



## **Cost Calculator for Children's Services Research and development overview and summary (Updated July 2015)**

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### **Background**

In 2000 the Centre for Child and Family Research (CCFR) at Loughborough University was commissioned by the Department for Health to undertake a research study to explore the relationship between needs, costs and outcomes of services provided to looked after children (Ward, Holmes and Soper, 2008). This study was commissioned as part of the wider Costs and Effectiveness Research Initiative (Beecham and Sinclair, 2007). One of the key outputs from this work has been the development of a software tool: the Cost Calculator for Children's Services (CCfCS). This initial study has subsequently led to the development of a sustained research programme using both the underlying methodology and/or the CCfCS tool.

This paper provides an overview of the CCfCS and the methodology that underpins it, along with an outline of the ongoing research programme.

### **The conceptual framework: estimating costs from the 'bottom up'**

The CCfCS utilises a 'bottom up' approach to estimating unit costs (Beecham, 2000). The 'bottom up' approach identifies the constituent parts that form the delivery of a service and assigns a value to each of these parts. The sum of these values is linked with appropriate units of activity to provide the unit cost of a service (*ibid*). The approach facilitates the development of a detailed and transparent picture of unit costs and is particularly well suited to children's social care services as it can accommodate variations in costs incurred by an extensive range of interventions offered to children with very different levels of need (see Ward, Holmes and Soper, 2008).

The conceptual framework that underpins the CCfCS makes a distinction between the ongoing *case management* functions carried out by social workers, family support workers and other social care personnel and the *services* (such as placements) that are provided to meet specific needs. The overall unit costs that are estimated include both of these elements. Separation in this way allows for exploration of the costs of services and also assessment, case management and decision making costs. One of the advantages of breaking down and then building up the costs in this way is that it is possible to explore how changes to one area of the system impact on another. It is also possible to focus on one element of the system and carry out 'what if' analyses, for example, to explore the cost implications of introducing new practices/protocols, or the introduction of a new service for a specific group of children and/or families.

The different support activities associated with the case management function for looked after children have been organised into eight social care processes, these are shown in Box 1 below.

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| <p>Box 1</p> <ol style="list-style-type: none"><li>1. Decide child needs to be placed</li><li>2. Care planning</li><li>3. Maintaining the placement</li><li>4. Return the child home from care</li><li>5. Find subsequent placement</li><li>6. Review</li><li>7. Legal</li><li>8. Transition to leaving care services</li></ol> |
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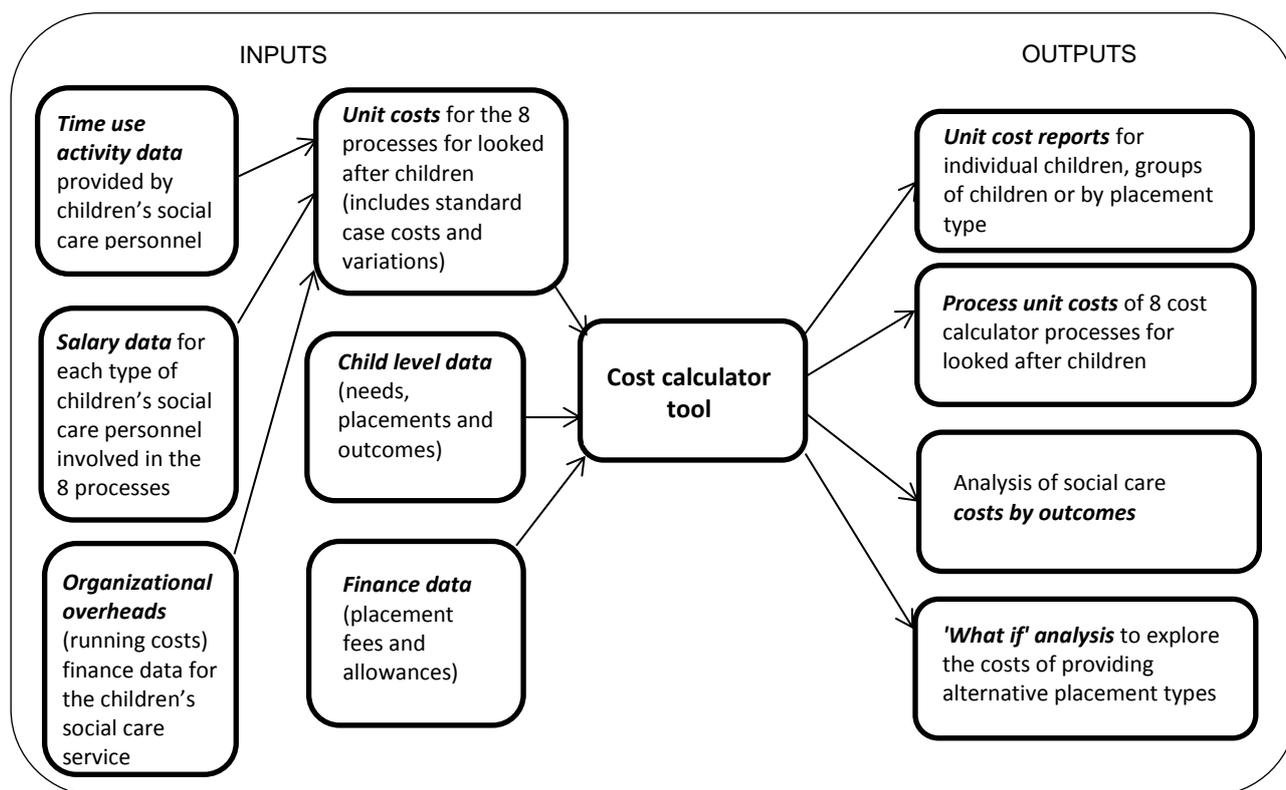
The personnel associated with each support activity or service is identified and the time spent on the activity is estimated. Time use activity data have been gathered using mixed methods: focus groups; verification questionnaires; online surveys and event records (diary recording for specific cases). These amounts of time are costed using appropriate hourly rates. The method therefore links amounts of time spent to data concerning salaries, administrative and management overheads and other expenditure.

This approach introduces greater transparency into cost estimations and facilitates comparisons between the relative value of different types of care, making it easier to estimate the potential benefits of introducing a range of alternative packages. It is also possible to undertake analyses of costs with respect to the outcomes and explore 'hidden' costs, such as the costs of administrative procedures.

## The CCfCS tool

The CCfCS is a purpose designed software tool that estimates the costs of social care processes and placements for **looked after children**. The unit costs of the processes are brought together with data concerning placement fees and allowances, management and capital expenditure along with routinely collected data on children's needs, characteristics and placements (using the SSDA 903 statistical return) to estimate the costs of placing looked after children for a given time period. Figure 1 shows the data that go into the cost calculator tool (inputs) and the outputs.

**Figure 1: CCfCS inputs and outputs**



The estimations take into account diversity in children's needs, placement type and local authority procedures. This approach allows children to be grouped by type of placement and also according to their needs and outcomes. Different care pathways can be observed and the way in which costs accrue over time can be examined. It is possible to compare these cost patterns for children with particular characteristics, in specific placement types or who achieve specified outcomes.

The costs of management and capital overheads are based on those included in a framework that has been developed with local authorities and Voluntary Adoption Agencies (VAAs). The overheads framework has subsequently been piloted and used by the team across a range of other studies and has been utilised to increase transparency and comparability in overhead calculations (Holmes, McDermid and Sempik, 2010; Holmes and McDermid, 2012; Holmes, McDermid, Padley and Soper,

2012). A 'how to' guide to replicate the overheads framework is included in McDermid (2010).

The CCfCS tool is currently being updated to incorporate recent feedback from local authorities and the new SSSA 903 codes (for example missing from placement). The CCfCS will be made available as a free download to all English local authorities from late autumn 2015. To express an interest in obtaining a copy, or for an opportunity to be involved in a Beta testing phase during summer 2015, please email ([costcalculator@lboro.ac.uk](mailto:costcalculator@lboro.ac.uk)).

## **The ongoing research programme**

The research programme initially focused on looked after children and since 2005 the research has been extended to explore the needs, costs and outcomes for all vulnerable children and their families, with a range of projects focused on specific services areas or interventions. Further details are provided below.

### *Current research*

The team are currently using the CCfCS tool for a number of evaluations across England and Scotland. These include the introduction of Social Pedagogy into UK Foster Care (Head, Heart, Hands); the evaluation is ongoing until October 2016. To date two interim papers have been produced outlining how the costing methods and CCfCS tool will be utilised to explore the cost effectiveness of Head, Heart, Hands and to inform sustainability debates (Holmes *et al.*, 2014; McDermid *et al.*, 2015).

Work is also underway to use the methods and tool for the Department for Education Innovation Programme. The CCFR team have been commissioned to carry out four Innovation Programme evaluations<sup>1</sup> and will be using the methods and/or CCfCS tool for the following projects:

- North Yorkshire No Wrong Door
- Mockingbird Family Model
- RESuLT

In partnership with Coram the CCFR team have also been commissioned under the Innovation Programme to extend the CCfCS tool for adoption and post adoption support processes. This addition to the tool will be made available in 2016.

### *Recent research*

Research studies that have been completed during the last five years include the following: the costs associated with assessment, support and services for children and families on return home from care (Holmes, 2015); the estimation of costs and cost comparisons of Multi-dimensional Treatment Foster Care (Holmes, Ward and

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<sup>1</sup> The evaluation of RESuLT is being carried out in partnership with Ipsos MORI and University of Bristol.

McDermid, 2012); the costs associated with the provision of services to all Children in Need (Holmes *et al.*, 2010) and the costs of supporting vulnerable children and families who do not meet the threshold for statutory children's social care support, but may require additional support or services as part of the 'Common Assessment Framework' (Holmes *et al.*, 2012). Although the CCfCS tool has only been piloted and used by the research team for these additional service areas, a range of unit costs across a spectrum of support and services are available and are also included in the annual unit cost book edited by the Personal Social Services Research Unit (Curtis, 2014).

A series of studies to explore the costs and cost effectiveness of services provided to disabled children and their families have also been carried out (Holmes, McDermid and Sempik, 2010; McDermid, *et al.*, 2011; McDermid and Holmes, 2013). As a result of this work, a resource pack for service providers has been produced. This resource pack enables providers to estimate the costs of their own services using the 'bottom up' approach (McDermid, 2010). The approach has facilitated a comparison of the costs of short break (respite) services for disabled children and their families from a range of different providers (McDermid, 2012). This stream of work is continuing: research is currently being carried out to explore the use of direct payments and specifically the introduction of pooled budgets for disabled children and their families.

#### *International research*

In collaboration with Oregon Social Learning Center and the Child and Adolescent Services Research Center, San Diego (funded by the National Institute of Drug Abuse) the CCfCS tool and underlying methodology were piloted for the child welfare system in the US (Chamberlain *et al.*, 2011; Holmes *et al.*, 2013). Following the completion of these projects the team are now working in partnership with Chapin Hall at the University of Chicago to use the conceptual framework, methods and tools for evaluations across Tennessee, Michigan and New York City.

Funding has also recently been obtained from the Scottish Government to adapt the CCfCS for Scotland. The data collection has been completed in two local authorities in Scotland and the CCfCS tool is currently being programmed in preparation for Beta testing in Autumn 2015.

#### **Making use of time use activity data**

A number of studies have been carried out that have made use of the time use activity data to inform policy and practice. These studies include an exploration of the 'hidden costs' of service provision such as the different referral and assessment routes through which families access short break services (Holmes, McDermid and Sempik, 2010) and the costs of the contracting and commissioning process (McDermid, 2012).

Research has also been carried out to inform national policy. For instance, the proportion of time social workers spend on direct work with families compared to administrative activities has come under considerable public and political scrutiny in England in recent years. An analysis of time use activity data gathered at two time points has facilitated an analysis of changes in how social workers spend their time (Holmes *et al.*, 2009; Holmes and McDermid, 2013). Analysis of the impact of changes in policy and practice on workloads for front line social workers has also been carried out (Holmes, Munro and Soper, 2009).

## **The future**

The overall objective of the research programme is to develop the CCfCS to incorporate unit costs for all services that children and families receive within specific time frames. These will include the unit costs of services provided by a range of agencies so that eventually it will be possible to estimate the costs to the public purse of providing services to children and families with a range of needs and to explore how these might be better configured to improve outcomes. The overall research programme is also designed to clarify how costs are shared between agencies and introduce transparency into the joint commissioning of services for children with complex needs (Holmes and McDermid, 2012; McDermid, 2012).

## **References**

Beecham, J. (2000) *Unit Costs – Not Exactly Child’s Play: A guide to estimating unit costs for children’s social care*. University of Kent: Department of Health, Dartington Social Research Unit and the Personal Social Services Research Unit.

Beecham, J. and Sinclair, I. (2007) *Costs and Outcomes in Children’s Social Care: Messages from research*. London: Jessica Kingsley Publishers.

Chamberlain, P., Snowden, L. R., Padgett, C., Saldana, L., Roles, J., Holmes, L., Ward, H., Soper, J., Reid, J. and Landsverk, J. (2011) ‘A Strategy for Assessing Costs of Implementing New Practices in the Child Welfare System: Adapting the English Cost Calculator in the United States.’ *Administration and Policy in Mental Health and Mental Health Services*, 38,1, 24-31.

Curtis, L. (ed) (2014) *Unit Costs of Health and Social Care 2014*. Kent: Personal Social Services Research Unit.

Holmes, L. (2014) *Supporting Children and Families Returning Home from Care: Counting the costs*. London:

NSPCC. [http://www.nspcc.org.uk/Inform/resourcesforprofessionals/lookedafterchildren/reunification-costs\\_wda104057.html](http://www.nspcc.org.uk/Inform/resourcesforprofessionals/lookedafterchildren/reunification-costs_wda104057.html)

Holmes, L., Landsverk, J., Ward, H., Rolls-Reutz, J., Saldana, L., Wulczyn, F. and Chamberlain, P. (2014) 'Cost calculator methods for estimating casework time in child welfare services: A promising approach for use in implementation of evidence-based practices and other service innovations.' *Children and Youth Services Review* 39, 169-176.

Holmes, L. and McDermid, S. (2012) *Understanding Costs and Outcomes in Child Welfare Services*. London: Jessica Kingsley Publishers.

Holmes, L. and McDermid, S. (2013) 'How social workers spend their time in frontline children's social care in England.' *Journal of Children's Services* 8, 2, 123-134.

Holmes, L., McDermid, S., Jones, A. Ward, H. (2009) *How Social Workers Spend Their Time: An Analysis of the Key Issues that Impact on Practice Pre-and Post Implementation of the Children's Integrated System*. London: Department for Children, Schools and Families. <http://www.lboro.ac.uk/media/www/lboroacuk/content/ccfr/publications/how-social-workers-spend-their-time-dcsf.pdf>

Holmes, L., McDermid, S., Padley, M. and Soper, J. (2012) *Exploration of the Costs and Outcomes of the Common Assessment Framework*. London: Department for Education. <http://www.lboro.ac.uk/research/ccfr/research/exploring/project---exploration-of-the-costs-and-impact-of-the-common-assessment-framework.html>

Holmes, L., McDermid, S. and Sempik, J. (2010) *The Costs of Short Break Provision*. London: Department for Children, Schools and Families. <http://www.lboro.ac.uk/media/www/lboroacuk/content/ccfr/publications/cost-of-short-break-provision.pdf>

Holmes, L., McDermid, S., Soper, J. and Ward, H. (2010) *Extension of the Cost Calculator for Children's Services to Include Cost Calculations for all Children in Need. Research Brief*. London: Department for Education. <http://www.lboro.ac.uk/media/www/lboroacuk/content/ccfr/publications/Extension%20of%20the%20cost%20calculator%20to%20include%20cost%20calculations%20for%20all%20children%20in%20need.pdf>

Holmes, L., McDermid, S. and Trivedi, H. (2014) *Exploring the Costs of Head, Heart, Hands and Informing Debates about Sustainability of the Programme and the Potential Costs Avoided as a Result of Head, Heart, Hands*. Loughborough: Centre for Child and Family Research, Loughborough University.

Holmes, L., Munro, E.R. and Soper, J. (2010) *The Costs and Capacity Implications of Implementing Laming (2009) Recommendations*. Loughborough: Centre for Child and Family Research, Loughborough University. [http://www.lboro.ac.uk/media/www.lboro.ac.uk/content/ccfr/publications/Calculating%20the%20cost%20and%20capacity%20implications%20for%20local%20authorities%20implementing%20the%20Laming%20\(2009\)%20recommendations.pdf](http://www.lboro.ac.uk/media/www.lboro.ac.uk/content/ccfr/publications/Calculating%20the%20cost%20and%20capacity%20implications%20for%20local%20authorities%20implementing%20the%20Laming%20(2009)%20recommendations.pdf)

Holmes, L., Ward, H. and McDermid, S. (2012) 'Calculating and comparing the costs of multidimensional treatment foster care in English local authorities.' *Children and Youth Services Review* 34, 11, 2141-2146. <http://dx.doi.org/10.1016/j.childyouth.2012.07.010>

McDermid, S. (2010) *The Costs of Short Breaks: Resource Pack for Service Providers*. Loughborough: Centre for Child and Family Research, Loughborough University.

McDermid, S. (2012) *The Cost of Short Break Services: Understanding the Contracting and Commissioning Process*. London: Action for Children.

McDermid, S. and Holmes, L. (2013) *Cost Effectiveness of Action for Children's Intensive Family Support Services*. London: Action for Children.

McDermid, S., Holmes, L. and Trivedi, H. (2015) *Informing Debates about the Sustainability of the Head, Heart, Hands Programme*. Loughborough: Centre for Child and Family Research, Loughborough University.

McDermid, S., Soper, J., Lushey, C., Lawson, D. and Holmes, L. (2011) *Evaluation of the Impact of Action for Children Short break Services on Outcomes for Children - Final Report: Report to Action for Children June 2011*. Loughborough: Centre for Child and Family Research, Loughborough University. <http://www.lboro.ac.uk/research/ccfr/research/exploring/project---evaluation-of-the-impact-of-action-for-children-short-break-services-o.html>

Ward, H., Holmes, L., and Soper, J. (2008) *Costs and Consequences of Placing Children in Care*. London: Jessica Kingsley Publishers.