Background

In 2000 the Centre for Child and Family Research (CCFR) at Loughborough University was commissioned 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). 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. More details about the programme can be found at: http://www.lboro.ac.uk/research/ccfr/research/exploring/.

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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<th>Box 1</th>
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<tr>
<td>1. Decide child needs to be placed</td>
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<td>2. Care planning</td>
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<td>3. Maintaining the placement</td>
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<td>4. Return the child home from care</td>
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<td>5. Find subsequent placement</td>
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<td>6. Review</td>
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<td>7. Legal</td>
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<td>8. Transition to leaving care services</td>
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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 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**

- **Inputs**
  - **Time use activity data** provided by children’s social care personnel
  - **Salary data** for each type of children’s social care personnel involved in the 8 processes
  - **Organizational overheads** (running costs) finance data for the children’s social care service

- **Outputs**
  - **Unit costs** for the 8 processes for looked after children (includes standard case costs and variations)
  - **Child level data** (needs, placements and outcomes)
  - **Finance data** (placement fees and allowances)
  - **Unit cost reports** for individual children, groups of children or by placement type
  - **Process unit costs** of 8 cost calculator processes for looked after children
  - **Analysis of social care costs by outcomes**
  - **‘What if’ analysis** to explore the costs of providing alternative placement types

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 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 (Holmes, McDermid and Sempik, 2010; Holmes and McDermid, 2012; Holmes, McDermid, Padley and Soper, 2012).

**The ongoing research programme**

The CCfCS tool currently estimates the costs of placing looked after children in England. Since 2005 the research has been extended to explore the needs, costs and outcomes for all vulnerable children and their families. Recent research has
included: the estimation of costs and cost comparisons of Multi-dimensional Treatment Foster Care (Holmes, Ward and 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).

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.

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 has been extended for the child welfare system in the US (Chamberlain et al., 2011; Holmes et al., 2013). Funding has also recently been obtained from the Scottish Government to adapt the CCfCS for Scotland. The project aims to develop a Scottish version of the CCfCS that will be made available to local authorities in Scotland in Spring 2015.

Other current studies include the development of a costing framework for the activities and services associated with the recruitment and retention of foster carers, this project includes work with a range of fostering providers and comparisons are being carried out between providers. Research has also recently commenced to explore the cost implications of strengthening the assessment process for children returning home following an episode of care. As part of this study the longer term cost savings of successful reunification are being explored.

**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 McDermaid, 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 McDermaid, 2012; McDermaid, 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.


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