# Appendix C2 Economic evidence tables

# Transition from children's to adult services for young people using health or social care services

Completed evidence tables: economic evaluations

Review Question 4

What is the effectiveness of support models and frameworks to improve transition from children's to adult services?

Munro, E., & Lushey, C. (2012). *Evaluaton of the Staying Put: 18 Plus Family Placement Program: Final Report.* UK Government. Department for Education.

| **Country, study type & intervention details.** | **Study population, design & data sources.** | **Outcomes, Resource use** | **Results: Cost-Effectiveness, Costs** | **Summary** |
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| **Country**: UK<br><br>**Date**<br>July 2008 - March 2011<br><br>**Internal / external validity**<br>( – / – )<br><br>**Follow-up period**<br>Outcomes measured from age 18 to 19 years old<br><br>**Study type**<br>Case study. This is not a full economic evaluation.<br><br>**Intervention**<br>"Staying Put 18+ Program"<br>Young people (YP) w. 'established familial relationships' are able to choose to stay with foster carers until age 21. | **Population**: Care leavers with an established familial relationship, although not strictly defined, was considered to include "young people who have lived with their current foster carers for some time and thus had an opportunity to develop an attachment to them".<br><br>Exclusions: "those with placement instability and change as they approach adulthood, as well as those who are placed with parents, or in secure units, children's homes or hostels.<br>These groups may be more vulnerable and have more complex needs than those who are eligible to stay put (Munro *et al*., 2011a; Sinclair *et al*., 2007)." (p.25).<br><br>**Study design**: Case study<br>Total N = not clear (see page 62)<br><br>**Source effectiveness data**:<br>Trial data<br><br>**Source of resource use data:** Trial data<br><br>Implementation cost = Local authorities' Management Information System data (MIS) (p.24) | **Primary Outcomes**<br>Significant limitation in collection of outcomes as outcomes being measured were also requirements for eligibility in the program in most intervention sites.<br><br>Outcomes included:<br>Education, Employment, Training (relates to self-efficacy)<br><br>Qualitative data is available on a smaller sample for health & social care outcomes, experience, & processes of care<br><br>**Resource use**<br>Significant limitations in collection of outcomes and costs, which meant that no analysis could be done. However, the authors conducted cost case studies in an effort to provide some information of the intervention's impact (p.24)<br>Case studies supplied following information, where relevant:<br>• Local authority (LA) social care services and YP's use of psychologist, housing, education, and benefits<br>• Public sector via 'Supporting People' grants (where applicable)<br>• Private costs to YP | **Findings on cost-effectiveness**<br><br>Not possible to determine due to limitations of study design.<br><br>**Costs**<br><br>Intervention costs were reported but it is not possible to examine impact of the intervention on changes in health and social care resource use due to limitations of the study. | **Applicable**:<br>Not applicable as this was not a full economic evaluation (no comparison group).<br><br>**Quality**:<br>Moderate reporting unclear in relation to unit costs and sample size.<br><br>**Summary**:<br>No conclusions can be drawn about the intervention's cost-effectiveness as there were significant limitations in the study design, i.e. that there was no comparison group and the lack of information on the effect of the intervention on individual's outcomes and on |

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| <u>Model type 1</u>:<br>"Pure Familial"<br>(8 LA, p.26)<br><br><u>Model type 2</u>:<br>"Hybrid" Removes the condition that YP must have had an established relationship w. their carer prior to age 18 to be entitled to 'stay put' (3 LA, p.26) | Young Person's care pathway cost = qualitative in-depth interviews + findings from CCFR's research programme (p.23) to create 'cost case studies' (p.24) as a result of pilot sites not recording data in MIS or not recording data properly.<br><br>**Source of unit costs**:<br>Not clearly stated. | <u>Intervention costs:</u><br>• Measured using bottom-up approach based on time-use survey and following standard costing approaches.<br><br>**RESULTS**<br>Significant limitations in collection of outcomes and costs, which meant that no analysis could be done. | | health and social care service use. |

Prestidge, C., Romann, A., Djurdjev, O., & Matsuda-Abedini, M. (2012). Utility and cost of a renal transplant transition clinic. Pediatric Nephrology , 27, 295-302.

| **Country, study type & intervention details.** | **Study population, design & data sources.** | **Outcomes, Resource use** | **Results: Cost-Effectiveness, Costs** | **Summary** |
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| **Country:** Non-UK (Canada)<br><br>**Internal / External validity**: ( – / ++)<br><br>**Date:**<br>Intervention = 2007<br>Comparison = 2000-06<br><br>**Follow-up period:**<br>2-year period<br><br>**Study type**:<br>Cost-consequence analysis.<br><br>**Intervention:**<br>Tertiary children's hospital with multidisciplinary transition clinic and transition team:<br>• One dedicated paediatric nephrologist, renal nurse, youth health specialist, renal pharmacist, renal dietician and social worker.<br>• Goals include health & medication education, behavioural strategies for self-management.<br>• Email, telephone, & text message between patient and | **Population**:<br>Adolescents undergoing transition usually referred at 16.<br><br>**Study design:**<br>Prospective collection of intervention group and retrospective matched control group<br>N= 45,<br>Intervention, N= 12<br>Control, N = 33<br><br>**Data sources:** Trial data<br><br>**Sources of effectiveness data:**<br>Information taken from computer database (includes demographic and laboratory results)<br><br>**Sources of resource use data:** Trial data but only measures resource use as associated with | **Primary Outcomes**<br>Death, allograft loss, biopsy-proven acute rejection, serum creatinine levels<br><br>**Resource use**<br>Individual patient-level data was not available, therefore, costs were estimated only on the basis of outcomes – those requiring dialysis or transplant. These covered: hospitalization, inpatient and outpatient physician care, laboratory and diagnostic testing and medications (p.297).<br><br>**RESULTS**<br><u>Deaths</u>:<br>Intervention: 0<br>Control: 3 (9%)<br><u>Allograft losses</u><br>Intervention: 0<br>Control: 7 (21%)<br><u>Serum creatine level</u><br>Not provided for control and intervention groups.<br><u>Biopsy-proven acute rejection</u><br>Not provided for control and | **Findings on cost-effectiveness**<br><br>Apart from limitations in the study design, the intervention is associated with improvements in outcomes.<br><br>The intervention costs less than the comparator group, inclusive of program costs. Lower costs are driven by fewer but costly adverse events.<br><br>**Total costs:**<br><u>Price year</u>: unclear, perhaps 2010/2011<br><br>Average yearly cost based on two-years post-transfer (Low/Upper cost estimates).<br><u>Intervention</u>:<br>$11,380–$34,312<br><u>Control</u>:<br>$17,127– $38,909<br><br>**Cost of the intervention:** | **Applicable:**<br>Applicable with some limitations.<br><br>**Quality**: Good quality reporting.<br><br>**Summary:**<br>Prestidge et al (2012, -/++) is a non-UK (Canadian) study that also conducted an economic evaluation. It was rated as having good applicability to the UK with some limitations with respect to economic methodological quality.<br><br>The economic analysis is an outcome-based model where differences in costs are estimated based the difference in the proportion of individuals with key clinical outcomes: those needing dialysis and transplants. Only direct costs associated with dialysis and transplants are included and cost data are not taken from the study directly but rather from the wider literature. The economic analysis is limited in that it takes a very limited healthcare perspective and does not measure all-important changes in health and social care service |

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| youth health, dietician, and nursing staff.<br>• Timing of transfer is made at individual's discretion (generally before 20th birthday).<br>• Duration of TC is as long as necessary, can be as long as 3 hours. Meeting at TC, on average, 4 to 6 months.<br><u>Transition to Adult Services</u>:<br>• Letter and verbal handover from nurse specialist, social worker, dietician to adult unit colleagues<br>• No adult nephrologist involved in TC<br><br>**Control:** People transferred to adult services before the introduction of the transition team. | outcomes – those requiring dialysis or transplant (p.297)<br><br>**Sources of unit cost data**: Published studies. | intervention groups | $6,650 per person | use. However, this type of analysis may be appropriate given that the aims of the study are to reduce adverse health consequences.<br><br>However, it is likely that the analysis underestimates cost-savings to the healthcare sector as individuals with dialysis or kidney transplant are likely to have greater healthcare needs and may have higher use of healthcare services than those without dialysis or kidney transplant.<br><br>Apart from limitations in the study design, the intervention is associated with improvements in outcomes for reduced cost (inclusive of program costs). Lower costs are driven by costly adverse events.<br><br>Average intervention costs were estimated on two years participation (Canadian $6,650 per person). Inclusive of intervention costs, the total costs per person for the intervention group ranged between $11,380 and $34,312 versus the control group, between $17,127 and $38,909. The price year of costs is unclear but may be 2010/2011.<br><br>It is not possible to say whether the intervention is or is not cost- |

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| | | | | effective in the UK setting, as it would require further analysis to take into account differences in institutional context and unit costs.<br><br>However, insofar as the intervention reduces adverse clinical outcomes that are costly, there is potential for the intervention to be cost-savings and cost-effective. |

# Transition from children's to adult services for young people using health or social care services

Completed evidence tables: economic evaluations

Review Question 5

What is the effectiveness of interventions designed to improve transition from children's to adult services?

Bent, N., Tennant, A., Swift, T., Posnett, J., Scuffham, P., & Chamberlain, M. (2002). Team approach versus ad hoc health services for young people with physical disabilities: a retrospective cohort study. *The Lancet , 360*, 1280-86.

| **Country, study type & intervention details.** | **Study population, design & data sources.** | **Outcomes, Resource use** | **Results: Cost-Effectiveness, Costs** | **Summary** |
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| **Country:** England<br><br>**Internal / external validity**<br>(++/++)<br><br>**Date**: 1999/2000<br><br>**Follow-up period**<br>6 months<br><br>**Study type**<br>Retrospective case-control study, 4 sites<br><br>**Intervention**<br>Young adult team approach (coordinated multidisciplinary teams) = team meetings held once per week between 1 to 2 hours attended by all professionals in the team, including secretarial support. | **Population**:<br>Young adults with physical & complex disabilities (in the target diagnostic groups of cerebral palsy, spina bifida, traumatic brain injury, or degenerative neuromuscular disease) and mild or no learning disability.<br>• *Age*: 20 (17-28) years<br>• *N=134 Male*; n=120 Female<br>• *23% communication difficulties*<br><br>Use of screening or targeting: Individuals were selected by reviewing case notes. Excluded individuals who only had sensory or learning disability.<br><br>**Sample size:** N= 254<br>Intervention sites<br>Leeds, N=74<br>Stoke on Trent, N=45 | **Primary Outcomes**<br>1. Participation restriction (London handicap scale – measuring mobility, self-care, work and leisure, getting on with people, awareness of surroundings, and being able to afford the things they require)<br>2. Body function impairment (Nottingham health profile subscales – pain, energy, sleep)<br>3. Activity limitation (Barthel)<br>4. Health status (Euroqol visual analogue scale)<br>5. Psychosocial measures (self esteem, self efficacy, proactive attitude, stress)<br><br>**Resource use**<br>Excludes:<br>- Acute care service use<br>- Respite care<br>Includes:<br>1. Intervention costs:<br>– *Full cost approach* (salary, oncosts, overheads, training, travel)<br>2. Community health and social care:<br>– Family doctors, other doctors, physiotherapists, occupational therapists, physiotherapist, | **Findings on cost-effectiveness**<br>Improved outcomes with no difference in costs from perspective of community health and social care services.<br><br>**Costs**<br><br>Price year: 1999<br><br>Total mean costs (Low / High estimate, 6 months):<br>Intervention group:<br>Leeds: £678 / £707<br>Stoke on Trent: £694 / £738<br>Control group:<br>Leicester and Birmingham: £798<br><br>Community health & social care services:<br>- Intervention: £650 / 6 months<br>- Control: £798 / 6 months | **Applicable:** Applicable with minor limitations.<br><br>**Quality**: Moderate reporting quality.<br><br>**Summary:**<br>Bent et al (2002 +/++) is rated as having good applicability with minor limitations with respect to economic methodological quality.<br><br>The results were presented as a cost-consequence analysis (presenting changes in costs alongside changes in outcomes).<br><br>The perspective of the analysis is that of the NHS and social care services, although it is limited to community services and does not measure changes in acute healthcare services and respite social care services. It is not clear why they are not measured and the authors do not provide any rationale.<br><br>The results indicate that the intervention improves outcomes with no differences in costs to the NHS |

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| **Comparator**<br>Standard ad-hoc service approach with respect to individual professionals working in isolation (consultant in rehabilitation medicine, psychologist, therapist, social workers), and links between them being of an ad-hoc nature. | Matched control sites:<br>Leicester, N=76<br>Birmingham, N=59<br><br>**Data sources**<br><br>**Sources of effectiveness data**<br>Trial, interviews<br><br>**Sources of resource use data:**<br>Trial, based on interview information, health-care service use and cost in the previous 6 months<br><br>**Sources of unit cost data**: National unit costs provided by PSSRU | psychologist or counsellor, social workers, speech therapists, and other health-care professionals<br><br>**RESULTS**<br>*Improvements favoring intervention*<br>1. Participation in society: Intervention = 2·54 times more likely to participate in society than those faced with ad hoc services (95% CI 1·30–4·98), after adjusting for variables as specified in the conceptual model (pain, energy, health status, independence, self esteem, self efficacy, stress, proactive attitude, age, sex, income)<br>2. Activity limitation<br>Intervention=19 (16-20) vs Control=17 (12.5 – 20) (p<0.013)<br><br>*No differences*<br>3. Body function impairment (although trending to improvement for pain, I=0 (0-12.1), C=5.8 (0-22.6) (p=0.066) and sleep, I=0 (0-34.4), C=12.6 (0-34.3) (P=0.062)<br>4. Health status, no difference, I=72.5 (50-90), C=70 (50-80), (p=0.078)<br>5. Psychosocial measures<br><br>Pain, fatigue, and stress also affected participation in society. Individuals with severe communication difficulties are less likely to participate than even those who report more pain. | - Health & social care service use not different between groups (using Mantel-Haenszel χ 2 statistic).<br>**Costs were only slightly higher for the control group because of slightly higher mean contacts with professionals*.<br>*Confidence intervals were not provided<br><br>Intervention costs per person*:*<br>- *Leeds: £28 and £57 per client for the 6-month duration*<br>- *Stoke on Trent: £44 to £88 in (higher because the cost of weekly meetings is spread among fewer clients than in Leeds)* | and social care services from the perspective of community services. Findings of no difference in costs depends on the assumption that the use of acute and respite care services is similar between groups.<br><br>The authors report costs using 1999 prices. Mean intervention costs are presented using low and high estimates although it is not clear how those low and high estimates were derived but it is likely based on the varying team size. Mean intervention costs per person (for the six-month period) ranged from £28 to £57 at one site and between £44 and £88 in another site. Mean cost associated with use of community health and social care services was similar between intervention and control groups (and was not statistically different) but it was marginally lower for the intervention group (£650 vs. £798 over a six-month period).<br><br>The evaluation is limited to some extent by the absence of baseline measurements of costs and effects and that there was no bootstrapping of cost estimates. Bootstrapping is a method to estimate uncertainty associated with cost estimates (using a probability distribution). Even though the authors did not undertake bootstrapping methods they did undertake sensitivity |

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| | | | | analyses on intervention costs. They doubled the duration of team meetings (from one to two hours per week) and found that this did not change the finding that the intervention was still marginally cost-savings compared to the comparison group. |