Making Use of Information in Children’s Social Services. Final Report to Wales Office of Research and Development for Health and Social Care

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Making Use of Information in Children’s Social Services

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Final report
to Wales Office of Research and Development for Health and Social Care
of the Data Analysis Network for Children’s Services
—a project in six local authorities
Project Number SCC99/1/001

Member authorities
Gwynedd
Newport
Pembrokeshire
Rhondda-Cynon-Taff
Swansea
Wrexham

Director:
Dr Harriet Ward

Co-ordinator:
Mike Gatehouse

A project of:
The Centre for Child & Family Research
Loughborough University
1. **Summary**

1.1 This is the final report of the Data Analysis Network for Children’s Services, completing a three-year project to help member local authorities improve the way they specify, implement and use information systems, both paper- and computer-based, in order to achieve better outcomes for children in need, particularly those who are looked after away from home.

1.2 Six local authorities in Wales were invited to join the Data Analysis Network. The work was undertaken through individual visits to the authorities by the DAN coordinator, workshops at which the representatives from participating authorities met together and more formal, bi-annual conferences attended by the full research team and representatives from NAW.

1.3 The project focused in particular on four aspects of information use:

- The trigger events that lead to information capture and recording and the responsiveness of systems to recording opportunities.
- The dividends which information systems should provide to users to ‘reward’ them for recording information; these may include time-saving, convenience, accuracy, reduction in paper-work and the ability to compare different pieces of information.
- The performance indicators identified for measuring the progress and outcomes of looked after children and their subsequent use both in local management and in statistical returns to national government.
- The feedback loops which should exist to return information from the aggregated level of national, authority, department or team management back to the individual case-worker, case file and child.

1.4 In the first year of the project\(^1\), the indicators required for Children First were examined with specific attention given to those relating to the education of looked after children. The practical difficulties in obtaining key information such as children’s examination results were noted as was the absence of feedback loops to distribute that information back to the case files of individual children where it could be used to prompt action to improve their outcomes.

1.5 Work in the second year focused on information inputs, especially the recording of essential information on looked after children, including the various chronologies of events in placement, legal status, health, education, schooling, family, and offending. The experience of DAN members showed that the same or closely related information is often recorded in a number of different systems which co-exist uneasily, with frequent discrepancies in the data. This is a major barrier to the successful use of information systems.

1.6 In the third and final year the question of outputs from information systems was addressed. ‘Outputs’ were determined to be not merely printed reports but every means of deriving information from a system, including screen-forms and filters, alerts and notifications, e-mail messages, and so on. It became evident that much of the disappointment experienced by users of electronic information systems for social services stems from the failure of both local authorities and their software suppliers to specify, design and implement the outputs which make such systems useful and repay the time and effort required to input data. This aspect of DAN work is now being continued in a separate research project commissioned by the Department of Health in England in collaboration with the Welsh Assembly Government, in preparation for the introduction of the Integrated Children’s System.

**Key findings**

1.7 While the situation has improved, DAN member authorities still have difficulty in producing reliable information on looked after children as required for Children First and other statistical returns, as well as for their own internal management and planning.

1.8 The most important reason for this information shortfall is not the lack of adequate computer systems or software, but an organisational culture where information is not clearly defined, ‘known’ and used for operational purposes and is therefore not clearly recorded whether on paper or computer files. While new or upgraded computer-based information systems (CBIS) may be helpful, they will not lead to significant improvement either in reporting statistics or in monitoring outcomes for the children.

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3 DAN’s annual reports are available to download from [www.ccfr.org.uk](http://www.ccfr.org.uk). The present report will also be made available from the same website.
concerned unless they are made part of much wider changes in the culture of information use within the organisation.

1.9 Practitioners are unlikely to record information accurately and keep it up to date if the systems they run do not enable them to make use of that information in their daily work. CBISs currently in use in the DAN authorities tend to be structured around a series of bureaucratic processes which do not reflect the needs of practice.

1.10 Most authorities tend to use a range of different paper- and computer-based information systems which co-exist uneasily, with frequent incompatibilities and discrepancies in the data.

1.11 Recording in a CBIS becomes ‘data entry’, which tends to be structured as an additional, separate, repetitive and rather onerous chore, whereas it should be simply a part of the normal way of achieving a particular task such as taking a referral, making a placement or assigning a case.

1.12 Existing CBISs often fail to provide a simple and effective way of recording and/or viewing children’s placement and domicile history. In particular, respite placements and family moves are often omitted and the reason for placement change or breakdown is not clearly specified. Recording has tended to be defined by the requirements for completing the statutory SSDA-903 return rather than by those of effective case management.

1.13 Statistical returns are often perceived as a periodic research chore conducted by specialist policy or information staff to satisfy the demands of an external authority rather than as a routine function of management at all levels to monitor and improve outcomes. The data in such returns is largely generated in the day-to-day practice of social workers and would be more accurate and complete if the practitioners themselves were enabled by their information systems to generate, interpret and ‘own’ the results and apply them directly both to improve their own practice and to report on them to their line managers.

1.14 Greater priority needs to be given to defining and obtaining outputs from CBISs and to their use in daily practice and management. Existing systems are often designed mainly for data-entry with little regard for the screens, reports and other outputs that might be useful for case management at practitioner, team or service level. Too often outputs are
not built into the system but require the use of a separate reporting application which is expensive to deploy, requires special skills to use and can only generate printed reports.  

1.15 Conversely, however, even where outputs are provided by a CBIS, there is no guarantee that they will be employed unless the organisational culture promotes their ownership and use. One valuable method for developing such a culture is the Quarterly Performance Review (QPR) process developed in North Lincolnshire. Several DAN authorities are now adopting similar approaches.  

1.16 Printed reports are not the principal nor the most important output from computer-based information systems. Screen forms can provide powerful ways of finding, browsing, selecting, collating, counting and comparing information. System-generated highlighting or dialog boxes can communicate alerts (e.g. for a review or assessment which is due or overdue). Automatic e-mail notifications can be generated and directed to managers, other departments or agencies (e.g. to notify a change of placement or school or to invite parties to a case review). Graphs, ‘traffic-light’ and other visual methods can be used to present analyses of the information.  

1.17 Information systems are often hobbled in use by the persistence of traditional and generally manual methods of working, especially where signatures or authorisations are required. For instance, a form that can be generated on screen must still be printed, corrected and manually signed by a manager; or, a practitioner can record all the information on a new referral but is not permitted to generate a new case, a procedure which only the team administrator is permitted to complete. Where this occurs a computer-based system, far from providing speed, reliability and convenience, adds yet further stages to an existing bureaucratic process. Yet appropriate checks and signing-off procedures could easily be incorporated in an electronic system.  

1.18 Lack of confidence in the data stored in the CBIS is one reason for the persistence of such cumbersome procedures for authorisation. It is essential to ‘authenticate’ electronic data to establish its ownership, history, completeness and validity. Every electronic record should include fields to record, at least, when and by whom it was created and when and by whom it was last modified. In addition, the complete electronic information records on each child should be regularly audited in an Electronic Information Review (EIR), similar to the checks on LAC form accuracy and completeness performed prior to or during statutory case review by reviewing officers in some DAN authorities.
A key problem for computer-based information systems is how to handle text-rich documents such as the LAC Assessment & Action Records and the Core Assessment Form in the Assessment Framework for Children in Need. There are technical and practical reasons which make it difficult to incorporate such information in a database. Yet such documents can be word-processed and stored electronically and pre-populated from a database with certain key data (identifiers, names, dates, etc.). As far as possible the creation, naming, storage and retrieval of such documents should be managed from within the CBIS. Printed versions should be produced in a compact format, freed from the constraint of imitating paper-based forms (with pages of white space dedicated to boxes that are often empty or contain only a few words).

The DAN authorities developed a simplified model of information-flow within Children’s Services (see p.29 and Appendix D) which suggests that while performance management tends to concentrate on returns to external authorities, information tends to flow upwards within an organisation, being collated and interpreted by policy or planning specialists. An invisible barrier operates which blocks the feedback which should flow downwards to team leaders and thence to practitioners and their individual case-management.

Components of information systems can be successfully modelled and pilot tested using a Microsoft Access database. The DAN database model developed to test a new type of placement record has been successfully extended to include much of the chronological information included in the LAC Essential Information Record Part 2 and is capable of further development to meet the requirements of the Integrated Children’s System.

The DAN database model has been extended to include a chronology report (a practical demonstration of how the Chronology exemplar in the Integrated Children’s System might be implemented).

A further development is the inclusion of a prototype electronic Help system which would provide a means of documenting, updating and distributing an authority’s own procedure manual, linking it to national guidance and research and making it accessible as context-sensitive Help from within the CBIS for Children’s Services.
1.24 The above findings from the DAN initiative will underpin the development of the recently commissioned Core Information Output Requirements for the Effective Management and Delivery of Children’s Social Care Services⁴.

1.25 DAN’s work has shown the value of an exploratory research project whose small scale and flexibility allowed it to investigate in some detail the practical information problems of a small but representative group of local authorities. DAN was able to suggest, test and share with these authorities tools for analysing information use and examples of practice, recording and outputs designed to provide immediate benefits. Some of these tools or the ideas embodied in them are being taken up by the authorities and/or their software suppliers.

⁴ A project of the Centre for Child and Family Research, Loughborough University and the Thomas Coram Research Unit, funded by the Department of Health and the Welsh Assembly Government.
2. **Introduction**

2.1 DAN was established in late 1999 with funding for three years from Wales Office for Research and Development for Health and Social Care. There were six member local authorities in Wales: Gwynedd, Newport, Pembrokeshire, Rhondda-Cynon-Taff, Swansea and Wrexham. The work of the network was co-ordinated part-time by Mike Gatehouse under the direction of Dr Harriet Ward, Director of the Centre for Child and Family Research, Loughborough University. Additional support was provided by Professor David Quinton, School for Policy Studies, University of Bristol and Jean Soper, Lecturer in Economics, University of Leicester.

2.2 The idea of a data analysis network derived from the perception that universal implementation of the Looking After Children system could lead to uniform data with the result that uniform information systems would become both possible and necessary.

2.3 Shortly before DAN began work, and partly as a response to the Utting Report\(^5\), the Children First\(^6\) programme was introduced in Wales\(^7\). Children First imposed requirements on local authorities to draw up an annual Management Action Plan containing a wide range of measures of their work and their progress towards certain specified outcomes for children. This greatly increased the authorities’ need for effective information systems able both to record and report the data specified. Observation of some of the difficulties authorities were encountering in recording and analysing data formed the early part of DAN’s work.

2.4 Meanwhile, the work of the Welsh Office was absorbed into the newly formed National Assembly for Wales (now Welsh Assembly Government). The DAN authorities worked closely with staff of the Development Unit for Children and Family Services in the Social Services Inspectorate (SSIW), and the Statistical Directorate.

2.5 In 1999 The Welsh Assembly Government commissioned a study of Performance Management Information for Social Services from the Nuffield Institute for Health\(^8\) which provided much of the background information for DAN’s initial work.

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\(^6\) Welsh Office Circular 20/99, April 1999.

\(^7\) Similar to Quality Protects in England.

2.6 Shortly afterwards the Assembly established its own Performance Management Programme under SSIW. This held quarterly conferences for the 22 Welsh unitary authorities at Gregynog and established regional sub-groups and several consortia of local authorities, one concerned with the commissioning of new computer-based information systems, the other bringing together users of the SWIFT software system. These conferences and meetings provided an invaluable forum for the DAN co-ordinator to monitor the concerns and needs of local authorities, to meet with key policy and information staff and to disseminate DAN’s own findings.

2.7 While DAN retained its primary focus on looked after children, its period of work coincided with the introduction in Wales of the Assessment Framework for Children in Need and work towards the eventual implementation of the Integrated Children’s System. Thus, changes in information recording and requirements for analysis were extended across the full range of children’s social services and DAN’s work acquired additional impetus and relevance.

2.8 The methodology adopted for the project is described in Appendix A.

2.9 DAN has also been involved in supporting and disseminating the preliminary research results of the Centre for Child and Family Research project ‘Costs and Consequences of Different Types of Child Care Provision’ in which Pembrokeshire, a DAN member, is one of the six participating authorities.

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9 SWIFT was originally developed by Sheridan Systems Ltd, now a division of Anite Public Sector.
3. Obstacles to the flow of information

3.1 Throughout the first two years of the project the DAN authorities identified a number of factors which obstruct the satisfactory flow of information: the proliferation of systems, poor co-ordination between computer- and paper-based records, physical constraints, the difficulties in accessing information, an unsupportive information culture and the absence of adequate feedback loops. Many of these factors underlie the problems in obtaining outputs which are addressed in the final section of this report.

The proliferation of systems

3.2 As was noted in DAN’s second annual report\textsuperscript{10}, most authorities tend to use a range of different paper- and computer-based information systems which co-exist uneasily. Information concerning the placements of looked after children, for instance, may be held on separate systems for client index, boarded out payments, placements, foster care and adoption, SSDA-903 returns, the child protection register and in movement forms and the Looking After Children materials.

3.3 In addition, it is commonplace to find various separate unofficial recording systems in place within a single department, each maintained for a limited purpose by an individual member of staff or team. These systems may be on paper, index-cards, word-processed lists, spreadsheets or (usually Access) databases. Generally staff trust their own systems more than the ‘official’ one. Often staff in other sections are unaware of the existence of these proprietary systems. The completeness and reliability of the official children’s services information system is further compromised by staff preference for and use of their proprietary systems.

3.4 Official and unofficial systems are frequently incompatible with one another (for instance in the manner of using names, case numbers and other crucial identifiers) and contain different or contradictory data. The true scale of the problems caused by this proliferation of incompatible systems only becomes apparent when a new external demand for information (e.g. for a new return or performance indicator) requires data to be collated from several of these sources.

\textsuperscript{10} DAN Annual Report 2000, Mike Gatehouse & Harriet Ward, Department of Social Sciences, Loughborough University, 2001.
3.5 The inconsistencies and inaccuracies that such incompatible systems introduce, and the practical difficulty of reconciling lists and statistics drawn from them provide a formidable barrier to the free flow of information in local authorities.

**The interface between paper and computer**

3.6 Where single, official information systems exist, information flow is often obstructed by a poorly designed interface between paper-based and electronic materials. While all the DAN authorities are now running systems which use an electronic database as well as paper materials, little thought has been given to resolving how the two can be integrated.

3.7 Despite the widely-shared ambition to create the ‘paperless’ office, in reality much information in children’s services continues to be on paper and this is likely to remain the case for many years to come. In routine social work practice, paper may be required either for input or output purposes in any of the following circumstances:

*Paper ‘input’ forms for recording information where the computer is unavailable because:*

- No computer has been allocated to a particular member of staff.
- The computer or network are not functioning.
- The computer is too slow (e.g. when recording details taken over the phone).
- Recording takes place away from the Council office and access to a network.
- Use of a computer would be inappropriate (e.g. during an interview, on a home visit, in court).
- Staff prefer to work unencumbered by the physical bulk of a computer and the barrier of a monitor.

*Paper outputs (reports, lists and forms) are required:*

- To supplement or organise other paper information (e.g. case file cover sheets; case summaries).
- For use away from the office where no computer access is available (e.g. on home visits, in meetings with other agencies, in court).
- To send selected information to other persons and agencies.
• To provide specified information (e.g. a LAC Placement Plan) where computer output may have the same content as or may mimic both content and format of a specified paper form.

• To provide readily readable summaries for colleagues (e.g. in supervision and team meetings, case reviews, in case hand-over).

• To provide case chronologies for reviews, court proceedings, etc.

• To provide checklists for administrators, team leaders and managers.

• To provide forms and notifications for other administrative systems within the Council (e.g. finance; boarded out payment systems; payroll).

• To provide forms and notifications required on paper by external agencies and bodies.

• To provide back-up when the computer-based system is unavailable.

• To provide an ‘authorised version’ of a document which will carry the hand-written signature or initials of the appropriate manager or officer.

3.8 Much additional paper and delay is generated by the requirement for managers and supervisors to apply their hand-written signature to forms and documents, often retaining a copy for their own files, and requiring new copies to be made where they correct or modify the originals. These procedures tend to persist after the implementation of a new computer-based system, perpetuating wasteful paper production and filing and often introducing significant delays into the system. Yet computer-based systems can incorporate electronic signatures and means of authorisation using system-generated messages or e-mails and, where appropriate, withholding certain information from view, use or further processing until it has been electronically checked or authorised by a designated manager. Such ‘pending’ authorisations can be logged and appropriate action flagged where the manager with authority is absent or ill or authorisation has been omitted.

3.9 It may also be the case that the wider sharing of information that computer-based systems make possible renders some of the formal processes of authorisation unnecessary – initial responsibility can more easily be delegated (so that, for instance, individual practitioners can accept a referral and create a new case without the need for
a manager to give prior approval and an administrative officer to generate the appropriate paper), with decisions being subsequently reviewed.

3.10 A clear example of this was found in one DAN authority which has implemented referral and initial assessment forms as electronic Adobe Acrobat documents. In principle, practitioners can call up a new blank form, fill it in on screen and e-mail it to an administrative officer for checking. After checking, authorisation and correction, the electronic version of the form is saved. In reality, only some practitioners fill the forms on screen, while others print out a blank form, fill it in by hand and then take it to the administrative officer for typing. Even where forms are completed on screen, the administrative officer has to print out a copy to send to the appropriate manager for checking and signing. The hand-corrected copy is then returned to the administrative officer, corrections are entered on screen and final copies are printed out and returned to the practitioner and manager for filing. The corrected electronic version is also filed, but probably never used or accessed again since only the administrative officer knows where it is.

3.11 This example neatly illustrates how old, paper-based ways of working can hobble a new, electronic system. In this case:

- New cases can only be created by the administrative officer who has the appropriate permissions to check and add to the client index system and who can make up the new physical case file.
- Referrals have to be signed off by a manager and this has to be done on a paper copy.
- The absence of any proper document-management (filing) system for electronic copies of the referrals means that they cannot subsequently be accessed.

The end result is a hybrid paper/electronic system which is arguably slower and more cumbersome than the pure paper system it replaced.

3.12 Paper copies of information are often retained purely for backup. Properly designed computer-based systems should have backup built-in and regularly tested so that extensive paper backup is unnecessary. However, as all computer-based systems are vulnerable to hardware failure (and especially to network difficulties), there should be enough paper-based information and recording available to enable work to continue ‘when the system is down’.
3.13 When improvements to information systems are discussed, most attention nowadays is focussed on electronic systems, sometimes to the detriment of existing paper systems. Although one DAN authority recently carried out a radical reorganisation of their case files, introducing an index and standard sections, in many authorities case file organisation remains haphazard. It is difficult to pick up a file and know immediately the complete identification of the child, current legal status, location (if looked after) and assigned social worker.

3.14 At the opposite end of the spectrum is an example of an authority (not in Wales) which believed that it had created a paperless system by dint of scanning the entire contents of its historical case files and storing them as page images. However, predictably, files had not been weeded, ordered and standardised prior to scanning, there was virtually no indexing, pages could only be retrieved to screen one at a time after long delays and meaningful information was almost impossible to retrieve from a welter of pages many of which were blank or contained arbitrary notes of no particular relevance.

3.15 Computer-based systems often include elaborate and wasteful efforts to mimic existing paper formats exactly. There is no reason to format a computer-generated report in the same way as a paper form designed for completion by hand. For instance, the LAC EIR-2 form occupies 12 sides of A4. A competent computer-based information system for looked after children will collect the same information (and more). A computer generated report would be able to print all the EIR-2 information on a single child on two to three sides of A4, producing a document that is shorter and much easier to read.

3.16 Similar considerations will apply to the exemplars of the Integrated Children’s System, especially to the Chronology and Assessments. Despite the intentions of its designers, there is a distinct possibility that in some authorities the adoption of the Assessment Framework and, subsequently, the Integrated Children’s System will increase the volume of paper records for each case. Much will depend on how the authorities interpret and implement the new ‘exemplars’. Unlike the forms of the Looking After Children system, these are not meant to be paper forms whose format is mandatory. However, it is likely that many authorities will treat them as though they were.

The constraints of physical space

3.17 It is important not to underestimate the importance of physical space, access and convenience in affecting the way information systems, whether computer- or paper-based, are used. In one DAN authority two assessment teams were sharing a tiny filing
room where all case files were stored in filing cabinets on both sides. The room was so narrow that one person seeking access to a file from a cabinet near the entrance would block access to anyone else seeking files located further back. Drawers from opposite cabinets would clash with one another. In consequence files were often not returned to the correct cabinet, but stacked near the door where they often fell off and shed their contents. Practitioners tended not to return files to their proper locations but kept them by their desks, adding to the general clutter of the team room and making it hard for anyone else to find a file. The net result was poor case file management, with crucial information unavailable when needed and prone to go astray.

3.18 The goal of one computer per social work practitioner for data input is often frustrated by the lack of desk-space to install bulky computers and monitors. The introduction of LCD flat-screens is a significant improvement but these are still generally more expensive than CRT monitors. Isolating computers in a separate area or room is generally a poor solution as users prefer and need to be close to their desks, telephones, filing space, papers, and belongings. They require computers that are immediately familiar to them (with screen short-cuts for common tasks such as e-mail, the childcare system, etc.). Often they will personalise their machines, installing their own screen wallpaper or screensavers.

3.19 Finally, access to computer-based information systems is often restricted by the limitations of the local and wide-area networks deployed by local authorities. A remote area office, for instance, may be unable to access the network and therefore be cut off from the main information system which, in turn, is deprived of essential information. Elsewhere, network connections may exist but operate very slowly for demanding database applications so that users find data entry and enquiry frustratingly slow and tedious. Such situations either oblige or encourage the establishment of separate, local systems, introducing duplication and ambiguity into the data.

**Access to data and information systems**

3.20 Information flow is also frequently obstructed by restrictions on access to data. These are often introduced on grounds of confidentiality. Although there are very real concerns about the need to protect the confidentiality of personal information held on children and families, these are sometimes used as a convenient screen for other motives. For instance in at least two DAN authorities practitioners cannot access information about the foster carers with whom they place children, not because that
information is really confidential, but because it is ‘owned’ by the family placement team who are reluctant to share it. In another DAN authority, there is a single client index database for the whole local authority area, but there are three social services area offices. Staff in any one area office are barred from accessing information originating in either of the others. This makes for enormous difficulties when a family moves house from one area to another and may lead either to long delays before their files catch up with them or to the creation of duplicate case files. Such structural obstacles often derive historically from inadequate work to integrate several disparate computer systems after local government reorganisation, but subsequently acquire their own bureaucratic dynamic and are seized on as weapons in competition for scarce resources and management influence.

3.21 Most authorities rightly protect information on the Child Protection Register. In some cases this means that only certain specified staff (the Child Protection officer and perhaps one or two others) know whether a particular child is placed on it. However if those staff who have professional responsibility for safeguarding children do not have access to this information it is difficult to see how they can protect those who are at risk. It would seem more appropriate to make explicit the list of those who need access to the register, with passwords and access rights to determine ability to view only or to add, change and delete records on the register.

**Organisational culture and computer use**

3.22 Difficulties in obtaining, disseminating and using information are often exacerbated by the culture of use of the CBIS itself. This is a product both of attitudes towards computer systems and the specific character of the system being used. Social work practitioners tend to regard computer systems and electronic record keeping as the province of administrative staff. This was reinforced by the fact that until very recently many practitioners lacked access to a PC. All the DAN authorities aspire in the near future to have one PC per social worker, but staff attitudes take time to change. For their part, managers too may be happy to read and use reports and charts derived from such electronic systems, but believe that the task of preparing them should be left to information or policy officers. Hence the key roles of the ‘information brokers’ identified in the Information Flowchart (see p. 21 below). These cultural issues radically affect the extent to which information flows freely within the organisation. All staff will tend to make little use of the CBIS until they come to regard it as the principal, most reliable and most accessible source of information.
3.23 It will certainly take time before practitioners accept that they are just as responsible for the electronic records of the children assigned to them as they are for the paper case files. DAN authorities have been consulted about the idea of instituting an Electronic Information Review (EIR), possibly linked to the regular case reviews of children. Just as now the paper case file and LAC forms for a case are often checked by reviewing officers, it is equally important that electronic records are similarly checked for accuracy, consistency and completeness and the assigned social worker given the responsibility for making any corrections. The real transformation will occur when all staff regard the records in the computer based information as the case files on children while the paper case files are merely stores of paper documents (mainly correspondence and rough notes) which cannot easily be held electronically.

**Triggers and dividends**

3.24 Examination of existing computer-based information systems in children’s social care services shows a striking mismatch between the real-life trigger events which generate information and the recording processes envisaged in these systems. In part this is due to adherence to an outdated data-processing model in which data entry is a separate, bureaucratic procedure (see 5.3, below), rather than an intrinsic part of the way of responding to the event.

3.25 An example of a trigger event may help to illustrate this point: a foster-carer is suddenly taken seriously ill. The child s/he is caring for must be found a new placement immediately. The child’s social worker is notified and will spend perhaps many hours, consulting with the family placement team, visiting the available alternative placement, talking to the child, the child’s parent(s), relatives and so on. Location of school, arrangements for contact visits with parents and siblings and a range of other factors need to be taken into consideration. Each of these involves information which is likely to be already recorded in the children’s social care information system and where the system could and should be available to provide useful help (most probably in the form of outputs on screen) to the social worker.

3.26 In practice, however, in many such systems the first and only impact of this trigger event on the system would be long after the event: having made the new placement, the social worker would fill in a paper movement form and pass it to the team administrator for data entry at some subsequent moment. Often, the administrator will accumulate the forms over a period of days or weeks before spending a morning ’doing
data entry’. This is a classic instance of what used, in data processing terms, to be called ‘batch processing’. Meanwhile, until the data is entered, the information system is impoverished: it is missing two pieces of vital information: the current placement whereabouts of the child and the non-availability of the foster carer.

3.27 The remedy is notionally simple: enable the child’s social worker to enter the relevant details in the course of responding to the trigger event. The amount of keyboard time required would probably be less than five minutes, as the data items requiring change are very few. The sequence might be as follows:

1. Locate child’s record.
2. Locate linked placement history records (probably on the same screen form or available on a tab or button on that form).
3. Locate current placement.
4. Enter end-date for current placement together with reason for placement ending and a comment about the carer’s illness.
5. Enter start-date for new placement, identifying new carer and reason for start of episode.

3.28 Meanwhile, while this minuscule amount of data is entered, the social worker would potentially be able to see on screen (as outputs) and take into consideration numerous other relevant factors: the child’s home address, current school, GP, contact arrangements and any related services which might require notification. In addition, the system could have provided a screen list showing all other foster carers with current vacancies and details of their registration.

3.29 The CBIS could generate a range of other, helpful outputs. LAC Placement Records (Parts 1 and 2) containing all the relevant information would be printed off, ready for manual completion of additional details and distribution to the relevant parties. E-mail messages could automatically be sent to the child’s school and GP, notifying the change of address and carer. The independent reviewing officer could be alerted. The family placement team could receive confirmation of the change of placement. The change would also be included automatically on a list of all placement changes sent weekly to the LAC team leader(s) and head of service. Relevant entries would be made
automatically in the (electronic) versions of other relevant LAC forms (EIR2). And a new cover sheet for the child’s case file would be printed, ready for insertion in the file, detailing the new placement address and carer.

3.30 These outputs, on screen, in print and by e-mail, directly related to real-life trigger events, are the ‘dividends’ — the beneficial outputs which make it worthwhile to enter the data in the first place. There is a clear and direct link between the provision of dividends and achieving complete, good quality data. The absence of explicit provision within many CBIS of trigger-related recording and dividend outputs is a serious obstacle to information flow.

Feedback loops

3.31 One of the key aspects of information use is the various feedback loops which should exist to return information from the aggregate level, where it is considered by management information workers and operational managers, to the first-level managers (team leaders) and practitioners, to their cases and hence to the individual children with whom they work. The absence of such feedback constitutes a serious weakness in any information system and hence in the work of the organisation where it occurs.

3.32 A clear example of this is the way in which some authorities obtain and use information about school-age children’s SATS and GCSE results\textsuperscript{11}. Notionally, this information should be available on a child’s case file. Where children are looked after, a space is provided for recording it on the LAC Essential Information Record 2 form. In practice, sometimes the information is recorded on the form, or in notes of discussions with the child or foster carers, or in the records of case reviews. But recording is sporadic and can seldom be relied upon\textsuperscript{12}.

3.33 With the introduction of Children First, local authorities in Wales were required to provide summary statistics to the Welsh Assembly Government to indicate the ‘levels achieved in SATs and GCSE by children in need’ (CF 1.1). Since they could not reliably compile such data from their own case records, most DAN authorities sent a list of children in need to their own education department and this was returned with the examination results filled in. There were some difficulties in identifying children

\textsuperscript{11} See DAN Annual Report 2000, p.12
\textsuperscript{12} Confirmed by DAN member authorities and more widely observed in Outcomes for Looked After Children — The Longitudinal Study at the Third Data Collection Point, T.Skuse, I.Macdonald and H.Ward, Centre for Child and Family Research, Loughborough University, 2002.
because Unique Pupil Numbers (UPNs) used by LEAs and their SIMS database systems are not generally stored in social services systems and there are sometimes discrepancies in names or dates of birth. The results obtained were then aggregated and used to complete the required return to WAG, but the individual child’s results were not stored in the child’s electronic record, nor on the paper case file, nor reported to the child’s social worker.

3.34 A similar pattern was observed in regard to information about placements of looked after children. Again, Children First required local authorities to return the numbers of children who had had three or more placements in the preceding year (a measure of placement instability). Most authorities were able to supply a figure to WAG. Yet when asked what action was taken about the individual children who were experiencing that instability (with all its probable negative consequences), no DAN authority had, as part of this information process, put in place any measure to flag or follow up the individual cases, to intervene or to analyse why the children were having so many placement changes. Of course, these cases probably received special attention by other routes, notably case review, but the opportunity of feedback from within the information system triggering remedial action was lost.

3.35 A third example is the SSDA-903 return. Although every DAN authority spends considerable effort and resources to compile this statutory return to the Welsh Assembly on the placements of looked after children, it seems that the information so compiled is seldom used by the authorities themselves to analyse or plan their placement work, or that any significant feedback from the Assembly to local authorities occurs as a result of their submitting the return.

3.36 In each case, outputs from the information system were being required to compile returns for an external body. They were compiled by management information officers (MIOs) and discussed, for the most part, with senior managers. Where information was acquired from outside social services, e.g. from the LEA, it was delivered to MIOs and used to compile a return. Social workers, whose assigned children were the subject of the information, were not usually involved in collecting it and therefore did not ‘know’ or ‘own’ it. Information flow within the organisation was generally upwards (to senior management) and outwards (to external bodies and WAG). Feedback was usually absent. When it did come, this was often after a considerable time-lag (while returns were analysed by the external bodies), and reached only senior managers, percolating
down to frontline staff only when the figures revealed serious shortcomings and managers demanded changes. Meanwhile the individual children whose specific negative outcomes had triggered the concern received no benefit from the returns process at all. In a very literal sense, they became ‘just a statistic’.

3.37 This general situation is depicted in the diagram below on p.21\(^{13}\). In addition, the DAN Co-ordinator asked member authorities to compile their own charts of which two are presented in Appendix D. While the DAN diagram is a simplification, it does illustrate some key aspects of children’s services information systems:

- Information tends to flow in one direction — upwards and away from the subject (the child).
- There are two types of information: operational and management.
- There are three spheres: the child’s, administration and policy.
- The key linking roles are played by Administrative Clerks (between the Child’s and the Administration Sphere); and by Management Information Officers (between the Administration and the Management Sphere.
- The ‘information broker’ for management is the Management Information Officer; for operational staff, team leaders and social workers, it is the Administrative Officer.
- Very little information is fed back to Team Leaders (first-line management) who tend to be marooned below an invisible wall or ‘block’.
- The information output given the highest priority is the Return, which is compiled and sent off to external authority, often without being used for internal management purposes.
- Information from other departments and agencies tends to be fed in to the Management Information Officer and may never be known by the operational staff.
- Operational staff have no direct involvement with and therefore tend not to own the information supplied to management. They are seldom asked to summarise, analyse or discuss the outcomes of their own work.

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\(^{13}\) A version of this diagram was presented to Heads of Children’s Services and senior managers of the 22 Welsh local authorities at Gregynog in February 2002
How Information about Children Flows

<table>
<thead>
<tr>
<th>MANAGEMENT INFORMATION</th>
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<tbody>
<tr>
<td>Policy Sphere</td>
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<tr>
<td>Returns</td>
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<tr>
<td>SSDA 903</td>
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<td>MAP/CF</td>
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<td>NAW-Ps</td>
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<td>Multi-Agency</td>
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<tr>
<td>Health &amp; Education Systems</td>
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</tbody>
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<table>
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<tr>
<th>ADMINISTRATION SPHERE</th>
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<tr>
<td>Management Information Officer (MIO)</td>
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<tr>
<td>Financial System Movement Records</td>
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<td>Client Index</td>
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<tr>
<th>THE CHILD'S SPHERE</th>
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<td>Admin Clerk</td>
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<tr>
<td>Reviewing Officer</td>
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<tr>
<td>Social Worker</td>
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<td>Carers</td>
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<td>Parents</td>
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<th>SERVICE</th>
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<tr>
<td>Social Services Committee/Cabinet Members</td>
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<tr>
<td>Director (DSS)</td>
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<tr>
<td>Assistant Director/Head of Children's Services (ADHCS)</td>
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<td>Service Managers</td>
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<th>THE BLOCK</th>
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<tr>
<td>Team Leader</td>
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DAN Final Report
4. **Information flow and organisational culture**

4.1 Two particular problems in the flow of information in children’s services are discussed below in the context of the organisational culture (at both local authority and national level) in which they are located. In each case they significantly restrict the flow of information, the use made of outputs, the audiences for whom they are destined and hence the scope of knowledge within the organisation as it might be applied to improving the outcomes for children in need and their families.

4.2 Mechanisms used by central government to quantify, regulate and to improve the functioning of local government have traditionally included inspection, audit, review and the submission of statistical returns which summarise activity, resources and costs and attempt to measure outcomes. While the preparation of records and summary statistics required for such returns to external authorities is often regarded as one of the most important functions of a computer-based information system, the gaps in the feedback loop ensure that the resulting outputs tend to be under-used or not used at all within the reporting organisation.

4.3 **Returns**

Part of the problem seems to lie with the culture of ‘returns’. Unfortunately, the term ‘return’ conjures up the image of the annual income tax return—an unwelcome document which must be laboriously filled in with accurate, or at least plausible, information and sent off to a remote authority with a fervent prayer that there are no mistakes and that no more will be heard of it. Local authority staff sometimes view the returns which they have to make to central government in rather the same way.

4.4 As the requirements for statistical returns have increased, so local authorities have responded by creating or increasing staff posts to provide the requisite management information. These staff members, with their special expertise in statistics and software, constitute an information priesthood, which can be somewhat remote both from the operational staff and from first-line managers. Despite the good intentions of all concerned, there is a considerable risk of further alienating operational staff from the task of analysing and using the information of which they themselves are the primary producers and of which they should also be the primary consumers, users and analysts.

4.5 In recent years public concern about specific shortcomings in children’s services, an increased emphasis on outcome rather than process measures, the influence of business management models and central government policy to set targets and publish
comparisons of performance have combined to create greatly increased demands on local authorities to submit returns of a large number of ‘performance indicators’. This in turn creates a substantial requirement for outputs from information systems.

4.6 In Wales, while the approach of national government has been perceived to be more collaborative than in England (eschewing, for instance, star-ratings of local authorities), demands for returns and performance indicators have nevertheless been considerable. However, there has been a sustained attempt to limit and codify these, to discuss them in detail with local authorities, to provide uniform means of data collection and to make funding and assistance available to develop and improve information systems. This effort has constituted a large portion of the work of the Welsh Assembly Government’s Performance Management Programme.

4.7 Despite this, however, the information delivered to the Assembly is still a ‘return’ or series of ‘returns’, and shares the same cultural baggage as the older SSDA-903 return. There is a danger that, if nothing else is done with the data in the returns, performance management may remain little more than performance measurement.

4.8 One way of counteracting this is to ensure that information flows are not directed only upwards and outwards; that the desired output of information systems is not just ‘returns’; and that the feedback loops are in place within each authority’s children’s services to ensure that information is collected, known, analysed and used for the immediate benefit of children in need and for the management of the staff and resources involved in that work. In this case the return becomes a by-product of an active process of analysis and improvement, rather than an end in itself.

Management information

4.9 Like ‘return’, the term ‘management information’ also carries cultural baggage. In the still hierarchical culture of many UK workplaces, ‘management’ is ‘them’, while ‘the real work’ is done by ‘us’. Front-line workers, therefore, and sometimes managers also, tend to perceive management information as what enables managers to do their job, not what they themselves require to do theirs. They tend to think that management information is not about the work they do, but about how they do it — how quickly, how efficiently and so on. It is about meeting targets and deadlines. Management information can be seen as alien, in that it is for others, and alienating, in that instead of helping staff with their work it may make them more insecure. Because operational staff are the ones who have to fill in the forms and do the data entry, they tend to view these
as tedious distractions from the work they are most interested in — direct interaction with their clients.

4.10 The obverse of management information is operational information — the information that social workers and administrative staff use directly in their daily work and which litters their desks and fills to bursting the case files for which they are responsible. Their problem is how to bring order to the chaos that is the wealth of information and detail with which they are daily besieged.

4.11 Of course, for the most part management and operational information are the same information, presented for a different purpose. An organisation that has a good operational information system will need to collect very little additional information in order to have a good management information system: it merely requires the tools to collate and analyse the operational information in order to reveal the costs, delays and deficits of human and material resources and hence point to the areas requiring additional resources, motivation, training or structural change to improve organisational effectiveness and the outcomes for the clients.

4.12 However, mere possession of a good information system, which serves both operational and management needs, is not enough. The system has to be used, and the organisation has to have the appropriate organisational culture and practice to use information in the appropriate form at every level. This is part of what has been called ‘a reflective, learning culture’ and characterises local authorities where there is ‘openness and willingness to learn, both from external research and their own experience’.14

4.13 In an organisation with a healthy information culture, operational information would be widely shared and the tools to analyse it would be at the disposal of all staff, not restricted to managers and information specialists. Staff would be required to self-evaluate, by analysing the information within their own sphere of operation. Each social worker, for instance, would be expected to analyse the data on those children whose cases are currently assigned to her or him. That analysis could be combined with those of colleagues to create team- and service-wide analyses. These analyses are the backbone of management information, but the advantage of commissioning them from

the staff who generate the information, is that they will be better understood, known and owned than the same results derived by a manager or information officer from a centralised management information system.

4.14 Just as in matters of government and constitutions, a ‘subsidiarity principle’ should be observed for information systems: information should be analysed as far as possible by those responsible for the work which generates that information. When information is owned and used in this way, three consequences are likely to follow for operational staff:

- They will require and demand better operational information systems that provide them with greater assistance in their daily work.
- They will be much more motivated to record information, check its accuracy and update it promptly when it changes. Hence they will contribute positively to much better management information.
- They will develop the skills to analyse the information they record and collect and will therefore be involved in using management information to improve the services they provide.
- Where their own analysis yields results that differ from those derived centrally in management information they will have both the tools and the motivation to explore the discrepancies rather than dismissing them as ‘computer errors’ or disparaging the information system.

**Aggregate data and ‘exception reports’**

4.15 A key gap exists between management and operational outputs, especially printed reports. The former tend to report aggregate totals (total number of looked after children, care leavers, late reviews, etc.) and/or percentages and trends, sometimes expressed as charts or graphs. The latter often consist simply of lists of children, sometimes without even a total number. Neither is adequate for its purpose: totals and percentages on their own often convey little or misleading information. Lists, especially long lists, are snapshots at a moment in time and provide scant means of comparison.

4.16 Two examples will serve to illustrate the point: in one authority, a management report designed to monitor the numbers of children whose cases were not reviewed within the statutory deadline found a sudden and dramatic percentage increase. On subsequent investigation it turned out that the reviews of a large group of siblings had been
postponed because of the illness of the children’s mother. Much time and management concern might have been saved had the list of children’s names been part of the report. Secondly, as several authorities have pointed out, large variations in percentages in indicators of educational outcome for looked after children could be accounted for because the numbers are often very small (e.g. less than a dozen children in the age group). The proportion of children with special educational needs also varies greatly from one year-group to the next and may be a major factor underlying differences in educational outcome.

4.17 At the management information level the remedy which can be applied at least within the authority is to insist on providing ‘exception reports’ alongside the aggregate figures, which serve to identify those cases falling outside expected or target levels and hence to facilitate investigation of the causes. It is a feature of the Quarterly Performance Reviews (QPR) undertaken by N.Lincolnshire Council\(^\text{15}\) that where performance problems are identified, exception reports (or research into particular cases) are commissioned and discussed at subsequent meetings. Elsewhere this is described as providing ‘drill-down capability so that the user can get to various case level information for further analysis and problem solving’\(^\text{16}\). Similar capabilities are called for in the work on reporting of outcomes measures undertaken at the University of Kansas, which stress that outcomes reports should be ‘structured in a way that provides both summary and case level data for more in-depth analysis’\(^\text{17}\).

**Proactive and operational outputs**

4.18 Yet even these provisions are reactive rather than proactive—‘exception reports’, ‘drill-down capability’ and providing ‘case level data for more in-depth analysis’ are all things that happen after the event — some instance of (usually) poor performance reflected in changed outcomes for the children. Arguably, in a virtuous system, potential performance defaults should be flagged up at the operational level in advance on a case by case basis as, or even before they happen. The following example illustrates

\(^\text{15}\) These were described by Mike Pinnock, Performance Manager at N.Lincolnshire Council in a presentation to the DAN Conference in April 2002. Subsequently a number of DAN authorities requested further details and several have begun to develop their own versions of QPR or to adapt ideas from the original (see Appendix H).

\(^\text{16}\) Design specifications for the Oklahoma Outcomes Reporting System, Children & Family Services Dept, Oklahoma Department of Human Services

\(^\text{17}\) Improving Child Welfare Performance Through Supervisory Use of Client Outcomes Data, University of Kansas School of Social Welfare, July 2002
the type of outputs that might be relevant to monitoring reviews. A CBIS case record is likely to contain fields for ‘Date of last review’ and ‘Date next review due’. The system could easily generate from a comparison of these two items the following:

1. An automatically updated diary-style list for each practitioner of the future due dates for reviews of the children assigned to them.

2. An alert (message, dialog box or coloured or blinking field on screen) to the practitioner when a review is due within, say, the next 14 days.

3. A more insistent alert to the practitioner when the review is due within 3 days.

4. A warning alert to the practitioner when the review is overdue.

5. A list for the team leader of impending review due dates, by practitioner, for all children assigned to the team.

6. A list for the reviewing officer of all review due dates.

7. A list for the team leader and service manager of all overdue reviews.

4.19 It should be possible to build up a comprehensive list of such desirable outputs, both proactive and reactive, by mapping outputs to the processes identified in the Integrated Children’s System Process Model\(^{18}\) and determining, for each process ‘who needs to know what?’\(^{19}\).

4.20 Even those conventional operational outputs which consist of printed lists can convey other, more analytic information—totals and trend data, highlighting of new cases and providing comparison figures for previous time periods—thus making practitioners and administrative staff parties to management information.

4.21 Finally, it should be possible to build bridges between management and operational information by observing the principle that, wherever possible, staff should be made responsible for analysing and reporting the information that their own activity generates. They will therefore learn to use the outputs that can provide that information and contribute to a wider picture built up for their service or department, rather than

\(^{18}\) *Children’s Social Services Core Information Requirements, Process Model, Version 2.0, July 2001, Department of Health. This document is currently under revision to bring it fully into line with the Integrated Children’s System.*

\(^{19}\) *It is hoped that the Department of Health project ‘Core information outputs for Children’s Services’ will produce a tool (grid, spreadsheet or database) to facilitate this mapping process.*
being the passive subjects of performance reports created by others and, de facto, restricted to ‘management’.
5. **Information Outputs**

5.1 Much of DAN’s work drew attention to the problem of obtaining outputs from information systems. The conclusion of the 2001 Report was that ‘All too often our databases are information sinks into which we input data of varying quality, but from which we extract remarkably little. Because we get little out, there is little incentive to put good quality information in, to check it and to update it regularly.’

Insufficient attention to outputs accounted for many of the gaps in information feedback loops that were a major reason why information was inadequately used by the participating authorities. As a result, much of the work programme over the final year (2002) concentrated on identifying and using outputs.

**Difficulties in obtaining outputs**

5.2 An initial diagnosis of the difficulties with outputs suggested that:

- Outputs are often too rigidly distinguished from inputs, especially in computer-based systems where an outdated ‘data processing’ model still influences system design. In real life information use, the distinctions are generally blurred.

- Consideration of outputs is given too little importance in the design and implementation of computer-based information systems.

- Software developers usually delegate provision of outputs to separate reporting software which is expensive to purchase, complex to use and is not readily accessible by most practitioners because it is not integrated into the menu structure of their information system.

- The term ‘output’ is interpreted too narrowly to mean only printed reports.

- While the output needs of managers are usually considered, those of operational and administrative staff are often neglected.

**Persistence of an outdated model**

5.3 Data processing in its infancy involved a straight-line (see diagram below) flow of information from the point of collection on a paper form, via coding and, data validation (because so many coding errors were usually made) to the clean database file. All of this was data input. Only when it was complete could the data be processed

20 DAN Annual Report 2001, Appendix H
and outputs (invariably in the form of voluminous printed listings on tractor-fed paper) produced. The high cost of processing and the scarcity of computer resources meant that input and output processes were rigidly segregated and jobs had to be ‘batched’ and planned days in advance.

5.4 Traces of this model remain to this day in information systems, and some of the same thinking lies behind the distinction between inputs and outputs. In modern, complex and effective information systems, however, the distinction between input and output becomes increasingly blurred. The system simply provides ‘the way of doing things’.

5.5 Sometimes that involves inputting data into a screen form; sometimes it involves printing out a form, list or report; sometimes the system will communicate and exchange information with other systems, agencies or individuals, either by direct electronic means, via the Internet or e-mail or by means of letters or forms; at other times it is sufficient simply to view the output on screen and make decisions on the basis of what you see.

**System specification**

5.6 When local authorities are drawing up design specifications for new software systems for social services, they typically lack the systems analysis expertise to produce a full specification of system outputs. Priorities in commissioning tend to focus on what are perceived as the most problematic or time consuming output tasks for managers, rather than on those which would make the system most productive for practitioners and most useful in supporting their work. Typically, therefore, priorities include such outputs as the data required for the SSDA-903 or other returns to national government and
financial reports for major expenditure lines such as foster and residential care. Commercial software developers, meanwhile, having incorporated the means of outputting the prescribed returns and cost data, have little incentive to consider printed reports and other outputs.

5.7 Both parties tend to assume that questions of outputs can safely be left to a subsequent phase of development once the basic system is delivered and implemented. At this stage, however, the local authority may have no resources or budget for additional work, while the software developer has little commercial incentive to deliver it.

5.8 Customers of Oracle-based systems are generally expected to use a separate reporting software application such as Business Objects or Crystal Reports to query their databases and generate reports. Such software, however, is expensive. Local authorities may tend to purchase fewer user licences than they really require, with the result that they may not be able to make the application available to those who need it most. The software itself is quite complex and requires expensive training. In one DAN authority, only ten staff members received training in the reporting software at a cost of £650 per day each.

5.9 Managers may receive the training but then use the software too infrequently to develop and retain the requisite skills. In another DAN authority, over eighteen months elapsed between the date when training on a new information system was provided and the date when the system was implemented and became available to some of the staff who had been trained. Yet even when such implementation delays are avoided, as most regular users of computer software will readily acknowledge, unless an application and its various features are used frequently, users rapidly forget them, lose confidence in their ability to use them and are reluctant or unable to devote the time required to re-learn. Administrative staff seldom receive the training, while IT departments may have insufficient staff to respond to ad-hoc requests by managers to generate reports, often at very short notice.

Types of output

5.10 Other than printed reports and data for returns (often in spreadsheet form), very little consideration is given to other types of output:

- Screen forms are generally designed for data entry, which in turn is perceived by staff as being a distinct clerical process of recording, irrespective of whether it is carried out by administrative staff or social workers. It is seldom appreciated how
well-designed screen forms can be used as outputs — providing the means for locating, browsing and analysing information.

- Record selection is often limited to locating a particular record (e.g. a child, by name, date of birth, postcode) and users are not provided with the means of selecting groups of records according to common characteristics such as all looked after children, all foster carers with current vacancies, all children over 15, children who are disabled, those who have been excluded from school, and so on.

- System-generated alerts and reminders are seldom provided.

5.11 Even where an information system provides appropriate outputs, there is no guarantee that they will be used. Management information officers in DAN authorities are in general pessimistic about the extent to which even the limited outputs they are able to generate at present are being used. In one authority the DAN co-ordinator found a report on placements which was being delivered monthly by e-mail to an administrative clerk who had no idea why she was receiving it or what she was supposed to do with it.

Output needs of first-level management

5.12 In examining outputs from information systems, the DAN authorities were keen to discover what kinds of output are used in first-level management in children’s services, at the interface between management and operational information. The key instances of this management are supervision and team meetings. Further research is required before any definite conclusion can be reached, but from the experience of some DAN members it appears that:

- Little use is made in typical supervision meetings of information derived from CBIS.

- Team leaders welcome, but cannot always obtain, outputs that could show them such items as:
  - Case loads and assignment to each team member.
  - Delays between referral and assignment.
  - Where statutory responsibilities (e.g. the timely conduct of visits, reviews, assessments) are being met or missed.

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21 The topic was discussed at the DAN workshop for the four South Wales member authorities in September 2003.
Analysis of case progression in order to:

- judge the success of refocusing in line with the Assessment Framework for Children in Need (e.g. how many referrals, how many proceed to Section 47, how many reach case conference);
- activate case hand-over to long-term team (e.g. after completion of core assessment).

- Often those reports which are available are of little use because the relevant data has not been entered (so that summary outputs are at best partial) or has been entered wrongly (and therefore staff prefer to rely on their own intuitive knowledge or ‘proprietary’ recording systems).

- Management Information Officers in several authorities are producing regular (monthly or quarterly) bulletins or statistical summaries which are circulated on paper or via the council’s intranet to managers, including team leaders and may be accessible by practitioners. MIOs, however, receive little feedback and suspect that the reports are not widely used.

- Few team meetings use outputs from CBIS to analyse trends, workloads, problems and bottlenecks.

5.13 In general, there is little use of statistics in first-level management. Yet, in an average social work team, the number of cases of looked after children might be between 20 and 50, while there might be several times that number of children in receipt of family support services. It would be very difficult to understand and analyse the features of so many cases without using statistics; of course, an effective information system should be able to provide the reports, lists, counts, statistics and perhaps even graphs and charts to plot progress or shortcomings. If this information were available at the point of first use, at case, practitioner and team level, as well as at higher levels of management, it would potentially have a greater impact on the delivery of services.

**Practical work on outputs**

5.14 In the course of three years, a number of example outputs have been developed and discussed with DAN authorities. A number of these were incorporated in the DAN PEI Database Model. This model, in the form of a Microsoft Access database, was developed originally to test and demonstrate a new way of recording placements. It was gradually extended to incorporate much of the essential information, especially the chronologies,
found in the LAC EIR-2 form. An extended version was developed for Gwynedd council to show how similar principles might be extended to a complete information system for children’s services.\(^{22}\)

5.15 These sample outputs include:

- **Case summary**: a printed report bringing together much of the information to be found on the LAC EIR2 form and based on all the information on a particular child held in the CBIS. Such summaries are useful for review, case handover, case closure and for printing out by the assigned social worker prior to a visit, court appearance, or any occasion when away from the office and access to files and computers. It is striking that existing electronic systems seldom provide such a summary report.

- **Case chronology**: a report collating all the different event-based information and presenting it in a single chronologically ordered list for a particular child or group of children (e.g. siblings). An interface was developed which allows the user to select from a menu of different types of events for inclusion in the chronology, specify a start and an end-date and request output either to the screen, to paper, or in the form of an editable document in Microsoft Word. A social worker requiring to compile a court report, for instance, might choose the relevant dates, the categories of event, request output to Word and then be able to edit the resulting document, deleting less significant events and adding headings, commentary and conclusions. One DAN authority, Wrexham, showed the suggested chronology interface and report to their software supplier\(^{25}\), who are implementing it and are offering it to other local authority customers in England.

- **The electronic casefile**: the DAN PEI Database Model provided an example of how an electronic casefile might look. It incorporated all the information contained in the LAC EIR-2 form including not only the key attributes of the child, but associated chronologies such as placement history, schooling, health data, etc. These

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\(^{22}\) This initiative was undertaken and funded separately from the work of DAN.

\(^{23}\) *[DAN Annual Report 2001*, Appendix D](#)

\(^{24}\) see Appendix E. Also, *[DAN Annual Report 2001*, Appendix G](#)

\(^{25}\) Dublin-based Careworks, whose childcare system is called RAISE.

\(^{26}\) *[DAN Annual Report 2001*, Appendix G](#)
were all presented in a single multi-tabbed form\(^{27}\) (like a set of index cards), illustrating how a screen form can be used not merely for recording, but (as an output) for presenting and retrieving information.

- **Filters**: a device for enabling users to select a subset of records according to specified criteria (e.g. ‘all children aged 16 and over’, ‘looked after children who have had more than three placements in the past 12 months’, ‘boys who have been excluded from school in the past year’, etc.). In database terms a filter is a query or SQL Select statement which is applied to a table of data records and yields a recordset. Most printed reports are based on such filters and applications such as Business Objects and Crystal Reports provide the means of defining them. However, the same filter can be applied not only to a printed report but to a screen form (such as the ‘electronic casefile’ form discussed above) used to browse cases. So, for instance, a practitioner or team leader wanting to analyse outcomes for girls in the 12-16 age bracket could apply a filter and then browse through just those cases that meet the criterion. This facility enables much instant on-screen analysis and comparison without the need to print out cumbersome reports.

- **Groups**: just as filters can be used to select a recordset, particular cases can be assigned on a more permanent basis to a group. For instance a user might want to create a group consisting of all the children in an extended family; or all the children living in a particular neighbourhood; or a group of several non-related children who had been victims of a particular abuser. By assigning cases to a group, a filter can be used to browse through or report on the group members. In conjunction with filters this provides a powerful and flexible tool for comparing and analysing information.

- **Alerts**: these are visible devices such as a coloured or flashing field on a computer screen, a pop-up dialog box or a special tab or area of a casefile form. Alerts could be generated either automatically by the system (e.g. ‘Child’s case review due’, ‘Child has had more than 3 placements in last 12 months’, ‘Current placement fragile’ or ‘Core Assessment not completed’) or by the practitioner (e.g. ‘Child allergic to penicillin’, ‘Child requires signer’).

\(^{27}\)The tabs were: Key Facts, Placements; Legal Status; Family Details; Life Events; Health attributes; Health History; Education; Schooling; Offending; Support Services Use; Reviews; Visits; Case Notes; Concerns; Objectives; and Outcomes
• **Views**: many different views of the same information are possible in a computer-based information system. These views may be used both for input and output. It was suggested that the following would be relevant in a CBIS for children’s services:

  o **Children** — incorporating the electronic casefile and views by family and other grouping

  o **Tasks** — a view geared to work planning and prioritisation that collects together the tasks that a particular user should accomplish (e.g. schedule a review, complete an assessment, carry out a visit, follow up a contact, etc.). Tasks could be arranged in calendar or personal organiser format. Some tasks will be assigned by the system, based on comparing dates (e.g. for a review or visit). Others will be assigned by the user her/himself or by a manager.

  o **Processes** — a view that guides the user through particular processes (schedule a review; record a referral and open a case; assign a case to a practitioner; pass case to leaving-care team, and so on) by presenting the relevant data and any screen or paper forms required for recording.

  o **Services** — a ‘cross-view’ enabling the user to view attributes and event and use-histories of each of the services used by children (e.g. foster carers, schools, GPs, family support, counselling, YOT, leisure and training).

  o **Analysis** — a view enabling the user to count cases, analyse outcomes and prepare reports at practitioner, team, service and department level

• **Cross-Views**: as well as being available from the ‘Services’ view, it should be possible, for instance, for a social worker to examine a child’s electronic casefile, note that the child was looked after by a particular foster carer and then be able (by clicking a button or choosing from a menu) to view details of the carer (address, household details, fostering registration, training, history of placements, and so on); similarly, a click on the current school, recorded in schooling history, should bring up details of the school, key staff (e.g. names of LAC and SEN Co-ordinators) and a list of all children in need and looked after children currently attending. It is important to stress that these cross-views for the most part do not involve extra information, but information that is already recorded (e.g. in placement and

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28 See Appendix G
schooling episode records). Where additional details are provided (e.g. foster carers’ registrations and training, school key staff) these are ones that should in any case be known to social workers and can, by this means, be readily and consistently recorded and kept up-to-date.

- **Help System**\(^{29}\): this was a suggested way of using the context-sensitive Help provided by most modern software applications to provide guidelines for recording, the documentation of childcare processes and procedures, local policies, national guidance and related research. One DAN member authority which has just completed a revision of its Child Care Manual for Joint Review has taken up the idea and is planning to implement an electronic version.

- **QPR**: work to demonstrate and discuss the Quarterly Performance Review techniques used by N.Lincolnshire council (see Appendix H)

- **Costs**: DAN members were shown the preliminary research results of the Centre for Child and Family Research project ‘Costs and Consequences of Different Types of Child Care Provision’. Once a particular authority has established cost levels for particular services and processes, it should be possible to incorporate cost data into outputs proactively so that informed decisions can be taken.

**A typology of outputs**

5.16 In an effort to define what is meant by ‘output’, the DAN authorities developed a typology. A first attempt\(^ {30}\) (see Appendix B), distinguished five types of output by medium:

- computer screen-based form or dialogue
- printed report
- e-mail message
- inter-application (electronic export or message from the CBIS to another computer application)
- inter-process (where paper outputs from the CBIS feed other processes such as completion of partly-populated forms, payments by Finance, budgeting and planning and performance reviews).

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\(^{29}\) See Appendix F

\(^{30}\) Developed for the DAN Conference, April 2002
Next, the typology distinguishes types of output by the grouping of data on which it is based:

- **single record** — where the output is a case summary, description, or data about a particular characteristic or set of characteristics of a single child, foster carer, service, and so on

- **selected records** — where the output lists, describes or compares groups of records such as disabled children, children with a history of offending, foster carers registered to look after babies, and so on, where the selection is achieved by applying a filter to query the data in the CBIS

- **all records** — where the outlook is likely to be a list or summary.

Finally, the typology distinguishes types of output by their users:

- social workers and team leaders
- administrative staff
- service managers
- the head of children’s services
- external bodies (inspections, joint review, the Welsh Assembly Government, etc.).

5.17 The outputs list in this typology includes the draft exemplars of the Integrated Children’s System: the exemplars are clear examples of forms (whether paper or computer-based) which may be either inputs or outputs. The need for a specific ICS exemplar to be a printed output will depend on the particular implementation of the ICS and the CSSR’s own computer-based information system(s) (CBIS). The information role of the exemplars is primarily for recording (manual collection of data on paper prior to data entry), use away from the computer (during visits, at Review meetings), for information sharing (especially to give copies to parents, children, carers, etc.) and for case filing and documentation. These various uses may be fulfilled either by paper copies of the exemplars (whether partly ‘populated’ and printed by the CBIS or printed as blank forms for manual completion) or, more probably, by a combination of computer screen forms, and printed forms adapted for specific use where ‘live’ use of the computer is not possible. The need to print and file bulky case file copies of exemplars (as at present with the LAC forms) is likely to diminish where a good CBIS is
implemented and all relevant information can be called up on screen by practitioners, team leaders, reviewing officers and others.

5.18 This work to develop a full typology of outputs for the Integrated Children’s System is to be continued in 2003 in a project funded by the Welsh Assembly Government and the Department of Health and undertaken by Centre for Child and Family Research at Loughborough University and the Thomas Coram Research Unit.

Dissemination of outputs

5.19 Clearly dissemination of outputs is one means of making information more accessible. Dissemination may use paper, documents in various formats held on the network server, e-mail attachments and, increasingly, sets of web-pages published on the authority’s intranet. Four of the DAN authorities are currently considering or in the process of implementing intranet solutions for children’s services information31.

5.20 Intranet dissemination offers considerable benefits:

• It is much easier and cheaper to incorporate colour images, graphs and other visually attractive elements and to deploy standard templates.

• Production is potentially much quicker than for paper documents.

• Distribution is instantaneous and universal, constrained only by any confidentiality restrictions built into the intranet.

• The physical problem of destroying inaccurate or outdated paper copies disappears.

• Outputs need not be ‘static’ (documents produced and finalised at a given point in time), but may be dynamic, live-linked to the information system database so that they are continuously and automatically updated.

5.21 However, intranet technologies are not an instant panacea — they will only be effective where considerable planning, training and cultural change take place.

• All those who require to see and use the outputs must have access to an appropriate computer connected to the network. Provision must still be made for paper or other means for those who lack such access.

31 Two DAN member authorities, both SWIFT users, are using Business Objects to generate standard sets of reports. One distributes these as Adobe Acrobat (.pdf) documents via e-mail to the Children’s Management Team. The other distributes printed reports. Both plan to use Broadcast Agent (one of the modules of Business Objects) to publish the reports on their Intranet.
- Users unfamiliar with internet browsing must be given time, appropriate training and support to become familiar and at ease with the techniques.

- The outputs must be easy to locate on the intranet and the relevant links must be carefully maintained.

- Document management of intranet-based information is even more important than with paper. Users will rapidly lose confidence in a system which starts with great élan but then fails to correct and update information regularly.

- Actual usage should be monitored so that links can be improved and training targeted to those who make least use of the outputs.

- Appropriate editing and design skills must be available. Effective web-documents probably require more of such input than paper ones.

- Design must take into account the constraints of screen and type-size and be aware of all those factors which make most people prefer to read from paper rather than a screen.

- Where possible those responsible for generating the outputs should have appropriate access rights and skills to update their own sections of the intranet, without needing to go through another department.
6. Conclusions

6.1 The design, commissioning and implementation of information systems: much of DAN’s research and discussion with member authorities over three years has confirmed the view that the most important obstacles to effective use of information in children’s social services stem not from the inadequacies of computer systems and software, but from the way in which local authorities and their software suppliers design, commission and implement information systems. Particular problems arise when the relationship between paper and computer-based records is not adequately analysed and when insufficient attention is paid to the outputs from a computer-based system.

6.2 Organisational culture: alongside the design and implementation of appropriate computer-based systems, it is essential to provide the means of changing and transforming organisational culture. The great advantage of computer-based systems lies in their ability, at near-zero marginal cost, to copy, select, re-order and distribute information. Yet these advantages are barely recognised in social service departments where paper case files still dominate the daily business of practitioners and teams and computer-systems are still viewed as the private bureaucratic sphere of administrators and managers.

6.3 The Integrated Children’s System: the new system offers great opportunities for unifying practice, procedures and outcome criteria across the whole range of children’s social services. Yet these advantages will be limited in practice unless considerable efforts are made to share the benefits of integration among staff at all levels of the organisation and to avoid the creation of a voluminous new paper-based system.

6.4 The DAN project: The Data Analysis Network was conceived as a developmental programme whereby the member authorities could explore together the obstacles they encounter in making effective use of data on children’s social care and learn from one another how they might be overcome. Although the coordinator made regular visits to the authorities and gathered structured information concerning the types of Management Information Systems in use, and the different obstacles encountered by each authority, a major strength of the programme has been seen to be the regular inter-authority conferences and workshops which offered a forum for a free exchange of ideas.
6.5 DAN member authorities have been very positive in their assessment of the project. Perhaps its value has been in enabling a small group of authorities to analyse and reflect on the information processes that all are engaged in, to develop some tools to facilitate that analysis and to experiment with model solutions to particular problems. A number of DAN suggestions and examples have already been adapted by member authorities for their own use; DAN’s work on information on education helped the Welsh Assembly in drawing up education indicators; and some of DAN’s perspectives, for instance on chronologies, have influenced the ongoing development of the Integrated Children’s System. The last phase of DAN’s work on outputs, detailed in the present report, is being carried forward directly by the Welsh Assembly Government and the Department of Health.
APPENDICES

A. DAN methodology, conferences and visits
B. DAN typology of outputs from Children's Services Information Systems (CSIS)
C. Getting Information Out of Information Systems for Children’s Services
D. Information Flow within Children’s Services
E. DAN Chronology Report
F. DAN Model Help system
G. Views (GCSIM Main Menu)
H. Gwynedd QPR
I. Dissemination of DAN’s work
Appendix A: DAN methodology, conferences and visits

A.1 DAN’s work was pursued through six bi-annual conferences, a number of regional workshops held either in North or South Wales, by visits by the Co-ordinator to individual authorities and, as noted above, in numerous meetings under the auspices of the Performance Management Programme.

A.2 Within the member authorities, the main responsibility for work on DAN tended to be given to policy, information or performance management officers. These have differing job titles but broadly similar responsibilities for providing management information for their own authority, preparing statistical returns for the Welsh Assembly Government, drawing up bids to the Performance Management Programme and liaising with their IT departments on implementation of computer-based information systems.

A.3 Invitations to DAN conferences were regularly extended to practitioners and team leaders of looked after teams, but usually only one or two attended. In addition, the Welsh Assembly was keen for DAN to involve more senior managers, but efforts to achieve this were generally unsuccessful, although some contact took place at the Gregynog conferences of the Performance Management Project and other conferences and seminars convened by the Assembly.

A.4 Preparatory work for the conferences and workshops included distribution of questionnaires and spreadsheets. These were intended not only to collect specific information for discussion in the meetings, but to serve as tools which the authorities could use for their own purposes in analysing their information systems and the data they provide. The most useful of these tools were published as Appendices to the first two DAN reports and have been included in this final one.

A.5 A problem-solving approach was adopted, examining both the source of data, its quality, the difficulties in obtaining and recording it and the different operational processes and management levels at which it is being used.

A.6 It became apparent that poor information recording was due in part to lack of knowledge on the part of practitioners. This led to the development of DAN fact-sheets on school tests and examinations and on medical immunisations.

33 ‘When should a Child be Immunised?’, DAN Annual Report 2001, Appendix K
A.7 Efforts were made to observe the software systems in use in member authorities and to examine the way in which they were being implemented, their user interfaces and the organisational culture surrounding them. It was found that these factors were at least as important as the technical details of the software itself in determining the effectiveness of a particular system. Several demonstrations by commercial software developers were also attended. *(See table below for details).*

A.8 The DAN coordinator pioneered the use of a Microsoft Access database to model information recording and retrieval on the placements of looked after children, essential information, chronologies, case file summary reports and a help system. This was welcomed by the DAN authorities as a useful tool for promoting discussion with practitioners, policy and information officers and IT staff. Several of the ideas it embodies have been taken up by member authorities.
### A.9 Visits to local authorities to discuss/observe their software systems:

<table>
<thead>
<tr>
<th>Authority</th>
<th>System</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pembrokeshire</td>
<td>Carefirst (OLM)</td>
<td>Transfer of historic placement data into CareFirst</td>
</tr>
<tr>
<td></td>
<td>Various Access databases, spreadsheets and lists</td>
<td>Problems with placement data and SSDA903 returns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deriving indicators for Children First from review returns data</td>
</tr>
<tr>
<td>RCT</td>
<td>SWIFT (Anite)</td>
<td>Observed SWIFT in use to take referrals and assign cases</td>
</tr>
<tr>
<td>Swansea</td>
<td>Own proprietary system</td>
<td>Identity problems in client index</td>
</tr>
<tr>
<td></td>
<td>Acrobat forms</td>
<td>Use of Acrobat forms to implement Assessment Framework and accompanying problems of authorisation and document management</td>
</tr>
<tr>
<td>Wrexham</td>
<td>RAISE (Careworks)</td>
<td>Detailed examination of complete RAISE system using simulated live data on a training copy. Incorporation of DAN ideas on placement recording and chronologies</td>
</tr>
<tr>
<td>Gwynedd</td>
<td>Informix client index system</td>
<td>Design of GCSIM, a complete model of a Children’s Services Information System, to assist in the design, commissioning and implementation of a new system. Also: visit to University of Liverpool eBusiness Research Centre, who have joint project with Gwynedd</td>
</tr>
<tr>
<td>LB Richmond</td>
<td>TCO</td>
<td>Observation and discussion of new system being implemented to address Assessment Framework and Integrated Children’s System</td>
</tr>
</tbody>
</table>

### A.10 Attendance at demonstrations/discussions of commercial software for social services:

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Product</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface Onsite Ltd</td>
<td>Query and Reporting systems for SSID users</td>
<td></td>
</tr>
<tr>
<td>In4Tek</td>
<td>Paris —complete social care</td>
<td>Demonstration to Ceredigion Social Services</td>
</tr>
<tr>
<td>Company</td>
<td>Software Description</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>QTech</td>
<td>QCin Software for Children in Need Forms-based system reproducing LAC and AF forms and storing in a Windows-Explorer like interface</td>
<td></td>
</tr>
<tr>
<td>Viewpoint</td>
<td>Viewpoint Child Consultation Software Software for eliciting feedback from child service users about their feelings and experience of services</td>
<td></td>
</tr>
<tr>
<td>Compuware</td>
<td>System integration software Compuware examined and discussed the database model developed for Gwynedd</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix B: DAN typology of outputs from Children's Services Information Systems (CSIS)

<table>
<thead>
<tr>
<th>Records/Action/for…</th>
<th>Screen-based</th>
<th>Printed</th>
<th>e-mail</th>
<th>inter-application</th>
<th>inter-process</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Records: single child</strong></td>
<td>browse form</td>
<td>case details</td>
<td></td>
<td>e-mail case details to laptops/PDAs</td>
<td>populated forms</td>
</tr>
<tr>
<td><strong>Action: select</strong></td>
<td>summaries/EI</td>
<td>case summary</td>
<td></td>
<td>e-mail case summary to WP</td>
<td></td>
</tr>
<tr>
<td><strong>For: SW/Team Admin/Reviewing Officers</strong></td>
<td>chronologies</td>
<td>chronologies</td>
<td></td>
<td>e-mail chronology to WP (for court)</td>
<td></td>
</tr>
<tr>
<td><strong>Alerts</strong></td>
<td>notifications</td>
<td>notifications</td>
<td></td>
<td>e-mail notification letters/mail-merge</td>
<td>review, finance, FCT, CPR, etc.</td>
</tr>
<tr>
<td><strong>scheduling</strong></td>
<td>to-do</td>
<td>task lists Outlook/PDAs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>planning</strong></td>
<td>plans, reviews, etc.</td>
<td>invitations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Records: groups of children</strong></td>
<td>browse form</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Action: filter</strong></td>
<td>lists</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>For: SW/Team Admin/Team Leaders/Service Managers</strong></td>
<td>combined chronologies</td>
<td>action or staff member chronologies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>alerts</strong></td>
<td>action lists</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>scheduling</strong></td>
<td>assessments, reviews, case-loads, etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>planning</strong></td>
<td>plans, reviews, etc.</td>
<td>invitations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>exception lists</strong></td>
<td>exception lists</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Records: all children</strong></td>
<td>browse form</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Action: summarise</strong></td>
<td>lists</td>
<td>lists</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>For: Team Leaders/Service Managers/AD/DSS</strong></td>
<td>chronologies for delay/workload/bottleneck analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>alerts</strong></td>
<td>PI levels</td>
<td>triggers for research/investigation of service shortcomings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>scheduling</strong></td>
<td>resource allocation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>planning</strong></td>
<td>service planning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>performance indicators</strong></td>
<td>PIs, NAfW returns, etc.</td>
<td>export to Excel, Powerpoint, SPSS, etc. for analysis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>exception lists</strong></td>
<td>exception lists</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Filter on: SW (or no SW); Team; Area; Sex; Age; Care Plan; 3+ placements; Review due; SEN status; school exclusions; offending history, etc.

** In addition to child-based records, CBIS would contain records on: SWs, Sessional Workers, Foster Carers, Schools, GPs, Support Services, etc.
Appendix C: Getting Information Out of Information Systems for Children’s Services

- Information Systems often act as mere ‘repositories’ for information—information is put into them, but little or nothing is taken out and used.

- Usually, the quality of information in a system will be poor unless that information is used, since otherwise there are few incentives to input the information in the first place, ensure that it is complete and accurate and update it regularly.

- Information systems with poor provision for getting information out can be characterised as GINO (Garbage In, Nothing Out) systems.

- Information you get out is usually called ‘outputs’ and is often thought of only as printed reports. Information systems have ‘reporting functions’ or ‘modules’ or users may have to use special ‘reporting software’. At the extreme is ‘data mining’, where complex software is used to extract and make sense of raw data held in many databases.

- However, in complex but effective information systems the distinction between input and output becomes increasingly blurred. The system simply provides ‘the way of doing things’: sometimes that involves inputting data into a screen-form; sometimes it involves printing out a form, list or report; sometimes it involves communicating and exchanging information with other systems, agencies or individuals, either by direct electronic means, by the Internet or e-mail or by forms and letters; sometimes it involves viewing information on screen and making decisions on the basis of what you see.

- Ideally all outputs should be available, as simply and directly as possible, from buttons and menus within the main CBIS (the computer-based information system used by the CSSR for Children’s Services). Social workers and managers should not need to learn a separate software application in order to derive the standard ‘outputs’ they require for day-to-day work.

- No system will be effective unless at least as much thought, planning and provision is made for outputs as is made for inputs.

Below are some possible outputs from a Children’s Services Information System, at the Case, Practitioner, Team, Service and Department level.

<table>
<thead>
<tr>
<th>Level</th>
<th>Output</th>
<th>Type**</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case</td>
<td>View of all Child data</td>
<td>Screen</td>
<td>Casework</td>
</tr>
<tr>
<td></td>
<td>AF-dimensions-view of child data</td>
<td>Screen</td>
<td>Casework</td>
</tr>
<tr>
<td></td>
<td>Targets-reviews-outcomes (as per plans and reviews)</td>
<td>Screen</td>
<td>Casework; juxtaposes assessments, review conclusions and outcomes</td>
</tr>
<tr>
<td></td>
<td>Sibling case clone</td>
<td>Screen</td>
<td>Facility to ‘clone’ major case details to facilitate data entry and form production for siblings</td>
</tr>
<tr>
<td></td>
<td>Case summary</td>
<td>Print/PDA</td>
<td>General summary of case to take out to visits/to court/etc.</td>
</tr>
<tr>
<td></td>
<td>Timeline</td>
<td>Screen/Print</td>
<td>Casework, Reviews. Presents chronologies as a timeline</td>
</tr>
<tr>
<td>Level</td>
<td>Output</td>
<td>Type**</td>
<td>Use</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------------------------</td>
<td>---------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>*</td>
<td>Chronology</td>
<td>Screen/Print/WP</td>
<td>Reviews, Court reports, Case file summaries, Supervisions</td>
</tr>
<tr>
<td>*</td>
<td>Contact Record</td>
<td>Screen/L-Form</td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>Referral &amp; Initial Information Record</td>
<td>Screen/L-Form</td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>Placement Information Record &amp; Arrangements</td>
<td>Screen/L-Form</td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>Initial Assessment Record</td>
<td>Screen/L-Form</td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>Core Assessment Record</td>
<td>Screen/L-Form</td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>Assessment &amp; Progress Record</td>
<td>Screen/L-Form/PDA</td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>Section 47 Enquiry record</td>
<td>Screen/L-Form</td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>Child in Need Plan</td>
<td>Screen/L-Form</td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>Care Plan</td>
<td>Screen/L-Form/PDA</td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>Pathway Plan</td>
<td>Screen/L-Form/PDA</td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>Review</td>
<td>Screen/L-Form</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Case file cover-sheet</td>
<td>Print</td>
<td>Replace existing sheet whenever data changes</td>
</tr>
<tr>
<td></td>
<td>Movement/Placement form</td>
<td>Print/Notification/Authorisation</td>
<td>Admin form for child placement change with notification to FP team, Accounts, etc.</td>
</tr>
<tr>
<td></td>
<td>Change of address</td>
<td>Notification</td>
<td>Notify child’s change of address</td>
</tr>
<tr>
<td></td>
<td>Placement instability</td>
<td>Alert</td>
<td>Current placement fragile; more than 3 placements in year</td>
</tr>
<tr>
<td></td>
<td>Assessment/Review overdue</td>
<td>Alert</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Court report</td>
<td>WP</td>
<td>Based on chronology, above</td>
</tr>
<tr>
<td></td>
<td>Review report</td>
<td>WP/Notify</td>
<td>Based on chronology, above</td>
</tr>
<tr>
<td></td>
<td>Service assignment</td>
<td>Screen/Notification/Authorisation</td>
<td>Assigns child to service (e.g. CAMHS or change of school, etc.) and notifies associated agency</td>
</tr>
<tr>
<td></td>
<td>Case assignment</td>
<td>Notification/Authorisation</td>
<td>Assigns case to social worker and team</td>
</tr>
<tr>
<td></td>
<td>Case notes</td>
<td>Screen</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Family details</td>
<td>Screen/Print/PDA</td>
<td>Details of all siblings, birth parents and services delivered to family</td>
</tr>
<tr>
<td>Practitioner</td>
<td>Deadlines due and missed list</td>
<td>Screen/Notify</td>
<td>Diary of impending tasks and additional tasks set in case notes</td>
</tr>
<tr>
<td></td>
<td>Task diary</td>
<td>Screen</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supervision/team meeting preparation summary</td>
<td>Print</td>
<td>Summary of all assigned cases, visits, deadlines, outstanding tasks, for supervision or team meeting</td>
</tr>
<tr>
<td></td>
<td>Own performance analysis</td>
<td>Screen</td>
<td>Similar to above</td>
</tr>
<tr>
<td>Team</td>
<td>Caseload</td>
<td>Screen/Print</td>
<td>List of cases assigned to team, by worker</td>
</tr>
<tr>
<td><strong>Level</strong></td>
<td><strong>Output</strong></td>
<td><strong>Type</strong></td>
<td><strong>Use</strong></td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------------------------------------------------------</td>
<td>----------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Deadlines due and missed list</td>
<td>Screen/Print</td>
<td>Combined list of deadlines for visits, assessments &amp; reviews, for all children assigned to Team</td>
</tr>
<tr>
<td></td>
<td>Task diary</td>
<td>Screen/Print</td>
<td>Combined diaries of SWs on team</td>
</tr>
<tr>
<td></td>
<td>Work patterns</td>
<td>Screen/Print</td>
<td>Diary of work-to-date with numbers of contacts, visits, assessments, placements, etc.</td>
</tr>
<tr>
<td></td>
<td>Child in Need/Care Plans, objectives and outcomes</td>
<td>Print</td>
<td>Regular work analysis</td>
</tr>
<tr>
<td>Service</td>
<td>Lists of children currently and/or historically assigned to each particular services, e.g., and key features of the service use</td>
<td>Screen/Print</td>
<td>Service-based analysis for SWs, Team Leaders, Service Managers, and in inter-agency communication; could include cost data; could include outcomes (esp. for placements)</td>
</tr>
<tr>
<td></td>
<td>Family support</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Home sessional/Respite work</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Foster/Residential placement</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adoption</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Schools (with exam results, exclusions, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GP</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physiotherapy/OT/Audiology/Speech Therapy/Enuresis and other health services</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CAMHS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SEN provision</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Disability services</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Offending services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department</td>
<td>Basic service statistics</td>
<td>Screen/Print/Graph</td>
<td>Numbers of contacts, referrals, cases, assessments, CPR, LACH, Carers, Carer vacancies, etc.</td>
</tr>
<tr>
<td>Caseloads</td>
<td></td>
<td>Screen/Print/Graph</td>
<td>Management meetings/Regular performance reviews, etc.</td>
</tr>
<tr>
<td></td>
<td>Children by achievements (exam results, other qualifications, care-leaving, employment) and problems (truancy, placement breakdown, offending, absconding, substance abuse, etc.)</td>
<td>Screen/Print/Graph</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Local performance and QPR (Quarterly Performance Review) data</td>
<td>Screen/Print/Graph</td>
<td>Management meetings/Regular performance reviews, etc.</td>
</tr>
<tr>
<td>Costs</td>
<td></td>
<td>Screen/Print/Graph</td>
<td></td>
</tr>
<tr>
<td>Comparison</td>
<td></td>
<td>Screen/Print/Graph</td>
<td>Compares own CSSR performance/loads/costs with those of comparator CSSRs/national targets and averages</td>
</tr>
</tbody>
</table>
**ICS exemplars:** the need for specific ICS exemplars to be a printed output will depend on the particular implementation of the ICS and the CSSR’s own computer based information system(s) (CBIS). The information role of the exemplars is primarily for recording (manual collection of data on paper prior to data entry), use away from the computer (during visits, at Review meetings), for information sharing (especially to give copies to parents, children, carers, etc.) and for case filing and documentation. These various uses may be fulfilled either by paper copies of the exemplars (whether partly ‘populated’ and printed by the CBIS or printed as blank forms for manual completion) or, more probably, by a combination of computer screen forms, and printed forms adapted for specific use where ‘live’ use of the computer is not possible. The need to print and file bulky case file copies of exemplars (as at present with the LAC forms) is likely to diminish where a good CBIS is implemented and all relevant information can be called up on screen by practitioners, team leaders, reviewing officers and others.

**Output types:**
- **Screen**
  - Computer screen form in CBIS database
- **L-Form**
  - Linked electronic form generated within CBIS database or linked to it (e.g. in Adobe Acrobat, Microsoft Word, Lotus Notes, etc.) so that the form is partly populated from the database; ideally, the edited form should also automatically update the database.
- **Print**
  - Printed report
- **WP**
  - Editable word-processor document
- **Alert**
  - Colour, blink, dialog box or other computer screen alert to a deadline, missed deadline, task due, etc.
- **Notification**
  - E-mail or printed message to interested party or list (e.g. review invitees)
- **Authorisation**
  - Electronic notification to and confirmation by supervisor (team leader or other department, e.g. Accounts) of a change requiring ‘signing off’ which should be done electronically. E-mail or system message may be accompanied by form containing details to be checked or approved.
- **PDA**
  - Transfer of data to be read and edited in the field on a laptop or PDA
- **Graph**
  - Graphical presentation of data for charting trends, progress and performance
- **e-File**
  - Electronic file for submission (usually via Inter/Intranet or e-mail) to another agency, government, etc.

Data Analysis Network for Children’s Services
August 13 2002
Appendix D: Information flow within Children’s Services

D.1 DAN member authorities were asked:

Q: From your perspective as information/policy officers, how does (management) information on children’s services flow within your authority? Who requests information? Apart from the statutory and external returns, how much analysis is commissioned for internal (to the authority) purposes? To whom do you submit reports, summaries and charts? What use do they make of them? In particular, how much of this analysis is requested by and used by first-level managers (team leaders, etc.)? DAN produced a chart of this information flow in February this year, suggesting rather provocatively that most of this information flows upwards towards senior management and the Assembly, with an invisible wall operating which impedes much of the feedback down to team leader and practitioner level. Is this true for your authority?

Specific replies were submitted by four authorities.

D.2 One (Authority A) submitted copies of management reports it is producing monthly as Acrobat documents, but which it hopes in future to distribute on its intranet using Broadcast Agent.

D.3 Authority E replied: Most information is not provided on a routine basis to either senior managers or operational staff. It tends to be reactive - meeting the needs of the planning and budgetary cycles, individual projects or ad hoc requests from individuals. Standards reports are available on the IT system, but are not widely accessed and are currently in the process of being reviewed and re-written to better meet our operational requirements (e.g. caseload management, control of devolved budgets). All standard reports in any case require ‘secondary analysis’ if they are to have a specific use. Some information has been produced recently with the intention of effecting changes in service emphasis (e.g Education of LAC, placement stability, etc). Feedback, such as it is, relies on individual Team Leaders taking an interest in the quality of information they get from systems and demanding something better.

D.4 Diagrams submitted by two other authorities appear on the next two pages. In general they confirm the picture presented in the original DAN flowchart.
Data discussed at **Team Meeting**

**Data for statutory PI’s collated and calculated by Planning Officer**

(i) Quarterly report on statutory PI’s  
(ii) Annual report and comparison of PI’s for Welsh Authorities  
(iii) Occasional requests for analysis of operational or management info on specific issues  
(iv) Selection of reports on operational info can be accessed directly from CareFirst

**PI data discussed at Social Care & Housing Performance Management Evaluation Group (Heads of Services, Policy and Planning Officers) as part of rolling programme of review**

Issues and concerns taken back to managers and feedback required

**Client Index**

**Financial system**

**Manual returns**

**Weekly Managers Meetings**

**Head of Service**

**Director**

**Chief Officers Management Board**

**Statutory Return to WAG**

**Regular Information flow**

**Infrequent/weak Information flow**

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**LOOKED AFTER CHILD**

Individual case load data discussed with SW at supervision

**Monthly statistics collated by admin support**

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**DAN Member Authority D**  
**SOCIAL CARE & HOUSING**
Appendix E: DAN/CCFR case chronology facility
Appendix E.2 DAN Final Report

Centre for Child & Family Research
Babies and Very Young Looked After Children

The chronology contains one or all the dated events recorded for each child during data collection.

The following types may be included:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>Case Note</td>
<td>Who? = name of person entering note</td>
</tr>
<tr>
<td>DO</td>
<td>Family Contact Episode</td>
<td>Status? = frequency of contact</td>
</tr>
<tr>
<td>DO</td>
<td>Domestics</td>
<td>Domestic = Domestic or placement; separate entries for start and finish dates; Who? = household, person name; Status? = is child looked after? Comment? = domestic or reason for ending? Comment? = household</td>
</tr>
<tr>
<td>CP</td>
<td>CPR Episode</td>
<td>Type? = reason placed on CPR, separate entries for start and finish dates</td>
</tr>
<tr>
<td>LG</td>
<td>Legal Event</td>
<td>Status? = legal status; Who? = affected family member</td>
</tr>
<tr>
<td>HC</td>
<td>Health Condition</td>
<td>Health conditions &amp; illnesses; Who? = affected family member</td>
</tr>
<tr>
<td>HS</td>
<td>Health Service Event</td>
<td>Who? = affected family member</td>
</tr>
<tr>
<td>SB</td>
<td>Social Service Event</td>
<td>Who? = affected family member</td>
</tr>
<tr>
<td>LE</td>
<td>Life Event</td>
<td>Who? = affected family member</td>
</tr>
</tbody>
</table>

The following symbols are used to qualify approximate dates:

\*f = from
\*t = to
\*a = after
\*b = before
\*g = approximately

19/03/2003
<table>
<thead>
<tr>
<th>Child No: 10</th>
<th>Council</th>
<th>Date</th>
<th>Male</th>
<th>Relationship</th>
<th>Specific Type</th>
<th>Status</th>
<th>Proxy name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15/03/1994</td>
<td>Mum</td>
<td>Referal to social service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>12/04/1994</td>
<td>Sister</td>
<td>Child protection seized</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>07/06/1995</td>
<td>Wife</td>
<td>Child protection seized</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Chronology of events relating to each child**

**Event type**

- Re-progression of adoptive placement... to consider appropriate timing for adoption application, assess need for contact with foster mum and to plan contact with mum and sister. The timing order made an important decision regarding the... once in next couple of months... 

- **Hospital**

  - 03/01/1995: Homeless parent user - remained in hospital while withdrawing from alcohol addict.
  - 06/01/1995: Homeless parent user - remained in hospital while withdrawing from alcohol addict.
  - 08/01/1995: Homeless parent user - remained in hospital while withdrawing from alcohol addict.

- **Home**

  - 06/01/1995: Homeless parent user - remained in hospital while withdrawing from alcohol addict.

- **Order**

  - 15/02/1995: Child, 6t and 6t killed by order.
  - 14/03/1995: Mum, 16t killed by order.

**Mistaken White and Black C**
<table>
<thead>
<tr>
<th>Event No.</th>
<th>Type</th>
<th>From</th>
<th>To</th>
<th>Who?</th>
<th>Relationship</th>
<th>Male</th>
<th>Specific Type</th>
<th>Status</th>
<th>Primary</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>DO</td>
<td>26/07/1996</td>
<td></td>
<td>Home</td>
<td>Home visit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>DO</td>
<td>08/09/1996</td>
<td></td>
<td>Home</td>
<td>Home visit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>DO</td>
<td>05/09/1996</td>
<td></td>
<td>Home</td>
<td>Home visit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>DO</td>
<td>03/09/1996</td>
<td></td>
<td>Home</td>
<td>Home visit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>DO</td>
<td>03/09/1996</td>
<td></td>
<td>Home</td>
<td>Home visit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Chronology of events relating to each child**

**Comment**

*Child protection episodes:*
- **Episode 1:** Mother admitted following overdose of prescription medication.
- **Episode 2:** Mother discharged herself.
- **Episode 3:** Birth parents both abscond.
- **Episode 4:** Not dead has been violent and assaulted man in past.
- **Episode 5:** Mother and father had a child, slept in a hostel, and spent time in chaotic manner.
- **Episode 6:** Also left child in care of maternal grandmother (in absence of supervision needed).

- **Episode 7:** Mother admitted.
- **Episode 8:** Home visit.
- **Episode 9:** Home visit.
- **Episode 10:** Home visit.
- **Episode 11:** Home visit.
- **Episode 12:** Home visit.
- **Episode 13:** Home visit.
- **Episode 14:** Home visit.

**Decision to end placement made by social services as foster mum pregnant.

- Child, child, and sibling removed. Care of children by mum inconsistent and often left in care of inappropriate individuals. Mum chaotic lifestyle, including drugs. Comments had been growing over recent times and child admitted to hospital (diabetes). Mum further drug abuse.

19/03/2003
Appendix F: Example of DAN model Help system

The screen below shows the kind of Help screen which might be produced when a user of a Children’s Information System presses the F1 Help key:
The screen has five tabs which could be used to display:

- Guidelines for recording data or interpreting specific fields currently in view.
- Processes and Procedures (the relevant part of the authority’s own child care manual which could be held in its entirety as an electronic document structured as a Help file). This could include process flow diagrams mapping decisions and procedures (e.g. for child protection, making a new placement, adoption, leaving care, etc.)
- Local Policy.
- National Guidance (part or all of the relevant national guidance documents could be held electronically in Help document structure.
- Research — Internet hyperlinks to relevant or related research.

Microsoft has an established set of conventions for structuring Help documents (including tables of contents, indexes and hyperlinks). Help authoring software is widely available.
Appendix G: Gwynedd Children’s Services Information Model, Main Menu Screen, illustrating concept of Views
Appendix H: Gwynedd’s prototype adaptation of the N.Lincolnshire Quarterly Performance Review. Sample Powerpoint screens

Gwynedd Children’s Services
Quarterly Performance Review

Children are safe and protected from harm

Process

Key Performance Results

People

Policy and strategy

Resources and partnerships

Leadership

Gwynedd Children’s Services
Quarterly Performance Review

Children are safe and protected from harm

Key Performance Results

- Proportion of children on the Child Protection Register where a new substantiated or indicated event of concern has been recorded.
- Proportion of children de-registered in the last 2 years where a new substantiated or indicated event of concern has been recorded.
- Proportion of children on the Child Protection Register where a previous unsubstantiated report of abuse/ neglect had been recorded.
Appendix I: Dissemination

Completed Dissemination of DAN results and findings

DAN Annual Reports
(distributed to DAN members, the 22 Welsh CSSRs and others on request. Versions in the Welsh language are* or will soon be** available)


DAN Research Papers
(distributed variously to DAN members, staff at the Welsh Assembly Government, researchers on the Integrated Children’s System and others on request. Some of these have been included as appendices in DAN Annual Reports)

Notes for SSI-W (National Assembly for Wales) on Education Data for Children First, July 2000.
DAN Placements & Essential Information Model Briefing, August 2001.
DAN Typology of Outputs from Children’s Services Information Systems, April 2002.
Getting Information Out of Information Systems for Children’s Services, August 2002.

CCFR Evidence
Information and Information Systems for Looked After Children, CCFR Evidence No.2, Centre for Child and Family Research, Loughborough University, June 2002

DAN Factsheets
When Should a Child be Immunised, February 2002.

DAN Database Model and Example Components
(distributed or made available to DAN members, researchers on the Integrated Children’s System and others on request, either as Microsoft Access databases or example screens or reports derived from databases).
Chronology Builder Dialog and Chronology Report, Outcomes for Very Young Children who Remain Long Looked After project, Centre for Child and Family Research, Loughborough University, August 2002.
Gwynedd Children’s Services Information Model, developed by Mike Gatehouse for Gwynedd Social Services, December 2002.