

Storing up trouble? An exploration of the potential issues regarding the long term storage of children's electronic social care records.

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Abstract

The purpose of this research is to explore the potential issues and concerns associated with the long term storage of electronic social care records, with particular regard to records stored by Children's Services Departments within Local Government.

The aim of the study is to develop a set of recommendations for Local Authorities regarding the long term maintenance of Children's Social Care Records.

The objectives of the research are:

1. To establish the level of awareness of information professionals currently working within Local Government, regarding the potential issues posed by the requirement to ensure the long term integrity, confidentiality and accessibility of electronic social care records.
2. To identify policies and procedures that Local Government organisations already have in place which assist in the maintenance of electronic social care records.
3. To undertake a documentary analysis of these policies and procedures, to identify gaps in provision and to consider what if any, further policies and procedures may be required.
4. To identify ways in which senior management, records managers, information managers, archivists and technical staff are already working together to address potential issues and concerns and to establish any gaps in such collaboration.

A qualitative cross-sectional design comprising a focus group, semi-structured interviews and a documentary analysis is used to undertake the research. The results identify some key areas of risk and some areas where the awareness of information professionals regarding the wider context within which they operate might be raised. The need to raise the profile of this work within Local Government is highlighted.

The conclusion includes recommendations for Local Authorities which could assist in meeting the challenges of maintaining long term electronic social care records. The study design is reviewed and the validity and transferability of the research findings considered.

Declaration

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed (candidate)

Date

STATEMENT 1

This work is the result of my own investigations, except where otherwise stated.

Where correction services have been used, the extent and nature of the correction is clearly marked in a footnote(s).

Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

Signed (candidate)

Date

STATEMENT 2

I hereby give consent for my work, if accepted, to be available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organisations.

Signed (candidate)

Date

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List of abbreviations

ERDMS	Electronic Record Document Management Systems
EU	European Union
ICS	Integrated Children's System
ICT	Information and Communications Technology
InterPARES	International Research on Permanent Authentic Records in Electronic Systems
IRMS	Information and Records Management Society
ISMS	Information Security Management System
IT	Information Technology
MIS	Management Information Systems
MoReq	Model Requirements for the Management of Electronic Records
OAIS	Open Archival Information Systems
PDF	Portable Document Format

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Chapter 1: Introduction

1.1 The purpose of this dissertation

The purpose of this research is to explore the potential issues and concerns associated with the long term storage of electronic social care records, with particular regard to records stored by Children's Services Departments within Local Government.

1.2 Background

The researcher has worked for over thirteen years as an employee of Denbighshire County Council, and is a member of the Social Services MIS (Management Information Systems) team, which develops, supports and maintains social services information systems. During the ten year period the researcher has worked within this team, the electronic social care record has largely replaced the paper record. As will be discussed in the literature review, the drivers for this change have been social, economic and political, however, the legislative requirement to maintain long term records is the same for electronic records as for paper records.

Records which are created today will in some cases need to be kept for many years, and in order to meet legislative requirements, will need to be retained appropriately against the background of a fast changing electronic environment. Records of children who have been in the care of the Local Authority, for example, are required to be kept for 75 years. This dissertation is an exploration of the potential issues for the long term storage of children's social care records, with consideration of how the integrity, confidentiality and accessibility of these records can be assured in a changing environment.

1.3 Aim

To develop a set of recommendations for Local Authorities regarding the long term maintenance of children's social care records.

This aim will be addressed through the following research questions and specific objectives.

1.4 Research questions

The research questions to be investigated are as follows:

1. What are the potential issues which are likely to impact upon the integrity, confidentiality and accessibility of children's social care records during the period for which they are required to be maintained?
2. How can Local Authorities mitigate against any risks posed to these records and ensure that they are appropriately retained whilst remaining both accessible and confidential?
3. Why does this matter? What is the impact upon these children and others having a legitimate interest in these records if the records are compromised or cannot be accessed in the future?

Although we cannot know what our information systems will look like in 50 or 100 years time, the future issues which will arise around security and privacy concerns, or future legislative requirements; is it possible to develop a set of high level recommendations which will guide Local Authorities in their responsibilities towards the children upon whose lives they have impacted?

1.5 Objectives

1. To establish the level of awareness of information professionals currently working within Local Government, regarding the potential issues posed by the requirement to ensure the long term integrity, confidentiality and accessibility of electronic social care records.
2.
 - a. To identify the policies and procedures that Local Government organisations already have in place:
 - i. To ensure that electronic records can be maintained for the long term.
 - ii. To mitigate against any risks posed by electronic record keeping systems.
 - b. To undertake a documentary analysis of these policies and procedures, to identify gaps in provision and to consider what, if any, further policies and procedures may be required.

3. To identify ways in which senior management, records managers, information managers, archivists and technical staff are already working together to address potential issues and concerns and to establish any gaps in such collaboration.

1.6 Scope and limitations

This research is carried out within the context of the laws and statutes of the United Kingdom, both with regard to legislation regarding data and information (the Freedom of Information Act 2000 and the Data Protection Act 1998) and children's social care legislation including the Children Acts of 1989 and 2004 and the Arrangement for Placement of Children (General) Regulations 1991. As the researcher works within Wales, and as the development of the Welsh Government as a separate legislative body has resulted in recent years in policies specific to Wales, the research is also carried out within the Welsh context. The literature review however, also makes reference to the Scottish legal framework and draws on research from Sweden, where "the principle of public access to government information/records is one of the cornerstones of the Swedish judicial system" (Svärd, 2013, p.161). Although the research has a Welsh context, there is also a wider relevance, as the challenges of maintaining electronic records for the long term are pertinent to the whole of modern society.

The research focuses upon children's social care records, as particular examples of records of a significant and sensitive nature, required to be held for 50 years or more. As children's social care records are now generally held in an electronic format and as Local Government have responsibility for these records, the investigation is concerned with electronic record keeping systems maintaining social care records within Local Government in Wales.

1.7 Structure

This dissertation uses the APA citation style throughout, with the exception of references to legislation, for which the OSCOLA citation style has been used.

- **Chapter 2**, the literature review, presents an overview of the development of the electronic social care record, considers the existing literature relating to the long term maintenance of electronic records and discusses the issues and concerns raised.

- **Chapter 3** considers the methods which could be used to examine the research questions and explains and justifies the methods employed in undertaking the research and analysing the information obtained. The development of the research instruments and the conduct of the research, including ethical considerations is discussed.
- **Chapter 4** presents the findings of the research.
- **Chapter 5** analyses and discusses the findings of the research.
- **Chapter 6** considers whether the research questions have been answered and presents recommendations which have been developed as a result of this research.

Chapter 2: Literature review

2.1 Introduction

Over the last few years, we have witnessed a remarkable transformation in statutory children's services, with traditional paper records now universally supplanted by electronic ones. It is hard to imagine a more consequential decision in terms of its impact on front-line social work than the move to electronic recording. No such wholesale revolution has occurred for other professional domains, such as medicine, where progress has been checkered to say the least, despite decades of enthusiasm (Wastell, 2010).

This literature review traces the progression from a paper record environment to the electronic social care record in children's social care, and discusses the issues that this raises from the record keeping point of view, with particular reference to the long term maintenance of electronic social care records, against the background of social care policy, in Wales. The importance of the social care record to the individual and to society is considered, the records continuum model explored as a means of understanding how electronic records are created, stored and used, and research to date into the technological and data security issues surrounding the long term storage of electronic records is considered.

2.2 The social care background

Societal events, combined with the development of technological capabilities over the last ten years, have driven forward a revolution in the capture and maintenance of children's social care records. The Climbie report, published in 2003, following the murder of Victoria Climbié despite the involvement of social services and other organisations, identified failings in social work processes, record keeping and information sharing. The Climbié Enquiry was followed by the Children Act in 2004, which built upon the foundations established by the Children Act of 1989 and was intended to further safeguard children. As part of the UK Government's major reform programme for Children's Services in England and Wales, the Integrated Children's System (ICS) was developed, which aimed to achieve a more structured and systematic approach to social work, supported by a set of ICS 'exemplar' forms designed specifically for electronic record keeping. (Department for Children, Schools and Families, 2009). In 2005 the Welsh Assembly Government published a statement

of business requirements for the implementation of the Integrated Children's System in Wales.

Significant funding was made available to enable Local Authorities to implement information technology supporting the electronic recording of the social care process, which it was considered would improve the effective use of information within the service and facilitate information sharing between professionals and partner organisations. The development of a suite of social care performance indicators by the Welsh Assembly Government, supported by funding in the form of the Performance Management Development Fund Special Grant, was a further driver in the move towards the electronic social care record, as it was identified that data could be extracted from electronic records and analysed to provide statistics meeting performance indicator requirements. The Welsh Assembly Government required Local Authorities to have fully operational electronic recording systems by 31st December 2006, with the acknowledgement that information technology was a rapidly developing field perceived as having great potential for record keeping, and that further developments to such systems would therefore inevitably take place over time (Welsh Assembly Government, 2005).

Record keeping for children's social services includes the recording of the key processes of contacts and referrals, assessment, planning, intervention and review. It is a complex process, figure 1, page 7 illustrates the detail of the documentation process for children becoming looked after. Current documentation underpinning children's social care processes in Wales includes:

- Towards a Stable Life and a Brighter Future (Welsh Assembly Government, 2007), which documents the processes to be followed in the care of looked after children
- The All Wales Child Protection Procedures (All Wales Child Protection Procedures Review Group, 2008)
- Fulfilled Lives, Supportive Communities 2008 – 2018 (Welsh Assembly Government, 2008), which outlines the strategic direction for strengthening and modernising Social Services in Wales from 2008 to 2018.
- The Social Services and Well-being (Wales) Act 2014 (Due to be implemented by April 2016).

In 2011, the Munro report was critical of the culture of performance indicators and targets and recommended that nationally designed assessment forms and prescribed approaches to IT systems should be relaxed to allow for local innovation and professional judgement (Munro, 2011). However, most Local Authorities have not as yet made significant changes to recording processes, as most systems currently in use were developed to support the ICS forms. Electronic record keeping for social care has however become the established practice, and whilst in the early days of electronic record keeping systems, the electronic records were usually printed out and retained in paper case files, increasingly common practice is to maintain only the electronic record. Denbighshire County Council for example, implemented a policy of keeping children's social care records solely in electronic format in 2011.

2.3 Wider developments in Local Government

Whilst social care has been one of the first services to embrace a full set of electronic records, an inexorable move towards electronic record keeping has taken place across Local Government, against a background of business and legislative requirements, and economic constraints. The Data Protection Act 1998 and the Freedom of Information Act 2000 have had a particular impact.

The Data Protection Act places an obligation upon bodies such as Local Government, holding personal information, to process data fairly and lawfully, for specified and lawful processes. Personal data held is required to be adequate, relevant and not excessive, it should also be accurate, up to date and not kept for longer than is necessary. The Act requires that appropriate technical and organisational measures are taken against unauthorised or unlawful processing of personal data and against accidental loss, destruction or damage to data. Local Government bodies are increasingly implementing electronic records and document management (ERDMS) systems, having concluded that for business purposes, the maintenance of data within electronic systems provides a means of control over data and information, as secure log-ins can control access to data, the type and quantity of information being held can be monitored and automated retention scheduling can be implemented.

The Freedom of Information Act places obligations upon Local Authorities to facilitate access to recorded information held by the authority, provided it is not subject to listed exemptions. Once a freedom of information request is received, a

public authority has 20 working days to respond to the request. A public body needs therefore to be able to access its information effectively and efficiently in order to meet its obligations under the Freedom of Information Act. Again, as with the Data Protection Act, Local Authorities are increasingly looking towards electronic systems as a means of accessing the organisation's information assets.

Cuts to Local Government funding since 2011 have led to Local Authorities looking for ways to reduce their spending. Mobile and flexible working and the consequent reduction in office space requirements are facilitated by the electronic storage of documents in systems accessible by employees wherever they happen to be working. Additionally, e-government, as it is increasingly coming to be known, offers opportunities for improving public service efficiency and delivery by moving towards integrated services within the authority, the joining up of services across sectors, and improved stakeholder engagement. The Welsh Government ICT strategy for the public sector in Wales, published in 2011, supports the delivery of core public sector goals identified as

- improving public service delivery
- improving access to public services
- increasing the efficiency of public service
- the promotion and facilitation of the use of Welsh throughout the public service

(Welsh Government, 2011)

The Williams report, published in January 2014 also advocates integration and collaboration between Local Authorities and other public bodies such as the Health Service and again identifies “the availability of, and ability to share, data and information to improve the planning and delivery of services; and the opportunities to improve efficiency and reduce costs” as key concerns for a modern and efficient public sector (Williams, 2014, p.47). The specific social services legislation referred to on page 6 of this dissertation, identifies the use of ICT to enable information sharing as key to the future development of social care services.

2.4 The long term preservation of records

Whilst the profile of record keeping within Local Government has been raised, the emphasis has been on the current business need rather than on the long term

preservation of records. Academics such as Svärd (2013) and Kallberg (2012), both writing from a Swedish perspective, have commented that IT-competence has a higher value within government organisations than recordkeeping competence, even though access to and reuse of information is recognised as being vital to the achievement of strategic goals; “the focus on creating efficient processes has also meant focusing on the management of current information/records without long term preservation strategies” (Svärd, 2013, p.162). It is pertinent to note that in the same way that the Freedom of Information Act in Britain has impacted upon recording keeping by public bodies, Sweden has had to grapple with similar issues due to the tradition of open government within Sweden and particularly the Swedish Freedom of the Press Act, which gives Swedish people the right to study public documents (Quisbert, 2006).

Children’s social care records, whilst required to be available in a form which meets current business needs, also require long term preservation, and the principles underpinning effective record keeping need to be articulated and implemented (Humphreys and Kertesz, 2012). Retention periods for children’s social care records are enshrined in legislation and documented in the Local Government Classification Scheme. Regulations 8 and 9 of the Arrangements for Placement of Children (General) Regulations 1991 state that case file records of looked after children should be kept for 75 years, whilst the Retention Guidelines for Local Authorities recommend that records relating to children under the protection of the local authority are held for 70 years (Records Management Society of Great Britain, 2002). The regulatory framework reflects the importance of these records to those whose lives have been impacted upon by the intervention of statutory services, their importance to the organisations making provision, and their importance and relevance to social history.

Evidence shows that when records of displaced children, in particular, are not retained in an appropriate manner, it is a cause of immeasurable damage to the children concerned. In Scotland, the influential Historical Abuse Systemic Review, a review of children’s experiences of residential care in Scotland between 1950 and 1995, found that, despite the fact that laws were in force to govern records, practices of generating and retaining records were found wanting. Poor record keeping and retention significantly hampered the review itself and additionally presented challenges to

previous residents of children's care homes, wishing to find information about their childhood.

Records are essential for society to gain an insight into, and learn from, people's experiences. Records of children's residential services are an essential part of ensuring children's safety and well-being. They're also significant to people who lived in children's residential establishments – they're essential to their sense of identity

(Shaw, 2007, p.215).

This experience has been replicated in other contexts, where children have been separated from their natural families and thus experience a sense of displacement and loss of identity. The 'Stolen Generations' as they came to be known, of Aboriginal children, removed from their families by the Australian Federation and State government agencies between approximately 1909 and 1969, experienced many challenges in finding records to re-establish their identities and cultural heritage (McClellan & Tanner, 2011). Yet for many Aborigines, understanding their personal history has been important in helping them to come to terms with the past. "Just by knowing who your mob are, where your mob comes from, and why and where you fit into all of it – can lead you to be better enabled to move on, move forward, and know exactly where you're going" (Brickell M, (n.d.) in Public Record Office Victoria. 2005, p.9).

From society's point of view, children's social care records are essential to maintaining accuracy in the reporting of events in the social care field which have taken place in the past (Nelson, 2013), and in establishing the facts in historical abuse enquiries such as the Waterhouse Enquiry and subsequent Operation Pallial. There is an importance to society in learning from the past in order to improve the lives of children whose well-being and protection is the responsibility of others today. Where records of displaced children have been kept effectively, as in the case of the Foundlings Hospital, London, which received its first children in 1741, and kept meticulous records of children in the care of the Hospital, the records have become a valuable historical resource.

The Shaw report in Scotland, recommended that "the government should commission a review of public records legislation which should lead to new legislation being drafted to meet records and information needs in Scotland" (Shaw, 2007, p.7). This

resulted in a review of public records legislation in Scotland and ultimately in the Public Records (Scotland) Act 2011. The review of public records legislation concluded that public records legislation in Scotland was no longer fit for purpose, and that whilst the Data Protection Act and the Freedom of Information Act Scotland were often used to fill legislative gaps, neither addressed the issue of long term preservation, rather, they assume the safe retention and long-term storage of the record after its creation. Additionally, the principle of the Data Protection Act: “Personal Data processed for any purpose or purposes shall not be kept for longer than is necessary for that purpose or those purposes” (Data Protection Act, 1998), militates against retaining records for any longer than is absolutely necessary.

The review also concluded that the day to day management of care records in Local Authorities needed to attract a higher profile. Particular issues were identified, including concerns that varying record keeping regimes in different Authorities could cause problems when tracing a care history where the child had moved from one Authority to another, that relations between Local Authority archives and social work departments were sometimes not well established, and that archivists and records managers lacked skills and experience when giving access to records of such a sensitive nature.

In November 2008, a group session held as part of the review, including amongst its participants survivors of abuse, raised a number of issues, including the comment that service users have no choice in the social services department which deals with their needs, as it is based on where they live, and therefore Local Authorities need to be made more accountable. It was also felt that legislation should reflect current multi-agency working, where all decisions and actions relating to the care of the child must be recorded (MacKenzie, 2009). In Scotland, as in England and Wales, legislation has made reference to an increasing number of specific types of records that must be created to chart the care of the child throughout its time in care, and which have specified appropriate disposal periods, however that same legislation has failed to make any provision for the management of these records over time, “neither the continuing relevance to the child of the information contained in the record nor its historical importance were considered” (MacKenzie, 2009, p.11).

Accordingly, the Public Records (Scotland) Act 2011 was implemented. The Act requires authorities to prepare and regularly review a ‘records management plan’ for the management of the authority’s public records. The records management plan must identify who is responsible for the management of the authority’s public records and for compliance with the plan and include the procedures to be followed in maintaining the records, including ensuring their security and also procedures for the archiving and destruction of those records. It should be noted however, that no similar legislation has been implemented in either England or Wales.

2.5 How electronic social care records are held

The ISO15489 records management standard (2001) defines a record as “information created, received and maintained as evidence and information by an organization or person, in pursuance of legal obligations or in the transaction of business.” In the field of social care, these records are generally held in database systems, which are used by practitioners to create the documentation they need to share with service users, and at the same time, to save the data to the database. The user enters data into an on-screen form and creates what the user views on screen as a single document, however, the data is saved as fields across a number of tables. As Yeo explains,

systems of this kind normally rely on relational databases with large numbers of tables and frequently contain both dynamic and static data. Dynamic data are subject to regular updating to ensure their currency. If the system creates and maintains records of business transactions, these records will necessarily take the form of static data that are not subject to change. Sometimes, especially in simpler systems, such records may be stored within a single table of the database, but in more complex systems for corporate use, each record is typically distributed across several tables

(Yeo, 2011, p.12).

Generally, database systems used for social care will contain hundreds of tables. In addition to the data stored in the database tables, many such database systems also include the facility to attach files and scanned documents including documents in a variety of proprietary software formats or PDF format, and also image, sound or video files, again in proprietary or standard file formats. Furthermore, the database system may contain a link to the corporate ERDMS system, so that the structured data within the database may have links to a variety of unstructured records, either linked directly to the database or maintained in an associated electronic records management system;

thus a single record could potentially be formed of data held in different areas across a database and in a variety of file formats.

Due to the complexity of the social care processes to be recorded, database systems for the maintenance of electronic social care records are rarely created in-house by the Local Authority but are usually purchased from software providers specialising in social care systems. Examples of software providers include Civica, OLM, Liquidlogic and CareWorks. The product is purchased by the Local Authority and customised to meet its specific requirements, with support provided by the software company on an on-going basis. In order to cope with fast moving technological changes and continuous development of the product, upgrades to systems are regularly published. If a Local Authority changes from one software supplier to another, then data will usually be migrated from the existing system to the new one. This is a technically challenging process, as the fields in the existing system will need to be matched to fields in the new system, which will have a different table structure. “Typically, the migration of electronic records involves a number of complex issues, is very costly and requires more time to complete than is projected” (Dollar, 2000). Consequently a decision will often be made not to attempt to migrate the full set of data. If this is the case, then only cases which are being actively worked, or certain key functions will be migrated, with the user being provided with a portal via which to view the data or information in the previous system.

2.6 The records continuum model

The complexity of the systems used to maintain social care records and the complex nature of the social care process itself, is mirrored by the complexities of the way in which records are used today. In the 1990’s, the Australian record keeping and archiving community of practice, based around Monash University and led by Upward and McKemmish, attempted to model this complexity by developing records continuum theory as a means of understanding the way in which records are used and managed today, as opposed to the Schellenbergian and North American life cycle approach which had previously dominated records management and archival practice. The records continuum model developed by Frank Upward (illustrated in figure 2, page 15), was “built on a unifying concept of records inclusive of archives, which are defined as records of continuing value. It also drew on ideas about the “fixed” and

“mutable” nature of records, the notion that records are “always in the process of becoming”, and articulations of the role of record keeping and archiving in society in relation to governance, accountability, identify, memory and information provision” (McKemmish, 2001, p.334).

Upward identified four key processes in the development of the record: Creation, capture, organisation and pluralisation. At the point of creation, recorded information results from the activities of individuals. Communications are then brought into a framework which enables their consistent and coherent use by groups of people and the information is captured with the addition of metadata. Information is organised by the use of commonly navigable structures and understandings within systems so that information can be shared, and is pluralised by being taken out to points beyond organisational contexts; this involves the use of the information in ways which are less predictable or controllable (Upward, 2000).

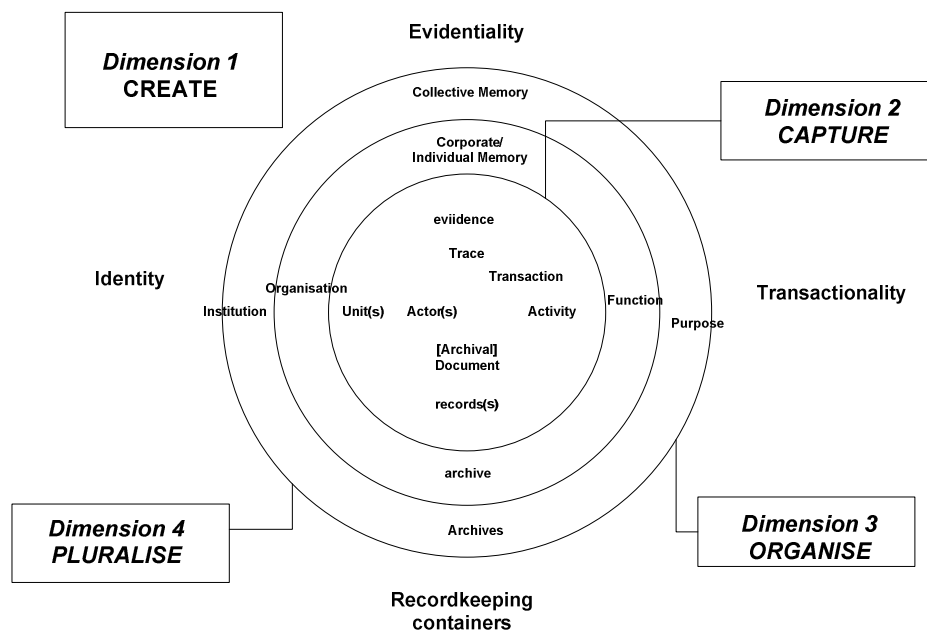


Figure 2: The Records Continuum model. Redrawn from Upward, 2000, p.123.

This theoretical framework aligns with the manner in which the social care process works with the records of individuals. By interacting with service users, social workers create records of activities that have taken place. These records are captured in the framework of an electronic recording system which organises the information by attaching metadata. The navigable structure of the system and the common understanding of the system by others enables the organised information to be shared

within the organisation; information is then pluralised by being shared with other organisations and maintained over periods of time for wider societal uses. Records are not archived by being physically moved to another place, but continue to be held on electronic servers (powerful computers providing resources to other computers via a network). Records and archive management therefore become intertwined both between themselves and also with the IT and information systems professionals responsible for the information systems which have been developed.

2.7 The technological challenges of the long term preservation of electronic records

For over 20 years, researchers have grappled with the challenges of the long term preservation of electronic records. The focus has been particularly on the technological issues which make maintaining long term records in digital format a challenge. This includes software and hardware obsolescence, standards, the authenticity and integrity of digital records, formats, metadata, contextual preservation and provenance. These areas have been studied in detail by researchers such as Bearman (1994), Dollar (2000), Rothenberg (1995), Gladney (2007), Quisbert (2006), Higgins (2008), Anbu and Chibambo (2009) and others, and the body of research is summarized by Svärd (2013), who additionally argues: “Despite advances in technology and the existing body of knowledge and research, long-term preservation of digital information still poses enormous challenges and therefore requires a holistic and proactive approach. Organisations should have full control of all their information resources and need to plan for the entire information/records continuum” (p.160). In 2011, The National Archives published a high level introduction to managing digital continuity, including four case studies discussing real life scenarios where electronic information could not be found, opened, used, understood or trusted. The National Archives currently offers training in digital continuity and also has a section of its website dedicated to the preservation of digital records.

Alongside the work of researchers, a number of projects have been undertaken in an attempt to identify and resolve some of the challenges associated with the long term preservation of electronic records. The most well-known of these being the InterPARES project, whose three phases to date, have aimed to develop the theoretical

and methodological knowledge required for the long term preservation of authentic electronic records. The InterPARES Trust, aims to take the work of the InterPARES project forward, and describes its goal as being “to generate theoretical and methodological frameworks to develop local, national and international policies, procedures, regulations, standards and legislation, in order to ensure public trust grounded on evidence of good governance, a strong digital economy and a persistent digital memory” (InterPARES Trust, 2014, para.1).

The EU sponsored Model Requirements for the Management of Electronic Records (MoReq), MoReq2 has focused on the functional requirements of managing electronic records by an electronic records management system and the Moreq2010 standard sets out requirements for records systems that are intended to be adaptable and applicable to divergent information and business activities and organisations (Ferguson-Boucher, 2013). Other projects have included the Australian SPIRT record keeping metadata project, which aimed to comprehensively specify and codify recordkeeping metadata and the OAIS (Open Archival Information Systems) Reference Model, an abstract model for the way in which an archival information system should be constructed; the OAIS model having originally arisen to address a situation in which digital data was irretrievably lost (Samuelsson, Öberg & Borglund, 2008).

The aforementioned research and project work has not been without results. Johnson, Renade & Thomas (2014, p.225), have argued that: “Mature policies for digital preservation are emerging, with the supporting technology not far behind” and that preservation is therefore no longer the core issue facing the digital world. Nevertheless, the complexity of the database systems used for maintaining social care records and the specific challenges raised by processes such as data migration mean that it should in no way be assumed that technological challenges are moving towards a phase of resolution.

2.8 The security challenges of the long term preservation of electronic records

Alongside the technological challenges of preserving records for the long-term, maintaining electronic records also involves inherent security challenges. In addition to the availability and the integrity of the record, the confidentiality of the record also needs to be maintained (See figure 3 below). In response to the risks of the complex

electronic record keeping environment, the international security standard ISO27001, published in 2005, was created to devise a governance framework for managing information and to “provide a model for establishing, implementing, operating, monitoring, reviewing, maintaining and improving an Information Security Management System (ISMS)” (ISO, 2005). The standard recognises that information security is more challenging in the electronic environment than in a traditional paper based record keeping system (Lomas, 2010).

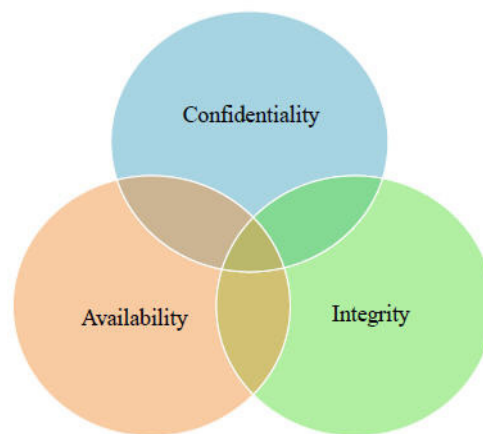


Figure 3: Representation of the information security dimensions that must be assessed and balanced within an ISMS in ISO27001 . Redrawn from Lomas, 2010, p.190.

Data held within a Local Government organisation will be held within a secure network, and databases and ERDMS systems within that organisation will have a hierarchy of access based on security levels according to job role. The organisation should have an information security policy and an information manager or managers responsible for the dissemination of that policy and of security awareness within the organisation. Systems administrators within the organisation will also carry a heavy responsibility for ensuring the security of information (Portela & Almeida, 2014). The levying of substantial fines by the Information Commissioner for data breaches within recent years has provided a strong impetus for Local Authorities to guard themselves against data loss. However, a recent investigation identified that Local Authorities in Wales broke data protection laws over 60 times in 2012 (Jones, 2013).

Whilst structures and systems in place within the organisation mitigate against the risks from within, the threat of cyber-attack from beyond the organisation is a real issue recognised by the UK Government and other national organisations. Indeed, such

is the concern that in the autumn of 2013, the National Cyber Crime Unit became operational as part of the UK's new National Crime Agency. In a speech introducing proposals to launch the Unit, James Brokenshire, Minister for Security, explained that: "Just as digital technologies have transformed the way we operate, it would be inconceivable to think that it wouldn't also transform the military, security, crime and public order threats" (Brokenshire, 2013). New security threats are constantly emerging, requiring continuous awareness and innovation to counteract the risk to commercial and government data (Wagner, 2013).

Whilst the commercial value of information relating to the lives of children who have interacted with social services might not immediately be apparent, the history and background of their lives could have a significant value to the media if the child was to achieve fame or notoriety in later life. The integrity of commercial organisations dealing with electronic information (Google or Facebook to name but a couple of examples) has already come under scrutiny, and it is not inconceivable that commercial software vendors supplying Government organisations could experience similar pressures or conflicts of interest. Lomas (2010) and Cherdantseva & Hilton in Portela & Almeida (2014) have discussed concerns that changes in organisational structures and cross-organisational working between public bodies may raise questions about the ownership of and responsibility for data. Lack of clarity in this area, compounded with budgetary constraints, could pose a real risk to data security.

2.9 An integrated approach to the long term preservation of electronic records

Recent research has concluded that the complex issues surrounding the confidentiality, integrity and availability of records over long periods into the future can only be addressed by records managers, IT specialists, system administrators, archivists and senior management working together to develop strategic, organisational and structural approaches, rather than focusing upon purely technological approaches. Potential issues need to be addressed at an early stage in the records management process. In 2005 Asproth, wrote that

Unlike paper-bound information, the means of preserving electronic information is determined at its creation, which is why actions must be taken at an early stage. Beyond the problem associated with the physical storage, the information must be structured in such a way so as to make it accessible during its entire preservation time. At present

it is unusual for special consideration to be given to these needs in information systems

(Asproth, 2005, p.28).

Asproth also states that whilst there was, at the time of writing, a growing awareness that the problems were not merely technical but were part of a wider organisational agenda, very little progress had been made in achieving a more joined up approach. Runardotter, Mirijamdotter, and Mörtberg (2007) suggest that archivists should work with systems developers to advance knowledge in this field “the question is not whether archivists should learn to design and develop systems, or whether systems designers and developers must know archiving. Instead, the question is: what do they need to know about one another’s fields? And how can information exchange be encouraged, so as to advance knowledge co-creation?” (Runardotter et al, 2007, p. 57). Other recent research has also focused on the challenges of preserving unstructured information resources (McLeod & Childs 2013), or records created by knowledge workers when they create records in social media settings such as Facebook and Linked-in applications (Joseph, Debowski & Goldschmidt 2012). Svard (2013) considers that the e-Government agenda requires information and records management policies that consider the entire information management and records management continuum.

2.10 Conclusion

In the light of the importance and significance of children’s social care records, the question to be asked is whether everything that can be is being done to ensure that as far as possible, the confidentiality, integrity and availability of these electronic records can be maintained for the length of time required. Is there anything further that can be done to improve the chances of these records being available to a future generation and are those responsible fully aware of the risks and the challenges? Do records and information managers within local government have a broad knowledge of the academic research which has already taken place and the issues which have been identified, and is a joined up approach being taken by senior management, records managers, information managers and IT specialists within the organisation to mitigate against these risks.

Chapter 3: Methodology, Research Instruments and Ethical Considerations

3.1 Introduction

This chapter describes the approach to the literature review and discusses the research strategy, design and methodology. The research instruments themselves are described and the manner in which the research was carried out including the handling of ethical considerations are discussed.

3.2 The literature review

The aim of the literature review was to explore the legal, governmental and social background to the development of the electronic social care record, and to consider the implications both for record keeping and for those about whom records are kept.

The starting point for the literature review was:

- The researcher's pre-existing knowledge of the legislative background to children's social care in Wales, gained through working in the field over a substantial period of time.
- The researcher's participation in the development of information systems within a Local Authority Social Services Department.
- Modules studied during Part 1 of the researcher's Master's course in information management.

This background meant that initially it was possible to locate the appropriate legislation, Welsh Government and UK Government reports and documentation by using the Google search engine with search terms relating to specific legislation and reports. The researcher was also assisted in identifying some specific and relevant Scottish legislation by her (Scottish) tutor.

The researcher was already aware from module Digital Records DSM4910 (Ferguson-Boucher, 2013), studied during Part 1 of the MSc course towards which this dissertation contributes, of some of the most frequently cited research in the field of digital records management and in the long term preservation of digital records, this was supplemented by a trawl of recent editions of the Records Management Journal, accessed via Aberystwyth University e-journals collection. References to relevant

works by other authors were identified from the bibliographies of the research initially identified and a search for these works was then also made, using the Aberystwyth University library catalogue and e-journals collections, Library and Information Science Abstracts and Google Scholar. Each work was analysed for its relevance to the research questions.

Following the initial phase of gathering relevant literature, a wider search was carried out to identify further literature of interest. Advanced search engine functionality including Boolean operators were utilised to narrow down search results where appropriate when searching catalogues, abstracts and when using internet search engines. See Appendix 1 for a table of search terms used.

Wildcards were used to include variations in terms and to improve the chances of retrieving appropriate literature. A spreadsheet of all relevant literature was maintained, to identify themes and facilitate analysis and subsequent citation.

An awareness of current affairs, a watchful eye on the BBC news website and the monitoring of social care journals, publications used in the information technology industry (Computer Weekly for example) and technology research produced by the research organisation Gartner provided a wider context. Although some of these information sources are less academic, and an awareness of possible bias should therefore be borne in mind when considering these texts, they reflect the very current nature of the subject and its pertinence to those working in a variety of related fields. During the course of undertaking the research, the researcher continued to monitor relevant publications to identify any new research both in the academic and business fields.

3.3 Limitations of the literature review

There is a large body of research on the long term preservation of digital records, some of the earlier research has been summarised in more recent works and was not therefore covered in detail in the literature review. Additionally, the rapid pace of change and increasing complexity of electronic records management brings into question the relevance of some less recent research.

3.4 Research strategy

It was decided to take a qualitative rather than a quantitative approach to the research in order to fully explore the research questions, aims and objectives. Although the literature review identified a broad consensus of opinion regarding concerns about whether electronic records can be maintained over long periods of time whilst ensuring their confidentiality, integrity and accessibility; the research took an inductive approach, in attempting to find out whether information professionals working within Local Government shared these concerns, how or whether they were already engaging with these issues, and what policies and procedures were already in place to attempt to deal with these issues.

These are not questions which can be explored deeply by the collection of numerical data, “qualitative research can be construed as a research strategy that usually emphasizes words rather than quantification in the collection and analysis of data” (Bryman, 2008, p. 22). Qualitative research is therefore appropriate where understanding and interpretation is more important than proving or disproving a theory or hypothesis. Methods of communication with information professionals within Local Government needed to be identified which would result in a body of qualitative data which could be analysed in order to answer the research questions.

3.5 Research design

Taking into account the research questions, aims and objectives, and the identified need for a qualitative approach, possible options were identified as follows:

1. A comparative cross sectional design, obtaining in-depth qualitative information data on a small number of cases.
2. A case study of an individual Local Authority.

A comparative cross sectional design was considered the preferred approach, as it provided a broader range of findings than a case study, whilst still allowing for the collection of in-depth qualitative data. Bryman (2008) expands on the concept of the comparative design by explaining that “The key to the comparative design is its ability to allow the distinguishing characteristics of two or more cases to act as a springboard for theoretical reflections about contrasting findings” (p.61). The research questions and context influenced the research design, as a design was required which allowed the

researcher to obtain in-depth qualitative information from more than one organisation if possible, in order to compare and evaluate the findings.

The case study approach, whilst being a narrower approach, was held in reserve as an alternative option in case it proved impossible to carry out the cross sectional research in the manner intended.

Both the research design and the research methodology evolving from the design were influenced by the context of the research, the opportunities available to the researcher as a participant in the research setting, and additionally the limitations imposed upon the research by practical and geographical considerations.

3.6 The Research methodology

3.6.1 Initial investigations – a focus group

A focus group was identified as a starting point for the research, as this allowed for exploration of the topic and also enabled the researcher to obtain a sense of whether the issues raised by the literature review and formulated in the research questions resonated with information professionals and merited further exploration, or whether the research questions themselves required further refinement. Pickard (2007), states that focus groups can be used at any point in the research design, and identifies that: “During the early stages of an investigation focus groups can allow you to explore a topic, to establish just what the salient issues surrounding the topic are and what requires further investigation” (p.220).

As a participant in the research environment, the researcher was aware of the possible opportunity to hold a focus group - as part of an annual conference drawing together information professionals from across the United Kingdom. As the focus group is a well-established technique in social research (Pickard, 2007), was appropriate to the context, and valued by the conference participants as an opportunity to explore the wider issues related to their work; the decision was made to take advantage of the available opportunity. In terms of timing, the focus group followed on almost as an extension of the literature review, as a starting point in the process of meeting the aims and objectives of the study.

3.6.2 Subsequent qualitative information gathering

Subsequent to the focus group, the researcher decided to conduct an in-depth analysis within a small comparative group of Local Authorities in order to obtain qualitative data on a small number of cases and compare findings.

The six North Wales Local Authorities (Denbighshire, Conwy, Flintshire, Wrexham, Gwynedd and Anglesey) were the most geographically accessible to the researcher and provided a reasonably sized sample for a comparative analysis within Wales (there are 22 Local Authorities in Wales); additionally, the researcher already had points of contact within some of these Authorities. A decision was therefore made to restrict the cohort for the in-depth analysis to these six Authorities. See Appendix 2 for a table which shows the under 18 population, numbers of looked after children and numbers of children on the register for these six Authorities, giving an indication of the number of records for which these Authorities are responsible.

The options were then considered for undertaking the analysis. See Appendix 3, for a full evaluation of the advantages and disadvantages of possible research instruments.

3.6.3 The semi-structured interview

Based on the analysis in Appendix 3 of the advantages and disadvantages of these various possible methods of exploring the research questions within the six North Wales Local Authorities, it was concluded that a semi-structured interview was the most appropriate tool, as it allowed for a qualitative exploration of the issues, whilst maintaining a basic structure which would ensure that all the research questions were covered during the course of the interview.

It was decided for each Authority, to request an interview with both the Local Authority's Information and Records Manager (or person holding that responsibility) and also with the person responsible for information systems within the Social Services Department. The aim being to provide the perspective of the person maintaining operational information systems on a day to day basis, and also the wider records and information management perspective, reflecting the information governance agenda that the research questions belong to. The interviews were planned

if possible to be conducted in person rather than by telephone, or by electronic communication methods such as 'Skype'; as face to face communication would hopefully enable a rapport to be rapidly established with the respondent. Bryman (2008) comments that when interviews are conducted by telephone "the interviewer is unable to offer obvious visual cues of friendliness like smiling or maintaining good eye contact, which are also frequently regarded as conducive to gaining and maintaining rapport" (p. 202).

3.6.4 Documentary analysis

A documentary analysis of the existing policies and procedures for the long term maintenance of electronic records was planned, to identify policies and procedures already in place and any gaps in provision. In addition to the intrinsic value of the documents themselves, Bryman (2008) identifies a particular advantage of using documents – that they are non-reactive, i.e., they are not impacted by any effects of social research. For this reason and because of their intrinsic value to the research process, existing policies and procedures represent a valuable addition to the knowledge base and increase the triangulation and validity of the research process. However, policies and procedures are internal organisational documents and therefore their provision would be discretionary. It should also be borne in mind that written policies and procedures, whilst they may reflect a desired position, may not reflect the day to day reality of the organisation "we cannot...learn through written records alone how an organisation actually operates day by day" (Atkinson and Coffey, 2004 in Bryman, 2008, p.527).

It is acknowledged that the non-random sample of Local Authorities chosen raises questions regarding the external validity of the research, such as whether the research undertaken within a geographical portion of Wales could be applied to Local Government across the whole of Wales, or indeed to Local Government in general. In defence of the research approach it should be recognised that whilst there may be variations in approach between different Local Authorities, all those within Wales are subject to the same legislative framework, finding themselves in the position identified in the literature review, of attempting to balance the need to maintain operational systems and at the same time to fulfil record keeping responsibilities. The focus group did however, provide some triangulation as it was aimed at a wider sample of

information management professionals and therefore provided external validity as well as providing some initial exploration of the issues early on in the research process.

3.7 Research Instruments and ethical considerations

3.7.1 The focus group

As discussed in 3.6, Research Methodology, the opportunity existed to for a focus group to take place as part of a wider conference and the focus group therefore took place in January 2014, as part of the Paris User Group programme, forming part of the annual Civica conference, details of the event being circulated to delegates under the title ‘Information Governance – storing up trouble?’¹ (See Appendix 4). Civica, as discussed in Chapter 2 of this dissertation, are a software provider. Their product, the Paris system is one of a number of products used by Local Authorities for the recording and maintenance of electronic social care records.

In order that appropriate preparations could be made for the numbers attending, delegates were invited to indicate in advance their intention to attend the focus group session. 18 delegates responded, and, due to the size of the group, it was decided to commence the focus group with a brief presentation addressed to the whole group, followed by division of the group into smaller discussion groups. Morgan (1997) comparing the merits of smaller and larger groups, has commented that it is difficult to manage the discussions of large groups, especially where participants are highly involved in the topic.

On the day, 23 people attended the focus group (see Appendix 5 for a breakdown of the organisation types and roles represented in the focus group). The initial presentation (Appendix 6), explained the purpose of the group, addressed ethical considerations and offered participants the option of providing contact details should they wish to participate in a further individual discussion and/or receive a copy of the key findings of the study (Appendix 7). The remainder of the presentation then very briefly summarised the issues explored in the literature review of this dissertation.

¹ Whilst the focus group title could be construed as inferential, a title for the group was required which would attract potential participants by providing an indication of the area of concern.

Following the presentation, the group mutually agreed to divide into three smaller groups for discussion, each small group considering the following four questions:

1. What do the group see as the major areas of risk impacting upon the long term maintenance of electronic social care records?
2. What strategies do we have in place and what else can we do to best mitigate these risks?
3. How can our software providers help us and how can we help each other?
4. Are there any other thoughts which members of the group would like to contribute to the discussion?

A flip chart and paper was provided to enable each group to write down their thoughts and ideas. Around 20 minutes was available for discussion, at the end of this time, each group was invited to present a summary of their discussions. Some considerable thought was given in advance to how discussions within the small groups might be captured, audio recording was practically difficult within the context and would quite possibly inhibit discussion, whilst note taking by the author was also not a practical option, given that the three small groups were operating contemporaneously. However, flip chart notes, whilst reliant upon the note taker within each group, and admittedly, not capturing every nuance of opinion in each group, offered the opportunity for each group to express their thoughts on paper in their own words. The flip chart notes from the discussions were retained for subsequent analysis.

3.7.2 The semi-structured interviews

The semi-structured interviews took place in October, November and early December 2014. The interview was initially piloted with the Social Services Information Systems Manager within Denbighshire County Council. Following this, efforts were then made to obtain the contact details within each Local Authority of:

1. The person responsible for the management of Social Services information systems.
2. The person responsible for overall information management within the organisation.

This information was obtained by a combination of using the researcher's existing personal knowledge and by a Freedom of Information request (see Appendix 8). Once

contact details had been obtained, an email was then sent to each of these people, requesting their participation in a semi-structured interview (See Appendix 9).

The email was accompanied by:

1. An information notice giving details of the research background, the approach to be taken in the conduct of the semi-structured interviews and the question guide to be used to prompt discussion during the interview (See Appendix 10).
2. A consent form to be signed by both the researcher and the participant should they agree to take part (See Appendix 11).

The information notice ensured that participants had an understanding of the background to the study and the manner in which the interview would be conducted. Ethical considerations of confidentiality and anonymity were addressed by the information notice; the consent form ensured that the researcher had the written agreement of the participant to their role in the research process.

The questions included in the semi-structured interview acted as an interview guide, they aimed to address the research questions and objectives of the research project, to allow scope for discussion and the opportunity for participants to raise any particular issues or interests of their own. Some minor changes to the questions were made following the initial pilot of the interview, largely to resolve a couple of issues around the clarity and brevity of the questions. Efforts were made to avoid leading questions, or closed questions which would not generate further discussion, but to use the questions to prompt discussion and exploration of the issues from the point of view of the interviewee. “This means trying to get an appreciation of what the interviewee sees as significant and important in relation to each of your topic areas” (Bryman, 2008, p.442).

Much consideration was given to the method of capturing information from the interviews. Whilst Bryman (2008) states that qualitative interviewers tend nearly always to record and then transcribe interviews, it was eventually decided not to record the interviews by electronic means as the researcher felt that this would inhibit discussion on a subject which interviewees might consider to be somewhat sensitive. After much thought, note taking was concluded to be a better option as it would be less

intrusive, although it was acknowledged that both conducting the interview and taking notes of the discussion at the same time would present challenges.

3.7.3 The documentary analysis

The researcher had access to policies and procedures within Denbighshire County Council, and made Freedom of Information requests to obtain internal policies and procedures from the other five Local Authorities in North Wales.

The wording of the Freedom of Information request was given careful thought to ensure that the relevant policies and procedures from each Local Authority were obtained. Rather than sending Freedom of Information requests out to all the North Wales Authorities at once, a Freedom of Information request was made initially to one Local Authority, this gave the opportunity to test the response of the Authority and the option to refine the request if necessary before sending to the remaining Authorities. As the initial Freedom of Information request was successful in obtaining the information requested, the outstanding requests were subsequently sent out.

See Appendix 8 for the text of the Freedom of Information request which was sent to each Local Authority.

3.8 Conclusion

The nature of the study indicated a qualitative approach to be appropriate and a comparative cross-sectional design was developed, with three research instruments being used:

- A focus group
- Semi-structured interviews
- Documentary analysis

This approach provided a resource of information from three different research techniques to develop an understanding of the topic, and the consequential triangulation also enhanced the validity of the research.

The research instruments were designed and created to meet the aims and objectives of the study and to ensure that the research was approached in a professional and ethical manner. The next chapter examines the findings of the research.

Chapter 4: Results

4.1 Introduction

This chapter examines the results of the research methods employed, as outlined in Chapter 3, Methodology, Research Instruments and Ethical Considerations. The results of the three strands of the methodology

- The focus group
- The semi-structured interviews
- The documentary analysis

are considered in turn and the results are described and summarised.

4.2 The Focus group

4.2.1 Introduction

As discussed in Chapter 3 and shown in Appendix 5, the focus group was comprised of 23 people representing Local Authorities and Health Care Trusts across England and Wales, and also included one participant from Canada. All were actively involved in the management of information systems for the long term maintenance of electronic records containing sensitive personal information and represented a range of roles including strategic information managers, project leaders, programme managers, trainers and business systems officers.

Following the initial presentation (Appendix 6) which outlined the background to the study, the participants mutually agreed to work as three small groups for a period of around 20 minutes, each small group then presenting a summary of their discussions to the focus group. During their discussions, the small groups considered four main questions:

1. What do the group see as the major areas of risk impacting upon the long term maintenance of electronic social care records?
2. What strategies do we have in place and what else can we do to best mitigate these risks?
3. How can our software providers help us and how can we help each other?
4. Are there any other thoughts which members of the group would like to contribute to the discussion?

The findings of the groups are outlined below, the small groups being referred to as group one, group two and group three. A sample of the results is shown in Appendix 12.

4.2.2 Question 1: What do the group see as the major areas of risk impacting upon the long term maintenance of electronic social care records?

All three discussion groups saw the existence of legacy systems (that is information systems which have subsequently been replaced), as an area of risk. As the full set of data held by an Authority was often not migrated to any new information system, this could result in various items of data forming part of an individual's record being held in different information systems – the full story of the person's interaction with the Authority not being held on one system. Group one specifically mentioned the loss of expertise in the management of legacy systems as staff in the due course of time moved on, as a particular issue presenting a risk to the maintenance of electronic records.

Another area of risk identified by all three groups was the approach to meeting statutory retention periods for electronic records, and the potential for contravention of the Data Protection Act, the risk being that records were either kept for longer than they should be, that inappropriate or unnecessary data was being held, or that long term retention periods were potentially not adhered to.

Migration to new information systems was seen as a particular area of risk by group two, and group one identified that version upgrades within the lifetime of an information system also posed a potential risk. Group one also considered other technological challenges including the risks to storage media posed by technological change, and the issues presented by changes in proprietary data formats. This group also saw organisational change and the potential merger of Local Authorities as an area of risk. Group three mentioned data theft and the challenges to data security as a potential issue.

4.2.3 Question 2: What strategies do we have in place and what else can we do to best mitigate these risks?

Strategies proposed for mitigation of the identified risks included maintaining a robust policy for the back-up of data (a strategy mentioned by two of the discussion groups)

and the use of audit trails. Group two suggested that the appropriate retention or destruction of records could be evidenced by audit – an advantage of using an electronic system, as it would be possible to track file maintenance and destruction. Group three, which had expressed concern about data theft and challenges to data security, saw the development of tools such as audit trails as a potential solution to these risks.

Group one and group two considered migration strategies to be of particular importance, and group three felt that a corporate approach to information governance was required.

4.2.4 Question 3: How can our software providers help us and how can we help each other?

Groups one and three thought that software providers might be able to develop specific tools to assist in mitigating risk, group one specifying that this might be done by the development of tools for the automatic flagging of records due for deletion, taking into account differing data types and retention requirements. Group two emphasised the sharing of best practice and highlighted the effectiveness of user groups (groups where users of proprietary information systems meet together to discuss developments and share experiences), of which they already had experience. This group also felt that a quality assurance process could be applied to electronic records.

4.2.5 Question 4: Are there any other thoughts which members of the group would like to contribute to the discussion.

No further thoughts were contributed by group members.

4.2.6 Summary of the findings of the focus group

Overall the focus group identified a range of potential risks which could impact upon the effective maintenance of electronic records. Strategies which might mitigate these risks were discussed within the small groups and positive ideas generated regarding the assistance software providers might be able to provide, and how focus group participants might continue to support one another by meeting together as members of user groups and regional groups.

Given that the focus group took place in the context of a national conference, where delegates had a range of other options for the timeslot, the number attending indicated a large body of interest in the subject matter; no one attending expressed any doubts that the concerns addressed required serious consideration and all were keen to share their thoughts and ideas.

4.3 The semi-structured interviews

4.3.1 Obtaining the interviews

By mid-December 2014, eight interviews had been obtained, covering four of the six Local Authorities targeted, a response rate of 66.6%. At this point, two potential interviewees with whom contact had successfully been established, had not been able to participate due to pressures of work and other time constraints. It is therefore possible that, had the research period been extended, further interviews could have taken place, however, there was at this point, a need to draw the research period to a conclusion. Further discussion regarding the challenges of conducting the interviews is included in the conclusion of this dissertation.

In the summary of results and subsequent analysis below, the participants in the semi-structured interview process are identified by letters A-H. Of the eight participants, four (participants A, D, F and G) were information systems managers, responsible for Social Services information systems within their Local Authority. One was the strategic information manager for their Local Authority, and the remaining three participants had strategic information management responsibilities within their Local Authority.

4.3.2 Results of the semi-structured interview process

With the exception of 5.3.3 and 5.3.4, The results of the semi-structured interviews have been grouped thematically rather than by the specific questions posed during the interview process, this arises from the nature of the interviews. Although the interviews did have a structure, the questions were posed as a guideline to discussions, rather than being followed in a rigid manner, and there was therefore some fluidity the issues addressed at various points in the interview process. When the results were analysed, the researcher identified recurring themes raised by participants and then

grouped the results according to theme. See Appendix 13 for a sample interview transcript.

4.3.3 Electronic social care systems in place

All four Local Authorities represented were using a proprietary information system for the maintenance of electronic social care records. Two Authorities were using the Paris system, supplied by Civica, and two were using Raise, a social care information system provided by CareWorks. Additionally, information was held in legacy systems which had not necessarily been migrated over to current systems and where this was the case, access was provided to information in the legacy systems on a read only basis. In two Authorities, there was already more than one legacy system in existence.

4.3.4 The paperless environment

Without exception, all four Authorities were in the process of moving towards a paperless environment for social care records, and had largely achieved this, although some documents which could not be reproduced electronically (original certificates for example) were still maintained within paper files. Other concerns resulting in the maintenance of some records as paper copies included issues over the legal admissibility of electronic signatures for court proceedings, and high demands upon server space resulting from scanning paper documents. Both these issues were in the process of being addressed in all four Authorities, with corporate ERDMS systems linking into the social care information system generally being seen as the potential solution. Overall, social care records across the four Authorities were predominantly at the time of the study, kept as:

- Native documents (i.e. inputted directly into the electronic social care system)
- Attachments into the social care information system, either of documents born digital, or of scanned documents.

4.3.5 The security, integrity and accessibility of electronic social care records

The question of whether participants were confident that electronic social care records could be kept securely, and remain accessible for the period of time required to meet legislative requirements, was met largely with a quietly confident response.

Overall, participants were confident and satisfied with the security of information systems, participant C commented that

a well-managed system is more secure than paper

and participants B and G pointed out the advantages of electronic records from a security point of view, including the audit facilities within an electronic information system, which enable the tracking of persons viewing or editing a record. System architecture was seen as an enabler in ensuring that only appropriate persons could access records and robust policies around data protection were identified as reinforcing the in-built functionality of the information system. Participants A, F and G, who were all working in roles close to the day to day management of information systems, identified possible technical problems with security, although interestingly the specific examples given related to the risk of records being hidden from view as a result of security protocols, rather than the risk of records being accessed by those without authority.

Participants were generally confident in the security of existing information systems, based on their information architecture, the security protocols of their own IT departments and the policies and procedures of their organisations, however there was some acknowledgement of new challenges which would demand fresh approaches. Participant G identified agile working (a process increasingly prevalent in social care, whereby practitioners can log in to Departmental information systems from a variety of work basis, from home or on a visit to a service user) as a new challenge, and participant F raised concerns about a potential loss of control by the Local Authority if the pressure on electronic server space within the organisation led to a reliance on cloud storage in the future, citing instances of hacking recently highlighted in the press, such as the repeated cyber-attacks on Sony Pictures.

In terms of the accessibility and integrity of the social care record, migration was the most frequently cited issue causing concern; the risk of data loss resulting from migration issues was identified as a potential issue by all four of the information system managers participating in the study, both because of the complexity of the migration process and due to the number of times that data could potentially be migrated. Participant D commented that the average lifespan of an information system was around 8-10 years, therefore it could be anticipated that a record needing to be

kept for 70 or more years would be migrated across a number of information systems, conversely, if the data was not migrated, parts of the person's record would be held in a number of different information systems. Participants who were information systems managers, reflected on this area with personal experience of having migrated data at least once already. There were several areas of particular concern in relation to the migration process.

- Participant A identified a risk of architectural decay for data not migrated, which would potentially present challenges in accessing data residing in legacy systems as technology progressed and older data formats and platforms became redundant.
- Participants A, D, E, F and G all expressed concerns regarding the risk of data loss during the migration process.

Whilst participants were well aware of these issues and anticipated actively addressing issues as they arose, participant A commented that there was also a need to maintain a balance when assessing the amount of effort and cost involved in dealing with the impact of technological advances on the accessibility of records. The storage of older records was of particular concern, with an awareness that attached documents, in particular, could be held in a variety of file formats, and there was an acknowledgement of the requirement for older documents to be converted to a proprietary format (for example PDF), to assure access in the future.

Other risks identified included the challenge of finding all the respective pieces of information forming an individual's social care record within the electronic system. The practice of attaching external documents into the electronic social care record was cited by participants A, C, E and G as a particular challenge because of differing file formats and also because, as participant G stated,

there is no accounting for how people file things.

Overall, participants were more favourable to electronic information systems as a means of keeping social care records secure and accessible than to paper based system. Participant E felt that whilst paper records had their own problems they were possibly more secure than electronic records, commenting that in a paper based system, records

couldn't just be deleted by clicking.

However, participants B, C, G were positive about electronic records. Participant G commented that retrieving paper records from archive was often a time consuming process, and participant C thought that paper records had sometimes been poorly maintained and organised and that electronic systems had raised confidence in the ability to retrieve records.

Participant C commented that there was an increased awareness in the need to maintain records in a manner which enabled them to be readily retrieved. However, participant D felt that the profile of record keeping within social care still needed to be raised. A degree of complacency was also acknowledged, participant C commented that

sometimes it's not until things go wrong that you realise what should have been done.

4.3.6 Research and consultation

Only participant H had any background knowledge of academic research or of projects such as the work of the InterPARES Trust or the National Archives in the field of the long term preservation of electronic records, and none had been involved in any consultative groups regarding the subject, although participants B and H mentioned that archivists within their respective local authorities were attending digital preservation seminars. Two authorities had undertaken a consultation process in order to look at retention periods and to develop their respective retention policies. All those participants without background knowledge of academic research or research projects were interested to know more of research work which had been undertaken, and were subsequently provided by the researcher with an information sheet giving brief details of the research projects identified in the literature review of this dissertation.

4.3.7 Policies and procedures

All the four Local Authorities who participated in the semi-structured interviews agreed that their organisation had policies in place for the following:

- Data protection
- Information security
- The procurement of information management systems

- Retention scheduling and storage/archiving of electronic records.

4.3.8 Retention scheduling

The implementation of retention periods within an electronic information system and deletion routines which could be run on electronic information systems to ensure that records were not kept for longer than required, were presenting challenges for all the participating Authorities and participants A and G mentioned that capacity issues in testing and implementing the functionality were holding back progress. Participants A and H observed that where paper records were kept in addition to electronic records, this presented a further challenge, as retention scheduling for the paper and electronic records needed to be synchronised, to ensure that one record medium was not destroyed whilst the other remained available.

4.3.9 The procurement process for new electronic social care systems

When Authorities were, for whatever reason, required to purchase a new electronic social care system, all agreed that they would consult widely both within and beyond the organisation. Within the organisation, consultation was expected to take place with Heads of Service and users within Social Services, with the legal department, central ICT and the Authorities procurement unit. However, the strategic information manager for the Authority and central Records Management and Archives Departments would not necessarily be involved at a detailed level. In all four Authorities there was an expectation that this work would be handled by Social Services expertise with briefings provided to corporate information management and records staff. Participant G remarked that in this situation

we don't work with them, they work with us

No Local Authority Social Services Department however, worked in isolation on procurement projects, in all four Authorities Social Services Departments worked closely with Social Services Departments in neighbouring Authorities to obtain the best system for their needs.

4.3.10 The maintenance and development of social care information systems

All the participants were enthusiastic about the benefits of collaborative work across their user community as a means of meeting challenges and resolving issues around the maintenance of electronic social care records, and despite financial constraints,

took part in user groups and consultations as much as possible. Two Authorities also mentioned regular meetings with their central ICT Departments and meetings with operational social care staff as being of particular benefit. All four Authorities also met regularly with their system suppliers.

There was a general consensus that more collaboration, particularly across the user community, would be beneficial, but this was constrained by financial considerations and a general scarcity of resources. It was considered that more could be done if greater money, time and other resources were available. Additionally, working together was also dependent on building up good working relationships. Participant A remarked that the customer base for proprietary information systems was often quite wide and localization, whereby systems were developed differently, sometimes to comply with different legislative requirements, could present barriers to effective collaboration. Whilst collaboration across the user community was largely seen in terms of collaboration regarding specific information systems, participant H identified the Wales IRMS (Information and Records Management Society) group as a possible forum for discussion and collaboration.

4.3.11 Long term challenges

It was admitted by participant B that short term challenges and issues tended to take precedence over longer term concerns; participant E commented that external and internal pressures on Local Authorities meant that development work was done on a reactive, rather than a proactive basis. Long term investment in information technology was identified as a concern by participant C, who commented that there was a problem with people

not always having the equipment they need

Participants were also concerned about succession planning. Participant D expressed concerns regarding the amount of implicit knowledge held by those involved in the management of electronic information systems, and the risk of the loss of knowledge should staff move on to other posts. Whilst data migration was identified as an issue by all four Authorities, participant D went further, suggesting that a long term strategy was required to address the problems of repeated data migration, and that the solution might be for one single system to be developed which could act as a portal via which data from all the electronic information systems currently in use could be accessed.

Respondents with a strategic information management background also made further suggestions: Participant B thought there was a need for clear guidance on the maintenance of electronic social care records, endorsed by a professional body within the social care sector, and participant H identified a need for a strategic plan and quality assurance for electronic social care records, the sharing of skills and expertise across the Local Authority and increased training and awareness for operational social care staff.

4.3.12 Other concerns

Data sharing between organisations is becoming increasingly prevalent, and whilst participants B, F, G and H were positive about the benefits of sharing key pieces of data, for example, with health organisations, participants C and F however, felt that service users were unaware of the extent of the electronic records held, and if they were aware, would be reluctant to disclose information that they might otherwise be willing to share. Participants A and H commented that performance reporting from electronic social care systems could impact upon the data and information recorded and sometimes resulted in ‘convoluted’ recording in order to ensure that performance targets were met.

4.3.13 Summary of results of the semi-structured interviews

When considering the results of the semi-structured interviews it should be born in mind that interviewees may have been keen to make a good impression, as the researcher was from a neighbouring Local Authority to their own, and participants would have wished to present their own Authority in a good light; however, overall, results of the semi-structured interview process indicate that information managers and information systems managers are highly dedicated members of staff, actively engaged and grappling with issues as they arise, and discussions with them demonstrated that they hold a vast resource of knowledge and expertise. They have a quiet confidence in the short to medium term security and accessibility of social services information systems but were also prepared to admit to unresolved challenges, particularly regarding the long term maintenance of electronic social care records against a background of diminishing resources and a fast changing environment.

4.4 Results of the documentary analysis

The Freedom of Information request was successful in obtaining details of policies and procedures in place in relation to information management within each of the six North Wales Local Authorities, and a summary is shown in Table 1 below, page 43.

Authority	Data Protection			Information Security			Procurement of Electronic Information Systems			Retention Scheduling and Storage/ Archiving of Electronic Records		
	Policy	Date of most recent update	Next scheduled review	Policy	Date of most recent update	Next scheduled review	Policy	Date of most recent update	Next scheduled review	Policy	Date of most recent update	Next scheduled review
Conwy	Data Protection Policy	26/10/2012	n/a	IT Security Policy currently being redrafted to include an Information Security Policy	n/a	n/a	IT Procurement Policy	2012	n/a	Records Management Policy	Oct 2013	2015
Denbighshire	Data Protection Policy	April 2013	n/a	Information Security Policy	2010	Scheduled for annual review but most recent version is dated 2010	ICT Procurement Policy	n/a	n/a	DCC Retention Schedule	n/a	n/a
Flintshire	Data Protection Policy	n/a	n/a	Information Security Policy	2010	Scheduled for annual review but most recent version is dated 2010	ICT Procurement Policy	2008	n/a	Records Management Policy currently being reviewed	n/a	n/a
Gwynedd	Data Protection Policy	02/11/2009	n/a	Information Security Policy	n/a	n/a	None	n/a	n/a	Corporate Retention schedule: Applies to both paper and electronic records	n/a	n/a
Isle of Anglesey	Data Protection Policy	01/03/2014	Scheduled for annual review	Information Security Policy	15/07/2014	Scheduled for annual review	None	n/a	n/a	None	n/a	n/a
Wrexham	No specific policy, although referenced through other policies (eg. FOI)	n/a	n/a	Information Security Policy currently in draft, due for publication April 2015	n/a	n/a	No specific policy documents.	n/a	n/a	Records Management Policy	Sept 2014	Nov 2015

Table 1: A summary of policies and procedures obtained from the six North Wales Authorities

This table shows that whilst the identified policies and procedures were mostly in place, one of the Authorities from whom information was requested did not have a specific data protection policy, two of the Authorities did not have a current information security policy (although both the Authorities which didn't have this policy had a policy in draft format planned for publication in the future). Two of the Authorities did not have an IT procurement policy and one did not have any records management or retention scheduling policy.

Where policies were in place, it was sometimes not possible to identify when they had last been updated, or when the policies were scheduled for review. Whilst the content of a policy may vary considerably dependent upon the approach of the organisation and the nature of the policy, it is appropriate to implement a review schedule for published policies and procedures. In relation to electronic records management, Smith (2007) refers to the typical characteristics of policy statements as including a process of review at regular intervals. A recently updated policy with a robust review schedule assists in giving the policy credibility and support within the organisation.

Where policies did include a review schedule, there was some evidence that the schedule was not being adhered to. For example, both Denbighshire and Flintshire's Information Security policies were marked as scheduled for annual review, but the current version was dated 2010.

All the records management policies which were available specified retention periods or referenced retention scheduling and identified responsibility for retention scheduling with the organisation.

4.5 Conclusion

The three strands of the research – the focus group, the semi-structured interviews and the documentary analysis provide a body of information regarding the issues and challenges facing those whose work includes responsibility for the long term maintenance of electronic social care records. The triangulation offered by these three different research methods serves to cross check the findings of the research and thereby establishes confidence that the findings have credibility and external validity and may be generalised across Local Government departments within the United Kingdom. In one instance (existing policies and procedures as perceived by

participants in the semi-structured interviews and those identified in the documentary analysis) results differ, and this will be investigated further in the next chapter, which analyses the findings of the research.

Chapter 5: Analysis and Discussion

5.1 Introduction

This chapter analyses and discusses the results of the research, examining the key issues which have been identified as a result of the investigations.

5.2 Analysis and discussion of the research findings

5.2.1 Migration issues

The results of the focus group and the semi-structured interviews indicate that migration is an issue which has inherent risk and is of serious concern to information professionals, confirming the findings of Dollar (2000), as discussed in the literature review. This is an area to which technical expertise has much to contribute, however, because every instance of migration is different, it is difficult to see how any sort of general migration strategy could be developed. Migration typically needs to be addressed on a case by case basis, nevertheless, it could be of value for migration experiences to be shared within user groups and other discussion forums, so that potential pitfalls are identified and lessons learned from experience of migration processes.

In view of the challenges of dealing with migration, consideration should be given to the question of whether the migration process could take place less frequently or possibly be avoided altogether. In response to this question, economic constraints probably already dictate that migration does not occur more than is deemed necessary, as the procurement of a new electronic social care system and the process of implementation is costly and time consuming. Nevertheless, political and social change may make the process unavoidable (for example, migration of data to join up social care systems will need to take place if the Local Authority mergers proposed by the Williams report come into effect). Additionally, simply continuing to develop an existing system architecture in order to avoid the implementation of a new system can have adverse consequences, indeed, pending a full enquiry by the Civil Aviation Authority, this is thought to have been one of the problems encountered in the aviation industry when traffic control systems failed at Heathrow in December 2014 (Lefty & Calder, 2014). If it is acknowledged that avoiding migration is not always possible, the problem then remains of how records of an individual which may be

spread over a number of information systems, can best be linked to facilitate effective retrieval when necessary.

5.2.2 Retention scheduling

Adherence to retention schedules and the embedding of the retention scheduling process within electronic information systems was another area very much to the forefront of the concerns of information professionals maintaining electronic social care records. As discussed by participants in both the focus group and the semi-structured interviews, information technology could potentially improve retention scheduling processes, as electronic systems have the functionality to embed retention schedules within automated routines and to produce audit trails evidencing file deletion. This functionality, reinforced by robust records management policies and corporate retention schedules based on legislative requirements and recommendations, could result in the development of a powerful tool to ensure that records are not kept longer than required. Conversely, consideration should be given to the risk of automated routines inadvertently deleting records still required.

Retention scheduling and automated deletion routines had not been implemented within any of the electronic social care systems used by participants in the focus group or the semi-structured interviews, processes were in every case, very much in the testing phase, progress being hampered by resource limitations. The greater impact of the implementation of retention schedules is upon ensuring that records needing to be kept for a shorter term (for example, records of adult social care users which are required to be kept for 10 years) are deleted appropriately, however, this is of relevance to this study because of the risk that under resourcing results in implementation of automated retention scheduling which has not been thoroughly tested and risks the deletion of records which need to be kept for a longer period.

5.2.3 Security

Robust security is an integral part of a modern information system and information managers saw the maintenance of internal security arrangements as is a key part of their role. As a result, the confidentiality of records within the organisation is probably assured at a higher level than was the case in the era before electronic record keeping became the norm. The potential threats which could result from changes in organisational structures and cross-organisational working, as identified in the

literature review by Lomas (2010) and Cherdantseva & Hilton in Portela & Almeida (2014), were acknowledged by one of the small groups within the focus group and by one participant in the semi-structured interviews. However, these threats did not appear to be seen as a major concern by participants in the research process, and the risk of a malicious attack upon a Local Authorities information systems by an external body, despite its high profile in the UK governments agenda, seemed to have an even lower profile amongst Local Government information professionals, only being raised as an issue by one participant in the research process. The documentary analysis identified that two of the North Wales Authorities had an information security policy only in draft format, whilst two of the Local Authorities had not reviewed their information security policies according to their own agreed timescales for review, suggesting a certain complacency regarding potential risks.

5.2.4 Collaboration – user groups and other consultative groups

Groups where those with a stake in the maintenance of electronic social care records could meet together were considered to be of great value by all the participants in the semi-structured interviews, although interestingly, only one of the small groups forming the focus group specifically mentioned this. As the focus group was taking place within the context of a user group, it is possible that this was an underlying assumption of the group, and indeed the fact that members of the group were already participants within a user group by virtue of their involvement in the focus group seems to confirm this.

User groups tend to develop around the systems in use (for example, Paris users meet on a regular basis as members of the Paris user group, one participant in the semi-structured interviews mentioned regular meetings of users of the Careworks Raise system). In two Authorities consultative groups were in place including internal stakeholders such as end users, MIS officers and central ICT and also the software providers. One participant mentioned that MIS had representation on corporate freedom of information and data protection groups, however, nobody mentioned consultation between corporate records management and those responsible for the management of electronic social care records and this appeared to be a gap in collaboration.

All the respondents to the semi-structured interviews who were closely involved in social care electronic records management agreed that meeting together in user groups and consultative groups helped in tackling complex issues and expressed concerns that group participation was sometimes constrained by capacity issues. Concerns were also expressed that development work was often not a high priority when immediate work demands were continually pressing.

5.2.5 Research and other external resources

The lack of awareness of participants in the semi-structured interview process of the large body of academic research on the subject of the long term preservation of electronic records, as outlined in the literature review of this dissertation, was noteworthy; it appears that academics are undertaking a great deal of work which could be informative and helpful to those working as information professionals, yet this work is not being utilised as a resource, even where the resources, such as those provided by the National Archives, have a practical application. One information manager mentioned that his archivists did attend some courses, and perhaps this is an area which it is thought by those involved, to be best left to the archivists. However, the semi-structured interview process identified very little evidence of joined up working between information professionals within social services and their respective corporate records management or archives departments. Information systems managers and staff meanwhile, whilst experts within their field, do not necessarily have training or formal qualifications in records management.

5.2.6 Knowledge management

The information systems managers participating in the semi-structured interviews, expressed concerns that the body of knowledge they had regarding the systems for which they were responsible, had largely been acquired through experience rather than formal training, and were concerned about the potential loss of knowledge and skills as staff moved on, particularly in times of challenging economic circumstances, when staff were not necessarily replaced once they had left and when there was little budget or capacity for succession planning. These concerns were also raised by the focus group. Those in more strategic information management roles acknowledged the expertise and experience of information systems managers and other staff working

within the teams charged with the maintenance of electronic information systems, and the implicit knowledge held within these teams.

5.2.7 Policies and procedures

The findings of the semi-structured interviews regarding policies and procedures are not entirely corroborated by the documentary analysis, which identified that although all the Authorities had policies in place regarding data protection, one of the Authorities participating in the semi-structured interviews did not have a policy in place regarding IT procurement and one didn't have policies in place regarding either IT procurement or retention scheduling.

This suggests a rather over optimistic view by participants in the semi-structured interview process of the arrangements within their own Authorities, possibly as a result of a desire to represent their Authority in a good light during the interview process, or simply an assumption that these policies were in place. It is likely that the economic and financial constraints faced by Local Authorities were impacting upon progress in ensuring that policies and procedures were full implemented and regularly reviewed. Whilst records management policies within all six North Wales Authorities referenced the person responsible for ensuring retention schedules were adhered to within each department of the Local Authority, there was no evidence that retention schedules were published in full in every Authority, whether as a part of the Records Management Policy or as part of any additional policy, and staff awareness of policies may also not be particularly high.

5.3 Conclusion

The three strands of the research process generated a valuable body of evidence, the next chapter discusses whether this evidence addresses the research questions and meets the aims and objectives of this study. High level recommendations for Local Authorities charged with the maintenance of long term electronic social care records are subsequently identified.

Chapter 6: Recommendations and Conclusion

6.1 Introduction

This chapter reviews the research questions and the aims and objectives of the research and considers whether the research questions have been addressed and the aims and objectives of the research met. A set of high level recommendations for the maintenance of long term electronic social care records by Local Authorities are then presented, thus achieving the aim of the research. Following this, the study design is reviewed and the question considered of whether this study could be usefully replicated in the future and the findings generalised or transferred across similar situations.

6.2 Have the research questions been answered and the aims and objectives of the research met?

The research questions posed at the start of this study were:

1. What are the potential issues which are likely to impact upon the integrity, confidentiality and accessibility of children's social care records during the period for which they are required to be maintained?
2. How can Local Authorities mitigate against any risks posed to these records and ensure that they are appropriately retained whilst remaining both accessible and confidential?
3. Why does this matter? What is the impact upon these children and others having a legitimate interest in these records if the records are compromised or cannot be accessed in the future?

6.2.1 Research question 1

Research question 1 was explored in the literature review and further exploration took place during the course of the subsequent research. The analysis and discussion of the research findings (Chapter 5, section 5.2), which meets objective 1 of the study, establishing the level of awareness of information professionals currently working within Local Government, regarding the potential issues posed by the requirement to ensure the long term integrity, confidentiality and accessibility of electronic social care records, identifies the issues examined in the literature review, with which information

professional are engaging, and also those issues (for example external security threats) of which information professionals appear to have less awareness and concern.

6.2.2 Research question 2

Research question 2 was explored, both as a part of the focus group and during the semi-structured interviews. Objective 2 of this study was met by the identification of policies and procedures in place within six North Wales Authorities which could mitigate against any risks posed by electronic record keeping systems and documentary analysis of these policies and procedures identified possible gaps in provision, including a need for fully published retention schedules for electronic documents.

6.2.3 Research question 3

Research question 3 was explored in the literature review, where clear evidence emerged of the impact upon children and others interested parties if these records should become compromised or inaccessible in the future. The subsequent research process demonstrated that this was also an issue of concern for Local Authorities and information professionals involved in the process and objective 3 of the research was met by identifying ways in which senior management, records managers, information managers, archivists and technical staff are already working together to address potential issues and concerns and by identifying a gap in collaboration between information professionals and records management and archival staff.

6.3 Recommendations

The aim of the research was to develop a set of recommendations for Local Authorities regarding the long term maintenance of Children's social care records.

The recommendations are therefore as follows:

- The maintenance of electronic social care records should have a high strategic profile within the organisation.
- Information professionals should collaborate with corporate records management and archival staff, as well as with central ICT, procurement and legal departments. Professional records management and archival staff need to engage with academic research and projects regarding this subject and use their professional skills to compliment the skills of information professionals.

- The development of electronic records management systems for social care records should be adequately resourced and active participation by information professionals in user groups and other collaborative opportunities widened and encouraged.
- There should be appropriate succession planning within the organisation for information systems managers having responsibility for social care information systems.
- Relevant policies and procedures should be fully established and regularly reviewed according to a specified and published review schedule. Full retention schedules for children's social care records should be published within the organisation and staff awareness regarding policies, procedures and retention schedules needs to be raised.

Although risk can never be eliminated, it is hoped that if the above recommendations were put into place, Local Authorities could have increased confidence in maintaining electronic social care records for the long term.

6.4 A reflection on the research process

The research methods used proved satisfactory in obtaining a body of evidence for analysis, however the semi-structured interview process took longer than anticipated. The greatest challenge was in making contact with the relevant people within each Local Authority. Personal contacts ultimately proved to be more successful in identifying the appropriate people for participation than obtaining contact details through Freedom of Information requests, which was only partially successful, due to the variation of organisational structures, job titles, roles and responsibilities within different Local Authorities and the time delay in obtaining the information. In retrospect, Freedom of Information requests could have been made earlier in the research process. Although by law, public authorities should respond promptly to requests, they still have 20 working days to respond, and this timescale can be extended if they seek clarification on any point of the request.

Another challenge proved to be the demanding workloads of the officers concerned, which meant that interview scheduling and the conduct of the interview often took some weeks. In reality, the interviews were most successfully achieved through something of a 'snowball' effect, whereby an interview with an officer from one Local

Authority would result in the provision of contact details for an officer in a similar job role in another Authority, networking ultimately proving to be the most effective way of working.

If the study design were to be replicated, it would be advisable to start making contact with potential interview participants several months before the interviews were planned to take place.

6.5 The validity and transferability of the research findings

The focus group included participants from a wider spectrum of organisations than the semi-structured interviews, however, both the focus group and the semi-structured interviews identified similar areas of risk, and also discussed some of the same ideas (for example, participation in user groups) as means of mitigating the risk. It is difficult to know whether the results of the focus group and the semi-structured interviews were totally unbiased as employees may wish to present their own Local Authority in a good light, particularly where they have management responsibilities, when responding to research carried out by an employee of a different Local Authority, however, if the researcher had not been working in the social care information management environment of a Local Authority, it would have been more difficult to make the contacts and have the opportunities to conduct the research at all. The documentary analysis was non-reactive and therefore not subject to any bias resulting from social effects.

The findings of this research could be generalized to other situations where important records are required to be kept in an electronic format for a significant period of time. Further research could identify whether other organisations, for example, central government or private industry either within the United Kingdom or beyond, have any other arrangements in place from which Local Authorities could learn, and also whether a sharing of knowledge within this wider context could be of benefit to all.

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Note: The OSCOLA citation style has been used for citing legislation whilst Harvard APA has been used for all other references.

Appendices

Appendix 1: Search terms used for the literature review

Search area	Wider search term	Narrower search terms
Digital records preservation	Digital records AND Preservation OR Digital records AND continuity	Preservation, continuity, archiving,
Information security	Information security	Information governance, cyber security, cyber attack, data protection,
E-government	E-government	E-government agenda, ERDMS, data sharing,
Records of displaced children	Displaced children AND Records	Aborigines, lost generation, lost children

Appendix 2: Under 18 population, numbers of children on the Child Protection Register and numbers of Looked After Children at 31/03/2014 for the six North Wales Local Authorities:

Authority	under 18 population (mid year estimates 2014)	Number of children on the Child Protection Register at 31/03/2014	Number of looked after children at 31/03/2014
Denbighshire	19289	85	165
Conwy	21881	80	165
Flintshire	32395	135	215
Wrexham	29304	130	215
Gwynedd	23745	85	185
Anglesey	13602	70	75

Data source: Stats Wales, 2014

Appendix 3: Advantages and disadvantages of research instruments

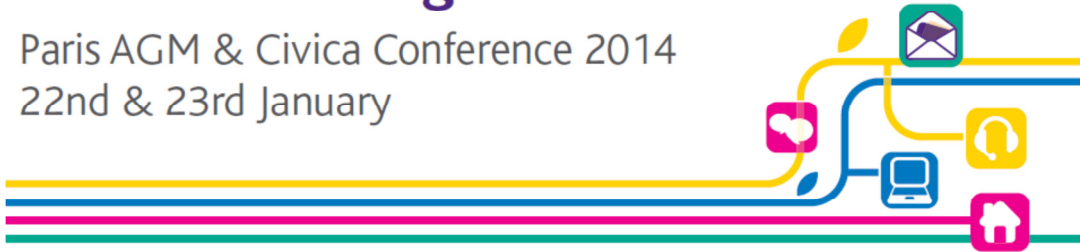
Research tool	Advantages	Disadvantages
A self-completion questionnaire (postal or email)	<p>Could be circulated easily, quickly and cheaply.</p> <p>Convenient for the participants – can be completed when time allows.</p> <p>Not impacted by the presence of an interviewer.</p>	<p>More suited to quantitative rather than qualitative analysis.</p> <p>Open questions would be more suited to the research than closed questions, but closed questions are more appropriate for a self-completion questionnaire.</p> <p>It would not be possible to explore issues in any depth or to follow different lines of discussion.</p> <p>More difficult to ensure the questionnaire is completed by the intended person.</p> <p>Response rates for self-completion questionnaires are often low.</p>
A structured interview	<p>The potential for intra-interviewer variability (the interviewer missing, misinterpreting or embellishing replies) is reduced.</p>	<p>More suited to closed rather than open questions.</p> <p>Would not allow the interviewer to follow particular lines of discussion or interest.</p> <p>More suited to quantitative rather than qualitative analysis.</p> <p>More time-consuming and expensive than circulating a questionnaire.</p> <p>More demanding for the interviewee than a questionnaire.</p>
A semi-structured interview	<p>A basic structure can be prepared in advance, ensuring that all the research questions are covered.</p> <p>Provides a basic structure to the interview, whilst allowing for follow-up questions,</p>	<p>More time-consuming and expensive than circulating a questionnaire.</p> <p>Requires more skill on the part of the interviewer than a structured interview.</p> <p>Difficult to capture in note</p>

	<p>probing, flexibility, exploration of issues in more depth as appropriate.</p>	<p>form and may require recording and transcribing.</p> <p>Risk of intra-interviewer variability.</p> <p>More demanding for the interviewee than a questionnaire or structured interview.</p>
<p>An unstructured interview</p>	<p>Allows for free-flowing exploration of the research questions.</p>	<p>More time-consuming and expensive than circulating a questionnaire.</p> <p>Requires more skill on the part of the interviewer than either a structured or semi-structured interview.</p> <p>There is a risk that the research questions are not fully covered.</p> <p>Difficult to capture in note form and may require recording and transcribing.</p> <p>Risk of intra-interviewer variability.</p> <p>More demanding for the interviewee than a questionnaire or structured interview.</p>

Appendix 4: Conference programme: Paris AGM and Civica conference 2014

Conference Programme

Paris AGM & Civica Conference 2014
22nd & 23rd January



Day Two Thursday 23rd January Manchester Central

09.30 – 10.30	Registration, refreshments & exhibition
10.30 – 11.10	<p>Information Governance – Storing up trouble? Elaine Smith, Performance Analyst, Denbighshire County Council</p> <p>We are storing electronic records today which will need to be maintained for many years. For example looked after children records must be retained for 75 years. This facilitated discussion will elicit thoughts from the group about the potential issues for long term storage and what can be done to ensure the integrity and security of records in a changing environment. Ideas will be discussed about how we plan to meet our legislative responsibilities with regard to the appropriate retention, accessibility and privacy of client records for years to come.</p>
11.10 – 11.40	Refreshments & exhibition
11.40 – 12.20	<p>Paris 5.1 – The user community's testing experience Michael Jones, Business Systems Manager, Denbighshire County Council</p> <p>Many Paris customers have now started testing its latest incarnation – Paris 5.1. This facilitated discussion will allow customers to share their experiences, 'must do's' and 'must don'ts' and questions about this release of software and seek Civica's expertise.</p>
12.20 – 13.00	Lunch & exhibition
13.00 – 13.40	<p>Paris Security: Challenges and solutions to the cross agency sharing agenda we face David Ellams, Business Consultant, Civica</p> <p>Do the security facilities within Paris lend themselves to the increasingly complex 'access models' we are being asked to facilitate, for example: Multi-department viewing, multi-agency access, third sector (i.e. non public sector) access, and restricting access to members of teams and/or departments? The user group met on this subject in September 2013, and identified a number of strands of UDF (i.e. security breaching UDF and/or AUDF), Core System and Configuration options that may be pursued. This session is to update on actions, and progress made within Civica and by sites, including a review of the attestation model as deployed in Vancouver Coastal Health Authority.</p>
13.40 – 14.10	Refreshments, exhibition & close



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Appendix 5: A breakdown of roles of participants in the focus group

Organisation Type	Role					
	Strategic Information Managers	IT Project Managers	Business Systems Managers	IT Trainers	Business Systems Officers	All roles
UK Local Authorities	0	2	4	0	5	11
UK Health Authorities	2	3	4	1	1	11
Overseas Health Authorities	0	0	1	0	0	1
Total	2	5	9	1	6	23

Appendix 6: The focus group powerpoint presentation - slides


Slide 1



CYNGOR
Sir Ddinbych
Denbighshire
COUNTY COUNCIL

Information Governance – Storing up trouble?


Elaine Smith
Performance Analyst
Denbighshire County Council



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Slide 2



CYNGOR
Sir Ddinbych
Denbighshire
COUNTY COUNCIL

Purpose of the group

- The purpose of this focus group is to gain an understanding of potential issues regarding the long term storage of electronic social care records
- The views expressed during this discussion will be used to develop a more detailed questionnaire to be employed for research purposes.
- Our software providers are keen to be involved in this group to understand if any of their portfolio of products could help their customers and so that requirements can be considered alongside other Paris enhancements as the product develops.
- There will be no audio or video recording of this discussion. Flip chart paper and pens will be used to record your thoughts and any ideas, thoughts and opinions expressed verbally or in writing, will be treated as anonymous.
- If you would like to receive a copy of the key findings of the study, or would be willing to participate in a more in-depth individual discussion, then at the end of this session, please complete a brief form to provide me with your contact details.




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Slide 3

Background to the study




- A study into the issues around the long term storage of electronic social care records
- This is of particular interest because of:
 - The length of time records must be kept to meet legislative requirements (e.g. 75 years for looked after children's records, 25 – 30 years for many types of medical records, 10 years for Adult Mental Health Records, 6 years for Adult Referrals).
 - The relevance and importance of these sensitive records to the individual and to society.





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Slide 4

Background to the study




- Our records are now commonly 'born digital' and in an increasingly paperless office environment, the electronic record may be the sole record retained.
- We need to be confident that we can maintain our records appropriately for the required timescales
- We also need to ensure that we are not holding records we should no longer be maintaining.



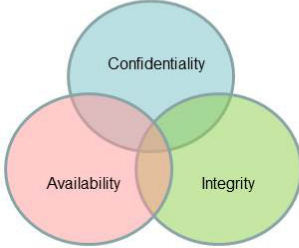
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Slide 5



The 5 pillars of records and information governance


- Confidentiality
- Integrity
- Availability
- Authentication
- Non-repudiation




A Venn diagram with three overlapping circles. The top circle is light blue and labeled 'Confidentiality'. The bottom-left circle is light red and labeled 'Availability'. The bottom-right circle is light green and labeled 'Integrity'. The circles overlap in the center and at the intersections between pairs of circles.

We need to ensure both digital continuity and data resilience.

Legally, we need to meet the requirements of both the Data Protection and the Freedom of Information Acts.

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Slide 6



So what are the threats?

- Cyber attack
- Such is the concern nationally, that in the autumn of last year, the National Cyber Crime Unit became operational as part of the UK's new National Crime Agency.
- The cost of a security breach for a large company is estimated at between £110,000 - £250,000. (Francis Maude, Cabinet Office Minister, 2012)

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Slide 7

So what are the threats?




We deal with routine security arrangements on a day to day basis, but consider the following scenarios:

- One of our looked after children becomes famous in later life and there is a strong media interest in the details of his/her childhood
- Our software providers are an established company with a strong reputation, but could our system providers in the future, potentially be bought out or taken over by a company with less integrity?
- Might changes in our organisational structures, budgetary constraints and requirements for cross agency working impact adversely upon our security arrangements?



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Slide 8

Data Resilience and digital continuity



- We can't know what our systems will look like in 50 or 100 years time. How can we maintain the availability of our data for such a long period if this is what is required?
- Can we be confident that we will be able to deal not only with future upgrades, but also potentially, with migration to new and different systems?
- Do we have systems in place to ensure that we are not maintaining data which should have been destroyed?

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Slide 9

Please could the group consider the following questions



- ❖ What do the group see as the major areas of risk impacting upon the long term maintenance of electronic social care records?
- ❖ What strategies do we have in place and what else can we do to best mitigate these risks?
- ❖ How can our software providers help us and how can we help each other?
- ❖ Are there any other thoughts which members of the group would like to contribute to the discussion.



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Appendix 7: Focus group participant details sheet

Information Governance - Storing up Trouble?

Name:

Work address:

.....

.....

Telephone number:

Email:

Please tick as appropriate:

I would be willing to participate in an individual discussion regarding issues raised during this focus group

I would like to receive a copy of the key findings of this study

Appendix 8: Freedom of Information request

I would like to make a request under the Freedom of Information Act.

Please could you provide me with copies of any current internal policies and related policies you have on the subject of:

1. Data protection
2. Information security
3. The procurement of electronic information systems
4. Retention scheduling and storage/archiving of electronic records

Please could you also provide me with the names and email addresses of:

1. The person responsible for social services information systems within your Authority.
2. The person responsible for information management and information governance within your organisation.

Appendix 9: Email inviting participation in the semi-structured interview

Dear

I am contacting you in connection with research I am undertaking as part of an MSc in Information Management with the University of Aberystwyth.

I would like to ask whether it would be possible for me to visit you in person and conduct an interview with you, which it is anticipated will take around 30 minutes.

The interview, if you agree to take part, will be semi-structured, i.e. I will ask questions to facilitate discussion, however, there will be flexibility for discussing any aspects of the subject you consider to be relevant.

To assist you in understanding the purpose of the interview and how any information you provide will be used, I have included as an attachment to this email, an information notice regarding my studies and the conduct of the interview. Should you agree to take part, I will ask you to sign a consent form. A copy of this is also attached for your information.

A copy of the key findings of this study will be made available to participants who wish to receive them. Hopefully, participation will be of interest to you and I would be grateful if you could let me know whether you would be happy to take part. If you are willing to participate, I will be in contact to arrange a date and time on which I can meet with you for the interview.

In the meantime, if you have any questions, please do not hesitate to contact me,

With best wishes,

Appendix 10: Information notice for the semi-structured interview

Research background

My name is Elaine Smith and I am studying for an MSc in Information Management with the University of Aberystwyth. For my dissertation topic, I am undertaking research into issues concerning the long term storage of electronic social care records.

Social Care records need to be kept for specific, and sometimes lengthy, periods of time to meet legislative requirements (for example, case records for looked after children are required to be kept for 75 years), these records have a particular relevance and importance to both the service user and to society. From the service users point of view, the record is a part of their history. From the organisations point of view, recent cases such as the Waterhouse Enquiry and Operation Palliol show how records may be required of events that occurred many years ago.

Electronic social care records have now largely superseded paper records in many Local Authority Social Services Departments, “the availability of, and ability to share, data and information to improve the planning and delivery of services; and the opportunities to improve efficiency and reduce costs” being seen as key concerns for a modern and efficient public sector” (Williams, 2014, p.47).

Maintaining these records over long periods of time can raise technological issues and security concerns and new approaches may be required to ensure the confidentiality, integrity and availability of information for years to come.

References

Williams, P. (2014). *Commission on public service governance and delivery: Summary report*. Retrieved from <http://wales.gov.uk/docs/dpsp/publications/psgd/140120-psgd-summary-report-en.pdf>

Conduct of the semi-structured interview

Please note the following procedures regarding the interview should you agree to take part:

- **Duration:** The interview should take about 30 minutes of your time.
- **Schedule:** The interview will follow the question schedule below but will allow for a free-flowing discussion. You can also raise other issues if you wish to do so.

- **Note taking:** The interview will not be recorded. I will make notes which will be used only for this piece of research, and in accordance with UK data protection legislation and the ethical research procedures of Aberystwyth University.
- **Confidentiality:** All information you give me will be treated confidentially. Both the conversation and the information you provide will be completely confidential.
- **Anonymity:** All interviews will be anonymous. No individuals or individual Local Authorities will be identified in any analysis. Any direct quotes included in my dissertation (that is, quotes of the things discussed in the interview), will be used selectively and anonymously (that is, no one will be able to attribute/link the words to you).
- **Data security:** The information will be kept securely, and for only as long as necessary to: a) undertake analysis of the information provided and b) complete the dissertation.
- If requested, a summary of the research findings will be sent to you once the dissertation is completed.

Interview schedule

Below is a list of the questions to be included in the interview as a basis for discussions:

1. Which electronic social care system or systems are used in your Authority for the maintenance of social care records?
2. For records which are being created currently, is the electronic record the sole means by which the record is maintained, or is a paper copy also maintained?
3. Are you confident that electronic social care records can be kept secure and remain accessible for the periods of time required to meet legislative requirements – is this something which is of concern to you?
4. Are you aware of, or have you ever consulted, any research or research projects regarding this subject, been a member of any consultative groups, or been involved in any other way in considering this subject at a strategic level?
5. What do you see as the main issues with maintaining electronic social care records on a long term basis?
6. Does your organisation have policies and procedures in place regarding

- Data protection
- Information security
- The procurement of information management systems
- Retention scheduling and storage/archiving of electronic records

Are there any other policies or procedures you are aware of within your organisation which would be relevant?

7. What would you say is the impact, if any, of using the electronic social care record for a variety of purposes (e.g.: as below)
 - Maintaining the operational social care record
 - Driving forward the efficiency and data sharing agenda
 - Measuring performance against national performance indicators
8. If a new electronic social care system were to be introduced in your Authority, who would you work with, both internally and externally, during the procurement process?
9. Do you regularly liaise with internal and external stakeholders regarding the maintenance and development of your electronic social care systems? Is this something which could be done more? If so, how do you see this developing?
10. Are there any other issues you would like to discuss?

Thank you for your participation in this study.

Appendix 11: Consent form for the semi-structured interview

Consent form

Title of project: A study into issues around the long term storage of electronic social care records.

Name of student/researcher: Elaine Smith

Project authority: This research project is being undertaken as part of an MSc in Information Management from Aberystwyth University.

- | | Please tick |
|--|--------------------------|
| 1. I confirm that I have read and understand the Information Notice for the above study. | <input type="checkbox"/> |
| 2. I have had the opportunity to consider this information and ask questions about it and have had these answered satisfactorily. | <input type="checkbox"/> |
| 3. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason and without my legal rights being affected. | <input type="checkbox"/> |
| 4. I agree to take part in the above study. | <input type="checkbox"/> |
| 5. I agree that the data I provide may be used by Elaine Smith within the conditions outlined in the Information Notice. | <input type="checkbox"/> |
| 6. I agree to the use of any anonymised direct quotes in the dissertation. | <input type="checkbox"/> |
| 7. I would like to receive a copy of the key findings of this study | <input type="checkbox"/> |

Name of participant	Signature	Date
Name of researcher	Signature	Date

Appendix 12: Sample of focus group notes

Major risks

- Migration to new/other systems
- Legacy systems – exit plans.
- Electronically meeting Data Protection Act retention and destruction rules.
- Evidence retention/destruction (audit).

Strategies

- Exit plan in place for legacy system
- Audit trails
- Migration strategy
- Licensing management

Supporting

- Sharing experiences – best practice
- User group – strong ties
- Quality assurance

Appendix 13: Sample interview transcript (marked up with coding(subscript text))

- 1. Which electronic social care system or systems are used in your Authority for the maintenance of social care records?**

[Responses to this section not included for confidentiality reasons]

- 2. For records which are being created currently, is the electronic record the sole means by which the record is maintained, or is a paper copy also maintained?**

Yes, electronic copy is sole record. Children's Services paperless since around 2007. Adult Services have become paperless in last couple of years._[paperless environment]

- 3. Are you confident that electronic social care records can be kept secure and remain accessible for the periods of time required to meet legislative requirements – is this something which is of concern to you?**

Yes – confident steps in place. Pre 2007 Children's Services had paper files which are now stored as microfiche. Current electronic information system has licence in perpetuity, so although we may change system, current system will be frozen and we can refer back. _[security, integrity and accessibility]

Strategy – retention periods are kept to. Data is deleted but a record is kept that the services has been received._[Retention scheduling]

- 4. Are you aware of, or have you ever consulted, any research or research projects regarding this subject, been a member of any consultative groups, or been involved in any other way in considering this subject at a strategic level?**

Not research._[Research and Consultation] We did employ an external consultant six or seven years ago to discuss retention periods – to create an internal policy._[Policies and procedures]

Main issues – succession planning. Issue with transfer of implicit knowledge._[Long term challenges]

- 5. What do you see as the main issues with maintaining electronic social care records on a long term basis.**

Succession planning – need people in place in the future. Transfer of skill may be forgotten about. [Long term challenges]

Retention periods – issue – somebody only says something when things go wrong. [Retention scheduling] Profile of importance of this area of work needs to be raised. [security, integrity and accessibility]

6. Does your organisation have policies and procedures in place regarding

- **Data protection** – Yes [Policies and procedures]
- **Information security** – Yes [Policies and procedures]
- **The procurement of information management systems** – Yes [Policies and procedures]
- **Retention scheduling and storage/archiving of electronic records** – one policy. Social Services specifications are separate for Children’s Services and Adult Services. [Policies and procedures]

Keep whole record for longer retention period than applies (e.g. for adoption record where part is LAC, keep whole record for adoption timescale). [Retention scheduling]

Are there any other policies or procedures you are aware of within your organisation which would be relevant.

No, but policies and procedures have been discussed quite a lot in our Authority.

Consultants did retention scheduling for whole of Authority. [Policies and procedures]

7. What would you say is the impact, if any, of using the electronic social care record for a variety of purposes (e.g. as below)

- **Maintaining the operational social care record**
- **Driving forward the efficiency and data sharing agenda**
- **Measuring performance against national performance indicators**

Safer way of doing it – one record. Paper file can be lost. Client safety. Portable assessments. Negative may be retention of systems. Change in information systems approximately every 8-9 years – stretch records over 11 systems (approximately). If nothing in place may lose data. [Migration]
Plans are more medium term rather than long term. [Long term challenges]

8. If a new electronic social care system were to be introduced in your Authority, who would you work with, both internally and externally, during the procurement process?

Other Authorities using same information systems. When last needed to re-procure, team up with health and contacted every other Local Authority in Wales. Internally, IT, procurement, legal. Touched base briefly with archives/records department but not involved as much as should have been.[Procurement process]

9. Do you regularly liaise with internal and external stakeholders regarding the maintenance and development of your electronic social care systems? Is this something which could be done more. If so, how do you see this developing?

Project team and project board meet every month. Every other month system providers attend. Internal stakeholders – IT every 2 weeks.[Maintenance and development]

Children’s Services sub-group and Adults Services sub-group meet once a month (operational staff). Meeting discusses requirements and issues – we have become more proactive. [Maintenance and development]

Don’t think we have thought that far forward through multiple systems – impossible to plan for this. Nobody has really cracked it yet. [Long term challenges]

10. Are there any other issues you would like to discuss?

Don’t think we are sorted for the next 100 years. A software supplier might see a gap and devise a system which could bring information from all software suppliers together. For example, a Welsh Government mega system which could be accessed by all Authorities.[Long term challenges]

There is a weakness with the number of different systems and with migration. A portal is needed to pull all the systems together. .[Long term challenges]

We need a long term strategy. [Long term challenges]

Thank you for your participation in this study.