Appendix H: Health economic evidence tables

Study	Marques 2015[170]			
Study details	**Population & interventions**	**Costs**	**Health outcomes**	**Cost effectiveness**
Economic analysis: Cost-utility analysis **Study design:** Within-trial analysis (APEX trial) **Approach to analysis:** Analysis of the costs and outcomes of different anaesthetic regimens for people undergoing TKR **Perspective:** UK NHS **Follow-up:** 12 months post operatively **Discounting:** Costs: N/A; Outcomes: N/A	**Population:** People who have undergone primary TKR **Cohort characteristics:** n=316 Start age: NR Male: NR **Intervention 1:** Standard anaesthetic regimen which consisted of a femoral nerve block in addition to spinal or general anaesthesia **Intervention 2:** Intra-operative LAI, administered before wound closure, in addition to the standard anaesthetic regimen	**Total costs (mean per patient):** Intervention 1: NR Intervention 2: NR Incremental (2−1): Intervention 2 saved £77 per person (95% CI: -£451 to £296; p=0.68) **Currency & cost year:** 2013 UK Pounds **Cost components incorporated:** Operating theatre time, intra-operative LAI injection (for intervention group), time spent in recovery, number of days admitted to ward after surgery. After discharge costs included, accident and emergency visits, inpatient and outpatient visits. Secondary care, community based care, medication and social service use were recorded via questionnaire.	**QALYs (mean per patient):** Intervention 1: NR Intervention 2: NR Incremental (2−1): Intervention 2 gave 0.009 more QALYs (95% CI: -0.030 to 0.049; p=0.64) **Inpatient admissions after discharge (total):** Intervention 1: 110/159 (69.2%)[(a)] Intervention 2: 103/157 (65.6%)	Intervention 2 dominates Intervention 1 **Analysis of uncertainty:** A probabilistic sensitivity analysis investigating 4 scenarios was conducted; excluding PSS costs, using macro-costed prescribed medications, 50% higher local inpatient costs and 50% lower local inpatient costs. Intervention 2 remained dominant in all instances. In the base case there was a 60% probability that LAI was cost effective at a threshold of £20,000 per QALY gained.
Data sources				
Health outcomes: QALYs calculated from patient questionnaires filled out at 3, 6 and 12 months after surgery **Quality-of-life weights:** Trial participants filled out the EQ-5D-3L questionnaire. **Cost sources:** Resource use was estimated from medical records and patient logs and questionnaires. Unit costs for the initial hospital stay were obtained from the North Bristol Trust finance department. Unit costs for LAI injections were provided by the Management and Procurement Department at North Bristol NHS Trust. HRGs for secondary care visits were valued using 2012/13 NHS Reference Costs. Community-based costs were obtained from Curtis' unit costs for health and social care. Costs for prescribed medications were taken from the BNF.				
Comments				
Source of funding: National Institute for Health Research **Limitations:** Complete cost and QALY data was available for only 142/316 (45%) of participants. The final dataset therefore included imputed missing costs and outcome data; outcomes from a single RCT excluded from the clinical review as it is not possible to tell if patients received general or regional anaesthesia.				

Overall applicability:[(b)] Partially applicable **Overall quality:**[(c)] Potentially serious limitations

Abbreviations: BNF; British National Formulary; EQ-5D= Euroqol 5 dimensions (scale: 0.0 [death] to 1.0 [full health], negative values mean worse than death); HRGs; healthcare resource groups; ICER= incremental cost-effectiveness ratio; LAI: local anaesthetic wound infiltration; NR= not reported; PSS: personal social services; QALYs= quality-adjusted life years; TKR: total knee replacement.

(a) Figures from available cases before imputation for missing data
(b) Directly applicable / Partially applicable / Not applicable
(c) Minor limitations / Potentially serious limitations / Very serious limitations
(d) This study was excluded from the clinical review as it was not possible to determine if participants had received spinal or general anaesthesia. It has been included as economic evidence as it may still provide useful cost information for the committee