious limitations | | |
| **Other comments:**<br>Have all important and relevant costs and outcomes for each alternative been quantified, where appropriate? Yes<br>Were any assumptions of materiality made to restrict the number of consequences considered? None reported<br>Was an analysis of correlations between consequences carried out to help control for double counting? No<br>Was there any indication of the relative importance of the difference consequence and suggested weighting of them? No<br>Were there any theoretical relationships between consequences that could have been taken into account in determining weights? Final outcomes associated with a cost a QoL weight such as the number of hospital admissions<br>Were the consequences considered one by one to see if a decision could be made based on a single consequence or a combination of a small number of consequences? No<br>Were the consequences considered in subgroups of all consequences in the analysis to see if a decision could be made based on a particular subgroup? No<br>Was an MCDA (multiple criteria decision analysis) or other published method of aggregation of consequences attempted? No | | |

| **Study identification**<br>Thornton, J., Elliott, R. A., Tully, M. P., Dodd, M., Webb, A. K., Clinical and economic choices in the treatment of respiratory infections in cystic fibrosis: comparing hospital and home care, Journal of Cystic Fibrosis, 4, 239-47, 2005 | | |
|---|---|---|
| **Guidance topic: Cystic Fibrosis** | | **Question no: 16** |
| **Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | Yes | Home IV vs. hospital IV, but not exclusive |
| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | Yes | UK |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Yes | NHS |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Partly | HRQoL not considered |
| 1.6 Are all future costs and outcomes discounted appropriately? | NA | Time horizon: 1 year |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above). | No | ICER reported. Outcome measure: FEV1 |
| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Unclear | |
| 1.9 Overall judgement: Directly applicable | | |
| **Other comments:** This study does not include the preferred measure of effects (QALYs), but is still thought to be useful for decision making given that all other criteria are applicable and the alternative outcome measure reported is unlikely to change the conclusions about cost-effectiveness. | | |
| **Section 2: Study limitations (the level of methodological quality)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | NA | |
| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | Yes | Time horizon: 1 year |
| 2.3 Are all important and relevant outcomes included? | Yes | QoL outcomes not considered |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Partly | From retrospective observational study |
| 2.5 Are the estimates of relative intervention effects from the best available source? | Partly | From retrospective observational study |
| 2.6 Are all important and relevant costs included? | Yes | Details provided |
| 2.7 Are the estimates of resource use from the best available source? | Yes | From retrospective observational study |
| 2.8 Are the unit costs of resources from the best available source? | Yes | Recognised UK databases |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | Yes | Difference in FEV1 / difference in cost |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | Yes | 95% Cis reported and probabilistic analysis performed |

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| 2.11 Is there any potential conflict of interest? | No | |
| 2.12 Overall assessment: Minor limitations | | |
| **Other comments:** | | |
| **Study identification**<br>Elliott, R. A., Thornton, J., Webb, A. K., Dodd, M., Tully, M. P., Comparing costs of home- versus hospital-based treatment of infections in adults in a specialist cystic fibrosis center, International Journal of Technology Assessment in Health Care, 21, 506-10, 2005 | | |
| **Guidance topic: Cystic Fibrosis** | | **Question no: 16** |
| **Section 1: Applicability (relevance to specific review questions and the NICE reference case as described in section 7.5)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 1.1 Is the study population appropriate for the review question? | Yes | People with CF |
| 1.2 Are the interventions appropriate for the review question? | Yes | Home IV vs. hospital IV, but not exclusive |
| 1.3 Is the system in which the study was conducted sufficiently similar to the current UK context? | Yes | UK |
| 1.4 Are the perspectives clearly stated and are they appropriate for the review question? | Yes | NHS |
| 1.5 Are all direct effects on individuals included, and are all other effects included where they are material? | Partly | HRQoL not considered |
| 1.6 Are all future costs and outcomes discounted appropriately? | NA | Time horizon: 1 year |
| 1.7 Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above). | No | Outcome measure: Cost |
| 1.8 Are costs and outcomes from other sectors fully and appropriately measured and valued? | Unclear | |
| 1.9 Overall judgement: Partially applicable | | |
| **Other comments:** | | |
| **Section 2: Study limitations (the level of methodological quality)** | **Yes/partly/no /unclear/NA** | **Comments** |
| 2.1 Does the model structure adequately reflect the nature of the topic under evaluation? | NA | |
| 2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes? | Yes | Time horizon: 1 year |
| 2.3 Are all important and relevant outcomes included? | Yes | QoL outcomes not considered |
| 2.4 Are the estimates of baseline outcomes from the best available source? | Partly | From retrospective observational study |
| 2.5 Are the estimates of relative intervention effects from the best available source? | Partly | From retrospective observational study |
| 2.6 Are all important and relevant costs included? | Yes | Details provided |
| 2.7 Are the estimates of resource use from the best available source? | Yes | From retrospective observational study |
| 2.8 Are the unit costs of resources from the best available source? | Yes | Recognised UK databases |
| 2.9 Is an appropriate incremental analysis presented or can it be calculated from the data? | No | Could be calculated from data reported |
| 2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis? | Partly | 95% CIs reported |

| | | |
|---|---|---|
| 2.11 Is there any potential conflict of interest? | No | |
| 2.12 Overall assessment: Minor limitations | | |
| **Other comments:**<br>Are money-costs and 'benefits' which are savings of future money-costs evaluated? No<br>Have all important and relevant costs and outcomes for each alternative been quantified in money terms? Yes<br>Has at least 1 of net present value, benefit/cost ratio and payback period been estimated? No, only net present value<br>Were any assumptions of materiality made? None implied | | |