
Extension of the cost calculator to include cost calculations for all children in need

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INTRODUCTION

Under section 17 of the Children Act 1989, local authorities have a statutory duty to provide services, or to facilitate the provision of those services, to all children identified as being in need living in their area. Latest figures indicate that in the year ending 31st March 2010 there were approximately 382,300 children in need in England (Department for Education, 2010a), 64,400 of whom are looked after (Department for Education, 2010b). The remaining 317,900 children in need will be receiving some level of support from Children's Social Care Services and possibly other agencies, while remaining with their families. This study examined the costs and outcomes that arise from the provision of services to all children in need.

KEY FINDINGS

- During the mapping phase of the research social care managers and practitioners reported that recent policy and practice developments across children's services have led to a complex picture of welfare interventions for children in need. This is most notable with regard to increased integration of services and demand for services along with closer public scrutiny and an increased policy and practice focus on prevention and early intervention strategies (Department for Children, Schools and Families, 2007).
- It was possible to identify specific variations in the costs for children with different types of needs and circumstances. Increased activity was identified for children under six, those who were the subject of a Child Protection Plan or had emotional or behavioural difficulties.
- Defining and recording the range of needs presented by children in need and the variations in activity and costs is a complex issue. Social work practitioners emphasised the necessity to view each case on an individual basis: the range of difficulties experienced by families and the nature of children's needs changed over time.
- The Cost Calculator for Children's Services (CCfCS) utilises routinely collected child level data to carry out cost calculations. The study found that not all

necessary data was available from the CiN Census¹ and local electronic recording systems. Supplementary data gathered by researchers from individual case files in the form of free text such as case notes or minutes from meetings were, however, available to enhance the accuracy and reliability of the cost calculations. Much could be gained from local management information systems being designed in such a way that the collection of information already being recorded by practitioners could be utilised fully to assist in the strategic planning of services provided to all children in need.

- This study identified a variety of systems for recording Common Assessment Framework (CAF) assessments that were rarely linked to the main children's social care management information system. Consequently, commissioning and operational managers from participating authorities reported that the numbers of children with additional needs receiving support following the completion of a CAF assessment might be underestimated. Exploration of the extent to which families are in receipt of such services would provide a more comprehensive understanding of the costs incurred by the public purse for interventions provided to all 'vulnerable children'.

BACKGROUND

As part of the costs and outcomes programme of research being carried out by the Centre for Child and Family Research at Loughborough University, a methodology has been developed and implemented for the calculation of costs of child welfare services. The methodology has been deployed in a number of studies to calculate the costs of placing children in care (Ward, Holmes and Soper, 2008; Holmes, Westlake and Ward, 2008); short break services for disabled children (Holmes, McDermid and Sempik, 2010) and key policy and practice developments (Holmes, Munro and Soper, 2010).

This study and the wider ongoing research programme at CCFR utilises a 'bottom-up' approach to calculating unit costs (Beecham, 2000). This method begins by separately costing the welfare interventions each child receives in a specified time period. Unit costs for each intervention are brought together with factors, such as types of children's needs, that cause costs to vary. The appropriate unit costs are then applied to child level data on children's needs and service provision. Multiplying the unit cost of providing a service to a child by the frequency with which it is delivered gives the cost of providing the service to the child during the time period under consideration. Costs are calculated individually for each intervention that every child receives and are then aggregated in different ways to show the total cost for selected groups of children or for particular types of services during the relevant time period.

This approach of breaking down social care activity into its most discrete parts clarifies the various ways in which children with different needs and circumstances

¹ <http://www.education.gov.uk/rsgateway/DB/STR/d000970/index.shtml>

are supported by children's social care. It allows the effectiveness and relative costs of the services provided to be examined. The method also facilitates the exploration of costs over time, increasing the understanding of cost fluctuations and indicating how costs relate to reported outcomes.

A key output of the research programme is the Cost Calculator for Children's Services (CCfCS), a practical application that can help local authorities understand more clearly how costs accrue, and identify how costs relate to children's needs and experiences.

AIMS

The overall aim of this study was to calculate the costs of providing support and services to children in need² as defined by section 17 of the Children Act 1989. The study aimed to identify any factors that led to variations in costs. It also sought to develop a pilot version of a CiN Cost Calculator for Children's Services.

METHODOLOGY

A preliminary mapping exercise was carried out with 15 local authorities to map the range of services provided to children in need. Four of these fifteen mapping authorities were selected to participate in the in-depth part of the study and to carry out detailed costing work. The in-depth research involved the collection of social care activity data, finance data and child level data.

Three methods were used to collect the social care activity data: focus group discussions; verification questionnaires; and event records recorded on a daily basis for a three month period for a sample of specific cases. Contextual information and the views of children's social care staff on policy and practice were sought from the focus group discussions. Finance data included overhead expenditure from the four authorities. Local authority overheads were calculated using a framework developed for a previous study (Selwyn *et al*, 2009). These overheads were applied to national salary data (Wiggins and Storry, 2010) to facilitate the calculation of unit costs.

The child level data collection was aligned with the time frame for the 2008-09 CiN Census; child level data for a sample of 60 children (in each authority) were collected for a six month period between 1 October 2008 and 31 March 2009.

FINDINGS

Development of a conceptual framework

The mapping phase of the study identified that there are two distinct types of services provided to children in need. Those in the first category provide 'ongoing support' or 'case management', whereby a children's social care professional

² While the statutory definition of a child in need includes those children who are looked after, for the purposes of this study, the term 'children in need' refers to those children who are defined as in need under section 17 of the Children Act 1989 but who remain with their families.

provides a case management function. In addition to any direct contact with the child and family, including assessments undertaken with the child or family, this activity can constitute regular planning and reviews, administration and liaising with other professionals. The work is carried out by allocated social workers and other practitioners in social care teams such as team managers, family support workers and team administrators.

The second category of services comprise 'additional services' for children in need and their families, enabling them to attend groups, parenting classes, or sessions aimed at addressing specific needs. These additional services may be provided either by the same team as those performing 'ongoing support' activities or by another team or agency.

To fully reflect the conceptual distinction between activity types and to replicate the methodology used by the research team to date (Holmes, McDermid and Sempik, 2010; Ward, Holmes and Soper, 2008; Ward *et al*, 2008) the 'case management' function was separated from the other 'additional services' accessed by children in need and their families. Such a separation partly reflects a functional split to distinguish between activity related to maintaining and managing an ongoing case and any additional activity to support the child, as provided by the local authority or by an external agency.

The case management activities were organised into eight social care processes based on the case management operations outlined in the Core Information Requirements Process Model (Department of Health, 2001). The case management operations in the Process Model were mapped against proposed child in need processes. An additional process, Process 3: Ongoing support, was included to reflect the day to day support offered to families. The processes are outlined in Box 1.

Box 1: Social care processes for all children in need

Process 1: Initial contact and referral;	Process 5: Core Assessment;
Process 2: Initial Assessment;	Process 6: Planning and review;
Process 3: Ongoing support;	Process 7: Section 47 enquiry;
Process 4: Close case;	Process 8: Public Law Outline.

Each process was broken down into its component parts, which enabled variations to be identified. Activities undertaken within each process included direct work, such as home visits and telephone calls, and indirect tasks, such as attendance at meetings and record keeping, along with administrative tasks such as the completion and distribution of minutes.

Calculation of unit costs

Data about the time spent on each of the case management activities were gathered from practitioners and other staff (such as administrators) involved in each process.

These activity data were combined with national salary scales for each professional type (Wiggins and Storry, 2010) and overhead information to calculate the costs of each process. In line with previous research (Ward, Holmes and Soper, 2008) London and out of London costs were calculated.

Routinely published data on the unit costs of children's social care services are often calculated using a 'top-down' approach. They bring together relevant expenditure and divide that by the number of children for whom the service is provided. Such calculations give an overall average cost but do not distinguish between variations in the needs and characteristics of the population served, the types of services necessary in supporting those users, or local circumstances or policies (Ward, Holmes and Soper, 2008).

'Bottom-up' methods allow more detailed cost comparisons because they can accommodate cost variations. By separately itemising the individual activities involved in delivering services to children in need and their families, 'bottom-up' costing methodologies enable a detailed and transparent longitudinal picture of costs to be built up. Previous research on the costs of placing children in local authority foster care (Ward, Holmes and Soper, 2008; Holmes, Westlake and Ward, 2008) used the same methodology to demonstrate how the costs of care reflect the relationship between the needs of children and the services they receive. In collecting and analysing the time social care staff spent on various activities and processes, it was possible to identify factors associated with variations in costs for services provided to children in need.

The methodology differentiates between two types of costs: 'standard costs' based on the average time reported by social care staff to carry out each process for a child in need, with no identified additional needs; and 'cost variations' where the time taken to carry out a process differs from the 'standard cost' as a result of the child's particular needs, circumstances or due to variations in local authority policies or procedures.

For Process 1, practitioners noted that where an initial contact and referral results in the decision to take no further action, additional activity is undertaken in order to feedback to the referrers and where appropriate, to put in place any community-based services. Where a child is previously known to social care additional activity is required as part of Process 2: Initial Assessment, to read the case history and locate back files (when required).

There are two unit costs for Process 6: Planning and review: one for children in need, receiving support under section 17 of the 1989 Act; and one for the Case Conference Review held for children who are the subject of a Child Protection Plan. These costs include the time taken by social care staff to prepare paperwork and make practical arrangements such as booking a meeting room prior to the meeting and any work carried out afterwards, as well as attendance at the meeting. Social care staff reported that Case Conference Reviews for children who had a Child Protection Plan, required additional activities to be carried out and were therefore more costly. Additional activities identified for Process 7: Section 47 enquiry were dependent on whether the strategy meeting consisted of a telephone call or a face to face meeting, or when an Achieving Best Evidence interview was required.

Previous studies in the costs and outcomes programme have shown that variations in costs correlate with variations in children's needs (Holmes, McDermid and Sempik, 2010; Ward, Holmes and Soper, 2008; Holmes, Westlake and Ward, 2008). As would be expected these studies all demonstrate that those children with the highest levels of need often require the most costly services. In addition, these children often require the most intensive and time consuming support from social workers. Subsequently, the cost of social care processes for children with high levels of need increases.

Focus group participants reported that identifying specific need types was difficult, in part, because activity undertaken was affected more by the severity of the need than by the type of need itself. Workers noted that a number of factors could affect the level of intervention, such as the resilience of the child or family. Furthermore, the levels of intervention required are continually in flux, and events and circumstances can change the level of support that is required. Workers also reported that the need categories included in the CiN Census did not always reflect these complexities.

While difficulties in defining and categorising children's needs were identified, it was possible to calculate variations in the levels of ongoing social care support (Process 3) provided to children with different types of needs and characteristics based on the case file and event record data. Differences in the overall time for each process were primarily attributable to variations in the amount of direct contact by social care practitioners supporting the children with different needs and circumstances.

The standard costs of each process, along with the variations, are summarised in Table 1. Each unit cost is a one off unit cost for the entire process, except Process 3: Ongoing support, which is monthly unit cost.

Table 1: Summary table of all unit costs with variations (overheads added to hourly rates)

Process	Standard or variation cost	Unit cost to social care (£)	
		Out of London	London
Process 1 Initial contact and referral	Standard cost	186	224
	<i>If no further action</i>	207	249
Process 2 Initial Assessment	Standard cost	271	327
	<i>If child previously known to social care</i>	334	402
Process 3 Ongoing support (per month)	Standard cost: No additional needs	107	128
	<i>If child under 6</i>	192	230
	<i>If Child Protection Plan (CPP)</i>	263	316
	<i>If 6 or under + CPP</i>	410	491
	<i>If emotional or behavioural difficulties (EBD)</i>	199	238
	<i>If EBD plus another factor</i>	499	598
Process 4 Close case	Standard cost	195	239
Process 5 Core Assessment	Standard cost	585	703
Process 6 Planning and review	Standard cost Child in Need Review	222	268
	<i>If Child protection case conference review</i>	378	473
Process 7 Section 47 Enquiry	Standard cost	511	614
	<i>If strategy meeting held</i>	661	795
	<i>Including Achieving Best Evidence Interview</i>	889	1,068
Process 8 Public Law Outline	Standard cost	2,238	2,687

Making use of cost calculations

A pilot version of a CiN CCfCS was developed based on the approach for the existing CCfCS for looked after children. The CiN CCfCS brings together the child level data items for the sample children and the unit costs set out in Table 1 to calculate the costs of supporting children in need over the six month time period (1 October 2008 – 31 March 2009). Child level data items such as the dates of Initial

Assessments or Child in Need Reviews, were used to identify whether the various processes (outlined in Table 1) had taken place. The child level data were also used to ascertain child characteristics or circumstances so that the appropriate unit cost (either the standard or a variation) for a particular child could be used for Processes 1, 2, 3, 6 and 7. A key advantage of this approach is that the CCfCS can provide a cost breakdown for each of the processes; these costs can also be aggregated for children with different needs and in receipt of different levels of ongoing support.

The capacity of the CCfCS to calculate costs is constrained by the nature and availability of child level data within local authorities. Difficulties were identified with the data in relation to the occurrence of some of the social care case management processes, the provision of additional services, the needs of children, and the status of children as either looked after or receiving services under section 17 of the Children Act 1989. In addition, the study found that few outcome variables, other than educational attainment, were included in the 2008-09 CiN Census data. Therefore it was not possible to undertake the calculations based on the CiN Census data alone. Supplementary data, about the needs and characteristics of the children, and the support and services they had received during the 6 month time period were also gathered from individual case files to enhance the accuracy of cost calculations.

Despite the limitations of the data outlined above, it was possible to develop a pilot CiN CCfCS. Calculations were carried out to estimate the costs of case management activities for children's social care over the six month study time period (1 October 2008 to 31 March 2009) across the four participating local authorities. Costs have been calculated for 239 children, using the London and Out of London unit costs outlined in Table 1. The average costs of the case management processes for children with different types of needs over a six month time period are shown in Table 2.

Table 2: Average total costs of case management processes for different types of children in need over a six month time period

Average total cost over 6 months (£)						
All children in the sample	Children in need with no specified additional need type	Children under 6 years	Children who have a Child Protection Plan	Children under six years who have a Child Protection Plan	Children with emotional or behavioural difficulties	Children with emotional or behavioural difficulties and another factor
1,416	905	1,387	1,864	3,069	1,494	3,205

The Cost Calculator for all Children in Need

The study identified that the pilot CiN CCfCS is able to utilise child level data which is routinely collected within local authorities, analyse it, calculate costs and aggregate them. Costs can be calculated and reports produced for entire populations of children in need within a local authority. In addition, the variation of costs according to the different needs of children and combinations of their needs may be examined.

Local authorities may also focus on particular elements of their case management such as the referral and assessment processes. Using data collected from individual case files, the study also demonstrated that as more data about 'additional services' (such as groups or therapeutic interventions) becomes available, it would also be possible to examine the costs of different configurations of service provision, or the costs incurred by children in need receiving a particular service or from a particular provider. The costs of children who move in and out of care or who receive multiple referrals before being identified as being in need under section 17 can also be calculated.

The CCfCS model could therefore provide valuable information for commissioners and service managers in children's social care to begin to understand the costs of delivering ongoing case management. Previous research has highlighted that social work teams have experienced increased workloads (Brookes, 2010; Holmes, Munro and Soper, 2010). Under increased pressure, information which can assist service managers in understanding how finite resources might be most usefully deployed, such as that provided by the pilot CiN CCfCS, would be valuable.

IMPLICATIONS FOR POLICY AND PRACTICE

Analysis of need

There is evidence that a thorough analysis of the needs of children and their families is essential for the effective planning and commissioning of services. The nature of different children's needs not only have an impact on the type of additional services that might be provided for them, but also on the type and level of case management support they may require from social workers and from other frontline practitioners. Evidence from this and other studies suggests that the needs of children being referred to social care are becoming more complex, with the numbers of referrals and section 47 enquiries also increasing. Development of a comprehensive understanding of both the needs of children and how those needs impact on the workloads of frontline practitioners will be essential in the effective deployment of resources. An increase in knowledge of the type and complexity of children's needs would enable commissioners and service managers including those offering case management services, to tailor services and thereby maximise their effectiveness.

Invest to save

This study demonstrates the importance of understanding costs over time, particularly how case histories build up. Many children have complex care trajectories, moving in and out of social care thresholds for intervention, and in and out of care. While empirical analysis of the impact of early intervention strategies is complex, there is some evidence to suggest that providing services earlier will reduce the requirement for more intensive services at a later stage (Axford and Little, 2006; Farrington and Welsh, 2004; Chan and Sigafos, 2001; Beresford, 1994). The pilot CiN CCfCS demonstrates how information about the full range of services used by children in need and their costs can contribute to an evidence base about early interventions and can assist in the planning of services. Inclusion of the costs of the Common Assessment Framework and other types of services provided to 'vulnerable children' following a CAF assessment would enhance this further.

Adopting a systems approach

In line with previous research on the cost of services provided to looked after children (Ward, Holmes and Soper, 2008), this study demonstrates the importance of taking a systems approach to calculating costs for all children in need. The costs of services to children in need should be calculated in the context of costs incurred for providing early intervention services and looking after children. Such a systems approach to cost calculations will make it possible to demonstrate how costs are spread across children's social care provision, and to examine how costs are incurred over time. A systems approach can also demonstrate how costs are distributed between agencies, so that reducing costs incurred by one agency may increase the costs to another.

Management information systems

Difficulties were identified in the study about extracting management information from an IT system that combines the dual purposes of recording information on individual cases and collecting data for monitoring and planning purposes. Qualitative information recorded about children in need and their families will reflect the complexity of children's needs, lives and experiences. Data items which are recorded in a defined and consistent way are easily extractable. This research identified that a great deal of data is held within free text fields of the case records for individual children. These data, which were manually gathered for this study, increased the accuracy of the cost calculations carried out by the pilot CiN CCfCS.

CONCLUSION

It is evident from this study, that the provision of services for children in need is a highly complex area, undergoing continuing policy and practice change. Children's social care services are experiencing increasing workloads, while financial resources are under sustained pressure. This study illustrates how child level data can be utilised to calculate the costs of social work activities with children in need and their families, and how this information can be aggregated in various ways to inform decision making. As social work teams experience increased workloads, the CCfCS provides an evidence base which can assist service managers in understanding how finite resources might be most usefully deployed to ensure that all children receive services that are appropriate to their needs. Further enhancements to the cost model could be made for considering additional services and support offered as a result of early intervention strategies and the Common Assessment Framework, should data become more readily available.

It is also apparent that there is a need for a transparent and comprehensive costing methodology that, in a time of economic austerity, can assist local authorities and other agencies in examining how finite resources can be most effectively deployed in order to provide evidence based services to the most vulnerable children and to ensure that all children achieve positive outcomes.

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Additional Information

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This research report was commissioned before the new UK Government took office on 11 May 2010. As a result the content may not reflect current Government policy and may make reference to the Department for Children, Schools and Families (DCSF) which has now been replaced by the Department for Education (DFE).

The views expressed in this report are the authors' and do not necessarily reflect those of the Department for Education.