Informatics Strategy Roadmap

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1. Executive Summary

1.1 Introduction

This strategy roadmap presents the proposed developments for Oxfordshire’s health information systems over the next 3 years to support the programme for Creating a Healthy Oxfordshire (CAHO). The focus is on connectivity and integration across the health and social care community, not the specific Information Management and Technology (IM&T) developments of individual provider organisations.

1.2 Vision and Goals

The Informatics Strategy Roadmap recommends the following vision and goals:

**VISION:**

*Information technology will be a critical enabler of service change and improvement in Oxfordshire’s health and social care system, and we aim to increasingly realise the following goals over the next three years:*

**GOALS:**

- The information on a patient needed to support his/her care will be available when and where it is needed by any authorised member of the clinical / social care professional team caring for that person.
- Home-based and community-based clinical care and monitoring will be enabled by remote / mobile technology that reduces the need for physical attendance at a formal care setting, or for the clinician to visit the home, and speeds up clinical care.
- Patients will be able to access their own patient record to help them manage their own health, and check that the record is correct.
- Patients and clinicians will be aware of and confident in the security and access controls applied in the management of any integrated care record, with clear opt-out and consent-to-view steps in place.

1.3 Specific recommendations of the Roadmap are:

- **Recommendation 1:** A strengthening, extension and more rigorous programme management and delivery of planned improvements to the flow of information between Acute and Primary Care (under the Transfer of Information Task Force);
- **Recommendation 2:** The development of a standards-based secure ‘health information exchange’ that integrates selected information from disparate patient / client record systems across health and social care in Oxfordshire, designed to support integrated multi-disciplinary care along patient pathways, and provide patient access to their healthcare record.
- **Recommendation 3:** A system-wide approach to the strategic standards-based development of mobile working and remote monitoring, with Providers taking the primary lead on the deployment...
of mobile and telehealth technologies supporting more flexible home and community based clinical care.

1.4 The recommendations are made in the context of and in response to:

- The programme for Creating a Healthy Oxfordshire (CAHO) aims and objectives
- The current landscape and planned developments of information systems across the Oxfordshire health and social care community
- The opportunities that the technology market provides for ‘interoperable’ information flows in health and social care
- The strong level of partnership working across the informatics community in Oxfordshire, aligned with the system-change initiatives underway

1.5 National context
The coalition Government’s White Paper – Equity and Excellence; Liberating the NHS – presents many uncertainties (at present) around informatics strategy and leadership in the future. However, what is clear both from the Ministerial Statement on the National Programme for IT (9 Sept) and from the overall direction and principles of the White Paper, is that local health communities must take full ownership and responsibility for developing and delivering informatics strategies, with patient and public involvement. This must achieve a crucial enabling impact on joined-up patient care and system transformation. Critical to this is how technology is applied to enable genuine integrated care along patient pathways, and to the delivery of connected care around and with the patient.

The blending of local health informatics strategies with the developing national context will need careful refinement and development over the next 4-6 months, in context of the review of the Summary Care Record (11 Oct, http://goo.gl/BoYK, see section 6.2 below), the newly published Department of Health (DH) Information Revolution Consultation paper (18 Oct, http://goo.gl/T46v), and the subsequent DH Information Strategy.

This strategy roadmap has been developed with the engagement and input of multiple stakeholders and organisations. The people and process involved are summarised in Appendix A.
2. Service-led change objectives – Creating a Healthy Oxfordshire

The focus of the Informatics Strategy is on enabling delivery of the programme for Creating a Healthy Oxfordshire (CAHO) aims via the application of appropriate modern technologies. This section summarises the CAHO vision against which the Informatics Strategy Roadmap should be assessed as a service-focused strategy.

2.1 CAHO Aims

NHS organisations and Oxfordshire County Council are working together to ensure we can provide high quality sustainable health and social care services in the future. Society is changing so health and social care systems need to change to respond to increasing demand, patient expectations and advances in technology and medicines.

The challenge is to ensure the highest quality care for all patients within the finite resources available. As a whole health and social care system we need to improve the quality and value for money of health services provided in Oxfordshire in a way that will keep the system in financial balance. This will involve redesigning the wide range of health care services currently provided throughout Oxfordshire. The Creating a Healthy Oxfordshire (CAHO) programme will lead to services being delivered in new ways with increased emphasis on self-care and healthy living and bringing care into the community. The programme will address different areas, these include:

- Helping people to help themselves, prevent ill-health and hospital admissions
- Developing GP and associated services in the community
- Integrating health and social care teams in the community to ensure patients can access the right treatment when they need it
- Reviewing delivery of hospital care and bringing care closer to home, when it is clinically appropriate
- Reviewing the provision of services and treatments that are shown to be clinically ineffective and inefficient

In addition to the top level CAHO aims, the Informatics Strategy Roadmap needs to consider the objectives of the Whole System Pilot (see section 2.2), with its focus on integrated, patient-focused and flexible care.

2.2 Whole System Pilot – Urgent & Specialist Care Closer to Home

As part of the programme for Creating a Healthy Oxfordshire (CAHO), the Whole System Pilot is taking place from the beginning of November in Abingdon. This pilot is testing a new health and social care model of urgent care that aims to provide care closer to home for patients who might otherwise have gone to hospital. In addition it will make sure discharge happen as soon as possible if a patient has been in hospital and requires support when they leave.
The Whole System Pilot objectives include:

- One call access, clearly understood by citizens, patients, their families and carers and health and social care staff with minimal use of eligibility criteria for access to individual services be available at the time of need
- A clear focus upon self care, prevention and care closer to home
- Offer a wide choice of services delivered locally
- are flexible and can respond quickly to changes in local need and better anticipation of such changes at a local level
- Provide integrated pathways of care and targeted improvement work so that all services perform to upper quartile / upper decile
- Enable partnership and integrated working between local people, NHS and non-NHS providers focused on delivering local services to local people
- Ensure that effort is made at every opportunity to bring services out of acute centres and into community facilities or delivered directly into people’s own homes (including early supported discharge and admission prevention)
- Ensure that opportunity for cost improvement and efficiency gains will be realised by focusing productive programmes and improvement plans in localities. These will provide the opportunity through improving quality and safety to improve cost effectiveness between and across teams in localities rather than by service lines alone
3. Context: current & planned systems architecture

The landscape of information systems for health and social care in Oxfordshire is complex, evolving and developing over many years in a largely organic and ‘provider-centric’ manner. Appendix B provides more detail on the current status and planned developments by sector, but the key issues are summarised here:

3.1 The current position

A number of key Information systems are in the process of modernising and consolidating within provider settings, but there is still a high degree of fragmentation. Systematic electronic exchange of information between care settings is limited (but with some pockets of good practice), with a considerable reliance on paper, fax, and email messaging. There is some degree of mobile working and remote access but this is limited, and the underlying network infrastructure is fragmented between different domains in Primary Care, other NHS settings (on OxNet) and Social Care. The 3G mobile data network in Oxfordshire is weak in many rural parts of the county, inhibiting remote clinical access to records.
3.2 Expected state (by end 2011)

Deployments and upgrades of Electronic Patient Record (EPR) systems will modernise and consolidate systems within care settings, and strengthen some key bilateral information flows, mainly between secondary and primary care. The introduction and spread of next-generation GP Systems of Choice (eg EmisWeb, Vision360) will also improve patient-records functionality within primary care. These developments will not however address issues of connectivity between the multiple providers of care, particularly in the complex arena of urgent care patient pathways. Remote access to clinical records will have been piloted with BT and other providers such as Blackberry, using the 2G network (rather than 3G) to help overcome mobile data connectivity. Functionality will have been developed in both RiO and SystmOne which will allow users to download a subset of patient records and then upload the updated records when they get back to their base.

This assessment (including Appendix B) of the current and expected status of informatics provision in the Oxfordshire health and social care system indicates a number of important developments and improvements, particularly in the context of individual provider care settings. However, at a system level there are significant limitations that must be overcome if the aims of the Creating a Health Oxfordshire (CAHO) programme are to be realised with essential IT support.
4. Proposed Informatics Vision and Goals

4.1 CAHO aims and IT gaps

An assessment of current information systems provision against the CAHO aims (section 2 above) indicates that the following areas are weakly supported and enabled by technology:

- Integrating health and social care teams in the community to ensure patients can access the right treatment when they need it.
- Helping people to help themselves, prevent ill-health and hospital admissions.
- Reviewing delivery of hospital care and bringing care closer to home, when it is clinically appropriate.
- Developing GP and associated services in the community.

4.2 Informatics vision and goals

In this context, the following informatics vision and goals are proposed as being the drivers behind how information systems at a local-health-community level develop over the coming three years:

**VISION:**

*Information technology will be a critical enabler of service change and improvement in Oxfordshire’s health and social care system, and we aim to increasingly realise the following goals over the next three years:*

**GOALS:**

- The information on a patient needed to support his/her care will be available when and where it is needed by any authorised member of the clinical / social care professional team caring for that person.

- Home-based and community-based clinical care and monitoring will be enabled by remote / mobile technology that reduces the need for physical attendance at a formal care setting, or for the clinician to visit the home, and speeds up clinical care.

- Patients will be able to access their own patient record to help them manage their own health, and check that the record is correct.

- Patients and clinicians will be aware of and confident in the security and access controls applied in the management of any integrated care record, with clear opt-out and consent-to-view steps in place.
5. The Informatics Strategy Roadmap

5.1 Overview

This section describes a proposed direction of travel for developing information connectivity across health and social care, and supporting delivery of the informatics goals described in Section 4.2 above.

The Informatics Strategy Roadmap proposal is that the health and social care system in Oxfordshire moves proactively from the current state of information systems architecture, through the ‘expected state’ and into a ‘vision state’ by the end of 2013.

The current and expected state is described in section 3 above. The vision state is summarised by the vision and goals proposed in section 4, but what is critical is the specific pathway that can deliver such aims, particularly relating to system-wide connectivity (see Recommendation 2 below).

Recommendation 1

The first Recommendation of the Informatics Strategy Roadmap is that the current developments on the transfer of information between Acute and Primary Care are strengthened and extended in scope, to achieve clear timetabled benefits by the end of this financial year (current programme deliverables) and by end 2011 (for extended deliverables).

The current Transfer of Information programme is focused on key areas of electronic document transfers:
- Radiology reports (implemented)
- Discharge letters (E-IDD) – Nov 2010
- Outpatient letters – Feb 2011
- A&E summaries – tbc, but due to implement by end FY

As part of the Transfer of Information programme, support to Primary Care in the management of incoming electronic document flows is being piloted with use of DocMan software. The costs and benefits of this approach will be evaluated before potential extension across primary care.

Extension in the scope of the Transfer of Information programme is provisionally:
- E-IDD communication from the Nuffield Orthopaedic Centre (NOC) and Oxfordshire and Buckinghamshire Mental Health Trust (OBMH)
- Out-of-Hours consultation report messaging
- Extending e-requesting from pathology to other services (principally radiology)
- Choose and Book - managing overall developments including for clinical assessment services, use by allied health professionals and other services to widen the scope and improve the data quality and clinical value of the system (dependent on Cerner upgrade / deployment at NOC and Oxford Radcliffe Hospitals NHS Trust (ORH)).
In addition the Transfer of Information Task Force will consider making recommendations to the Commissioning Quality Sub Committee on the need for Audit and improvement of clinical data quality transmitted via both referral and discharge documentation.

**Recommendation 2**

This recommends the development of a standards-based secure ‘health information exchange’ that integrates selected information from disparate patient / client record systems across health and social care in Oxfordshire, designed to support integrated multi-disciplinary care along patient pathways, and provide patient access to their healthcare record.

This recommendation of the Informatics Strategy Roadmap relates to the wider concept of interoperability, going beyond the mainly uni-directional focus of the Tol programme (acute to primary). This seeks to address the first proposed goal outlined above, ie -

- The information on a patient needed to support his/her care will be available when and where it is needed by any authorised member of the clinical / social care professional team caring for that person.

Initial analysis of the information needs that exist, particularly along urgent care pathways (informed by discussion at the Urgent Care Think Tank) identifies the following requirements:

- Patient demographics (validated against the Patient Demographic Service or Exeter).
- Current medications and allergies
- Diagnoses (with certain exceptions)
- Admission / contact history (including current service contacts)
- Discharge documentation
- A&E & Out-of-Hours outcome summaries

Appendix 3 provides a background introduction, with examples of interoperability projects and systems from elsewhere in the UK. With this as context, and informed by the current and planned status of information systems, there appear to be two broad approaches to creating the type of interoperability that will address the underlying information need:

a. An integration layer or ‘health information exchange’ that is a distinct technology solution, pulling in selected data from the core clinical / client systems:
b. An integration layer that is created by extending the functionality and scope of a provider-based system:

*Example 1:*
Built around the core Acute system, developing existing messaging and connectivity to extend beyond the current focus on information flows to Primary Care, and into bi-directional information flows with other clinical systems.

*Example 2:*
Built around next generation Primary Care systems (e.g., EMISweb, Vision 360), with bi-lateral information flows into Primary Care systems, and role-based-access control to selected / summary clinical data for services outside of primary care.

Both examples are represented in the single diagram that follows - this indicates the creation of an information-exchange or integration layer around a core Clinical system.
The assessment of the strategic solution to follow will be informed by the development of a business case that develops the specific requirements further for interoperable functionality. Procurement issues and options will also be investigated to confirm what process will be required (see section 5.5).

**Recommendation 3**

The final and third Recommendation of the Informatics Strategy Roadmap relates to mobile working and telehealth, and requires a strategic work-stream initiated via LISG, working closely with the current pilots and initiatives in this area. This will build on current developments relating to mobile working and telehealth (including the LAA2 project) and link in with initiatives taken forward by the Oxford Biomedical Research Centre.
5.2 Summary of ISR recommendations, and development / delivery options

**Recommendation 1:** A strengthening, extension and more rigorous programme management and delivery of planned improvements to the flow of information between Acute and Primary Care (under the Transfer of Information Task Force). The delivery timescale for this is predominantly to the end of this financial year, and achievable within current resourcing levels.

**Recommendation 2:** The development of a standards-based secure ‘health information exchange’ that integrates selected information from disparate patient / client record systems across health and social care in Oxfordshire, designed to support integrated multi-disciplinary care along patient pathways, and provide patient access to their healthcare record. There are two options for how this is taken forward into the next stage –

a. Proceed with the development of a Business Case (Nov-Jan), which if approved would lead to a Procurement process (provisionally via the Sprint II framework, an IT-specific rapid procurement process), and deployment between Q1 and Q3 of 2011/12. This would establish a foundation level integration layer, built around a patient-master-index (PMI), with core record-management functionality and scalability to extend scope and system-connectivity in the future.

b. Delay commencement on the development of a Business Case in order to investigate further the key clinically-led specific information-flow requirements – focusing on the Whole System Pilot, and conducting business-process analysis with the WSP clinical team to define more thoroughly the functional requirements of the integration layer. This pre-Business Case stage would take 2-3 months, delaying final deployment by approximately one quarter (into Q4 of 2011/12), but will strengthen the identification of needs and the depth of clinical engagement. The LISG (11 Oct) recommended this approach. In option a), the further work on needs-specification would be carried out as part of the Business Case development process, but be less in-depth and intensive.

**Recommendation 3:** A system-wide approach to the strategic standards-based development of mobile working and remote monitoring, with Providers taking the primary lead on the deployment of mobile and telehealth technologies supporting more flexible home and community based clinical care. This is principally a developmental strategic process, which LISG would take the lead on working closely with CAHO programme leads. A specific sub-group of LISG may be required to advance this area and to strengthen governance around the development and application of new telehealth technologies, which must be positioned firmly within a standards-based strategic context. A clinical workshop with interested parties from across the system is proposed to help progress the thinking and improve co-ordination of related pilots and developments.
6. Development and Deployment issues

This section covers a number of important issues that will need to be addressed in the development and implementation of the strategy recommendations, and summarises the key actions and next steps.

6.1 Information Governance / Consent Model, Patient & Public Involvement

The extension of connectivity and interoperability across health and social care systems raises important information governance and data-security issues. The success of any initiative of this nature will be dependent on the demonstrable achievement of full compliance with information governance controls, the confidence of individual patients, the public and local media, and the clinical communities in Oxfordshire. The development of a robust Information Governance and Consent model will need to be developed in tandem with the design of any ‘health information exchange’, and be accompanied by extensive and effective engagement with patients and the public. This dialogue commenced as part of the Creating a Healthy Oxfordshire (CAHO) workshop event on 29 October, and will extend to incorporate a wide range of on-line, written and face-to-face engagement opportunities.

The core principles of any integrated care record would be:

- Patients have a clear opt-out opportunity to exclude themselves from inclusion in the health information exchange;
- ‘Consent to View’ permission is given by the patient before the record is accessed by professionals involved in the care of a patient during an episode of care; this may be time limited permission;
- Role Based Access Control is incorporated into the design of the system to ensure that different levels of authorised access can be set and managed.
- The clinical data included in a health information exchange would exclude information of a sensitive nature, the definition of which would be informed by the patient and public involvement and require approval via Clinical Standards and Safety governance processes.
- The system would require sign off by both Clinical Safety and Information Governance processes.

6.2 National Summary Care Record

The review of the national Summary Care Record was published on 11 October. It concludes that –

‘The core Record should only contain a patient’s demographic details, medications, allergies and adverse reactions and this should continue to be copied from the patient’s GP record.

‘We note the coalition government’s commitment to ensuring patients have an ownership of their care records. The Summary Care Record is the minimal information required to support safe care in urgent or emergency situations. Both review groups agreed that any further information added to the Summary Care Record should require explicit consent from the patient.’ (Excerpt from the full Summary Care Record review recommendations - http://go.gov/SoJM).

The ministerial comment on the review confirmed that ‘I am pleased that a consensus has emerged about the importance of the Summary Care Record in supporting safe patient care, as long as the core information
contained in it is restricted to medication, allergies and adverse reactions. Coupled with improvements to communication with patients which reinforce their right to opt out, we believe this draws a line under the controversies that the Summary Care Record has generated up to now. We see this review as having taken a significant step towards the goal of patients owning their records and using them to share decision-making with healthcare professionals’. (Simon Burns, Health Minister).

The Oxfordshire health system is not currently deploying the Summary Care Record, and the review does not indicate expectations about the expected timescales to extend the Summary Care Record to areas not yet covered. Working closely with the Strategic Health Authority (SHA), the Primary Care Trust (PCT) and other local stakeholders will need to integrate an approach to the Summary Care Record that is consistent with local informatics strategy. The Summary Care Record does not itself provide a solution to the technology-enablement of CAHO aims, due to its focus on a limited scope of information and the prioritisation of supporting safe emergency care (as opposed to supporting integrated care in community settings / Long Term Conditions (LTCs)) but the method and timing of any Summary Care Record deployment will require careful local integration of both the technology implementation and critically the wider patient and public involvement process.

The newly published DH Consultation ‘Information Revolution’ notes a government commitment – ‘in relation to digital technologies, away from an approach where we expect every organisation to use the same system, to one where we connect and join up systems.’

This indicates, in the context of the Summary Care Record review, that interoperability across health and social care systems will remain a priority of national informatics strategy, and that the Summary Care Record itself is not seen as the ‘solution’ to interoperability.

6.3 Enabling infrastructure and standards

There are three key areas where underpinning developments are needed that will support interoperability, information exchange, and remote mobile access:

**N3 / Community of Interest Network (COIN)**

One of the precursors to greater sharing of information is ensuring the current network infrastructure can support this and removing any barriers such as having multiple networks across the County which restrict access by users not on that particular network. Further expansion of the COIN is planned during 2011 to add more GP practices to the Oxnet network which will enable clinicians to share information more easily.

**NHS Number**

Interoperability and electronic information exchange relies upon a number of technical and data-definitional standards, a key one of which is a common patient / client identifier. At a system level this has been agreed as being the NHS number, the application of which in Social Care records enables agreed information exchange (under information governance protocols) and interoperability with NHS systems. The systematic use and validation of NHS in Social Care records in addition to NHS patient record systems needs to be supported and sustained to enable realisation of the goals around integrated working and
interoperability. It is proposed that, via LISG, a target trajectory is agreed and monitored for achieving and maintaining full use and validation of NHS across stakeholder organisations.

**Mobile data network**

Connectivity via the 3G mobile data network in parts of Oxfordshire is poor, and pilots have demonstrated that it cannot be relied upon as the basis for mobile remote access to clinical records. As a result, developments relating to Recommendation 3 of this strategy roadmap will need to investigate and exploit alternative connectivity options, including use of the 2G network.

**6.4 Actions and next steps**

The key actions and next steps to take forward this strategy roadmap, if approved by CAHO Board, are summarised as follows:

Taking forward main Informatics Strategy Roadmap Recommendations:

- For Recommendation 1: ensure delivery of current Transfer of Information deliverables; Transfer of Information Task Force to review and update scope of the programme to extend benefits beyond current plans.
- For Recommendation 2: proceed with agreed option for development as outlined in 5.5 above, ie either Business Case development, or pre-business case needs analysis connected with Whole System Pilot.
- For Recommendation 3: establish the Local IT Strategy Group (LISG) work-stream and potentially sub-group; improve cross-system clinical engagement, including CAHO mobile/telehealth workshop.

Taking forward related and enabling work-streams:

- Summary Care Record: refine and amend Local health informatics plans for 2011 onwards to integrate a suitable approach to deployment of the Summary Care Record.
- Infrastructure: develop and extend the Community of Interest Network (COIN) across primary care, with input from the Primary Health IM&T Advisory Group (PHIMTAG).
- NHS number: target trajectory is agreed and monitored for achieving and maintaining full use and validation of NHS across stakeholder organisations.
Appendix A - Stakeholders involved in developing the Informatics Strategy Roadmap

The development of this strategy roadmap has involved a number of different groups and individuals, summarised below:

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<th>Local Health Community IM&amp;T Strategy Group</th>
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<tr>
<td>Additional 14 Sept workshop participants</td>
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<tr>
<td>Urgent Care Think Tank attendees</td>
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<tr>
<td>PHIMTAG (Primary Health IM&amp;T Advisory Group)</td>
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<td>CAHO programme leads</td>
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<tr>
<td>PCT IM&amp;T Strategy group</td>
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<td>Transfer of Information Task Force</td>
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These groups have involved the following people -

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
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<tbody>
<tr>
<td>Sarah Adair</td>
<td>PCT</td>
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<tr>
<td>Paul Altmann</td>
<td>SHA</td>
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<tr>
<td>Mary Applegate</td>
<td>ORH</td>
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<td>Alison Bussey</td>
<td>OBMHT</td>
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<td>Andy Chivers</td>
<td>GP / PCT</td>
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<td>Judith Collyer</td>
<td>SCAS</td>
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<tr>
<td>Claire Davies</td>
<td>PCT</td>
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<tr>
<td>Jaynie Fabershak</td>
<td>SHA</td>
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<tr>
<td>Richard Foggitt</td>
<td>PCT</td>
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<tr>
<td>John Galuszka</td>
<td>GP / PCT</td>
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<td>Christine Hewitt</td>
<td>CHO</td>
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<tr>
<td>Chris Hornby</td>
<td>GP</td>
</tr>
<tr>
<td>Jonathan Kay</td>
<td>ORH</td>
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<tr>
<td>Simon Kearey</td>
<td>OCC</td>
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<tr>
<td>Darren King</td>
<td>OLMT</td>
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<td>Rachel Martin</td>
<td>PCT</td>
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<tr>
<td>Bill McAvoy</td>
<td>SHA</td>
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<tr>
<td>Lynette McGuigan</td>
<td>Practice Manager</td>
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<td>Dominic McKenny</td>
<td>OBMHT</td>
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<td>Joan Norris</td>
<td>SPARC</td>
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<td>Caroline Parker</td>
<td>OCC</td>
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<td>Sara Price</td>
<td>OPCT</td>
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<td>James Price</td>
<td>ORH</td>
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<td>Sara Randall</td>
<td>NOC</td>
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<td>Fiona Robertson</td>
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<td>John Robinson</td>
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<td>Phil Skeldon</td>
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<td>John Skinner</td>
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<td>Christine Vize</td>
<td>OBMHT</td>
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<td>Alison Westmacott</td>
<td>OPCT</td>
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Other inputs & engagement:
- Dr John Galuzka, Medical Director, PCT.
- Dr Paul Altmann, Clinical Director, Health Informatics, NHS South Central & ORH.
- Dr Paul Robin, Chair BBO LMC.
- Bill McAvoy, CIO, NHS South Central
- Andrew Stevens, Director of Planning and Information, ORH.
- Martin Bell, Director of Assurance, Information & Technology, North Bristol Trust
- Andy Kinnear, Head of Avon IM&T Consortium

Meetings and Events:
- 27 Aug: Urgent Care Task Force
- 2 Sept: Urgent Care Think Tank
- 6 Sept: ORH Information Systems Board
- 14 Sept: LISG workshop: **see key outputs - diagrammatic 'Vision State’ images over the page.**
- 20 Sept: PCT IM&T Strategy Group
- 20 Sept: CAHO programme leads
- 5 Oct: PHIMTAG
- 7 Oct: Urgent Care Think Tank
- 11 Oct: LISG
‘Vision’ pictures from Informatics Strategy Roadmap workshop 14 September 2010
## Appendix B – Current systems & planned developments

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<tr>
<th>Organisation</th>
<th>Current systems</th>
<th>Planned developments</th>
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<tr>
<td>ORH</td>
<td>OXPAS (the Patient Administration system for ORH)</td>
<td><strong>Electronic Patient Record (EPR) - Cerner Millennium.</strong> LC1 go live September 2011. First phase will involve replacement of Inpatient and Outpatient admin functions currently done within OXPAS, OXMAT and ED systems. First phase likely to involve phased replacement of TIMS (Theatre system) with Surginet, the integrated Millennium theatre system. Plans to rollout clinical functionality within Millennium over a minimum of 2 years will be developed. <strong>Notes digitisation</strong> is seen as a core component of the digital vision and should be implemented in parallel with Millennium. Procurement is underway. <strong>The Radio Frequency Identification (RFID) pilot</strong> undertaken for wireless tracking of equipment. Wider rollout planned in 2011. <strong>Electronic Patient Master Index (ePMI) - ORH has c. 40 department systems which may require integration with Millennium. A shared PMI will facilitate this. Mirth Match is being used to harmonise NOC and ORH data; this has the potential to be extended to community data as an when this is required.</strong></td>
</tr>
</tbody>
</table>
| Radiology Information System (RIS)
Picture Archiving and Communications System (PACS) | RIS\PACS. ORH to review options for replacement of PACS and RIS in light of the end of the contract in 2013. | |
<p>| Casenotes | During 10/11 continued rollout of messaging of documentation such as discharge letters, Emergency Department whiteboard, electronic inpatient ePIL, electronic immediate discharge documentation (eIDD) and continued use of Casenotes after Millennium go-live for interim order comms, discharge summaries and accessing results. Approx. 2 months post go-live a phased casenotes conversion programme will commence over a 3 month period. This will involve moving functions such as eIDD, VTE assessments, ePIL and interim order comms into Millennium. | |
| 7 pathology systems | Pathology replacement\modernisation - Current systems need replacement however progress on reprocurement may be delayed due to the re-organisation of laboratory services across the North of South Central SHA. | |
| BloodTrack SafeTX - the system used by the blood transfusion service to track blood products. | Continued development of the decision support module is planned | |
| Stroke Nav is used to collect data about the stroke patient pathway; Visensia is a physiological monitoring system | A new version of stroke nav is being implemented with options to extend it to other DGH’s. The trials of Visensia and track and trigger will also be extended. |</p>
<table>
<thead>
<tr>
<th>Organisation</th>
<th>Current systems</th>
<th>Planned developments</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOC</td>
<td>CRS Cerner Millennium Release 0</td>
<td>PACs - to be review along with ORH</td>
</tr>
<tr>
<td>Casenotes</td>
<td>Move to using LC1 upgarde from Feb 2011</td>
<td>Structural change – potential merger between ORH\NOC will impact on planned developments</td>
</tr>
<tr>
<td>PACs\RIS</td>
<td>Data warehouse – procuring new datawarehouse to support output from LC1 upgrade</td>
<td>e-rostering –started rollout</td>
</tr>
<tr>
<td>CHO</td>
<td>RIO (EPR for Community and Child Health) Release 1 (R1) upgrade including prescribing; RIOtoRIO; order comms; blood spot test results messaging. Anticipated go-live for R1 is August 2011 and August 2012 for R2. Integration across care settings which would allow a shared record between Mental Health and Community Services to be explored with Supplier by SPFIT as this is not currently in the contract.</td>
<td>Digital dictation procurement</td>
</tr>
<tr>
<td>SystmOne (EPR for Urgent Care)</td>
<td>electronic messaging to practices of discharge documentation; enhance mobile working via blackberry\intranet;  Upgrade to Release 5 expected during 2011.</td>
<td></td>
</tr>
<tr>
<td>Email</td>
<td>Continued rollout of NHSmail for secure email of patient data between clinicians</td>
<td></td>
</tr>
<tr>
<td>Casenotes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACs\RIS</td>
<td>Radiology is an ORH led service however CHO staff use PACs functionality so they will be impacted by any change of system by ORH in future</td>
<td></td>
</tr>
<tr>
<td>OXPAS</td>
<td>CHO staff will continue to use OxpAS for casenote tracking of ORH notes for patients admitted from ORH into community hospitals until ORH move to Cerner</td>
<td></td>
</tr>
</tbody>
</table>
## The Informatics Strategy Roadmap

- **Supporting the programme for Creating a Healthy Oxfordshire (CAHO)**

### Organisation | Current systems | Planned developments |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OBMHT</strong></td>
<td>PCIS (current Mental Health EPR)</td>
<td>RiO v5.4 - go live in November 2010 with completion of all phases by March 2011 (approx 2200 users), Release 1 (anticipated go-live Jan 2012) and Release 2.</td>
</tr>
<tr>
<td></td>
<td>Departmental systems (prescribing and talking space)</td>
<td>Departmental systems - a review integration\interoperability with RiO will be developed</td>
</tr>
<tr>
<td></td>
<td>Mobile working (blackberry)</td>
<td>Possibilities of options for mobile working ie use of blackberries, laptops etc to be reviewed with BT.</td>
</tr>
<tr>
<td></td>
<td>Ascribe Pharmacy system</td>
<td>Ascribe pharmacy system to be integrated with RiO</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Review Integration options between community and mental health services for the new organisation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Review data warehouse strategy in line with merger between CHO and OBMHT</td>
</tr>
<tr>
<td><strong>Primary care</strong></td>
<td>52 EMIS LV, 5 EMIS PCS</td>
<td>Explore options for practices wishing to upgrade to next generation clinical systems (hosted, web access) - EMISWeb, Vision 360, Vision online, Isoft. Investigate use of case management via EMISWeb\secure tokens</td>
</tr>
<tr>
<td></td>
<td>11 Isoft Synergy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15 INPS Vision</td>
<td></td>
</tr>
<tr>
<td></td>
<td>34 Docman - document management</td>
<td>extension of Docman software to other practices to facilitate document management</td>
</tr>
<tr>
<td></td>
<td>10 Frontdesk - appointments</td>
<td>Configuration and asset management system - review options for procurement and implementation of an asset management system</td>
</tr>
<tr>
<td></td>
<td>Choose and Book</td>
<td>IT support for GP practices - There is a need to reprocure this service as the contract is finishing.</td>
</tr>
<tr>
<td></td>
<td>GP2GP electronic patient record transfer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N3 - IP Stream</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NHSMail (44 practices)</td>
<td>Continued rollout of NHSmail</td>
</tr>
<tr>
<td></td>
<td>Online requesting\booking of appointments for patients (EMIS access)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Casenotes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electronic prescribing</td>
<td>EPS2</td>
</tr>
<tr>
<td><strong>Ridgeway Partnership</strong></td>
<td>RiO (EPR for Mental Health)</td>
<td>Upgrade to RiO Release 1</td>
</tr>
<tr>
<td></td>
<td>SUS Reporting</td>
<td>Thin Client or virtualised desktop environment</td>
</tr>
<tr>
<td></td>
<td>Patient Care reporting service</td>
<td>Data warehouse enhancements</td>
</tr>
<tr>
<td></td>
<td>TED - database of clients - archive only</td>
<td>Customer Relationship Management (CRM) system (joint with social care?)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Email archiving\encryption\PC backup</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sus reporting - upgrade to Sunquest messaging software</td>
</tr>
<tr>
<td>Organisation</td>
<td>Current systems</td>
<td>Planned developments</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Adult Social Care</td>
<td>Swift - social care administration system</td>
<td>Business case for replacement of social care administration system developed, procurement and implementation anticipated to take place during 2011\12 if funding agreed.</td>
</tr>
<tr>
<td></td>
<td>EDMS (Document Management)</td>
<td>continued development of EDMS</td>
</tr>
<tr>
<td></td>
<td>SAP, Abacus, ETMS, Cold Harbour</td>
<td>review options for integration of departmental systems with new social care system</td>
</tr>
<tr>
<td></td>
<td>Reporting Tools</td>
<td></td>
</tr>
<tr>
<td>Children's social care</td>
<td>Frameworki (with feed from SWIFT) - Childrens services administration system</td>
<td>Development of new Integrated Childrens Systems- Every Child Matters forms</td>
</tr>
<tr>
<td></td>
<td>EDMS (Document Management)</td>
<td>Integration of other departmental systems to framework</td>
</tr>
<tr>
<td></td>
<td>SIMS (Education departmental system)</td>
<td>Family based recording to ensure familial links are capture</td>
</tr>
<tr>
<td></td>
<td>Capita One (Common Assessment Framework (CAF)\Team around the Child (TAC))</td>
<td>National eCAF for children</td>
</tr>
<tr>
<td>Transfer of Information Task Force</td>
<td>Radiology reports messaging</td>
<td>Maximise use of Choose and Book - managing overall developments including CAS services and AHPs</td>
</tr>
<tr>
<td></td>
<td>eIDD (Electronic Immediate Discharge Documentation)</td>
<td>Continued development of Casenotes for sharing of clinical documentation</td>
</tr>
<tr>
<td></td>
<td>Choose and Book</td>
<td>Electronic communication from NOC and OBMHT</td>
</tr>
<tr>
<td></td>
<td>Clinical letters</td>
<td>Out of Hours consultation on messaging to practices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wider development of CAF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electronic communication to support locality working including for clinical assessment services.</td>
</tr>
<tr>
<td></td>
<td>Emergency Department discharge summaries</td>
<td>Extending eRequesting from Pathology to other services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Docman Electronic Document Transfer (EDT) messaging of clinical information</td>
</tr>
<tr>
<td>Mobile / remote working</td>
<td>Various pilots have taken place in Oxfordshire on use of mobile technology with varying success. Users found great benefits of working remotely and being able to access their clinical data via laptops from any location however 3G broadband coverage and speed are an issue. Currently Vodaphone is the only provider of 3G broadband access to Trusts in Oxfordshire. There are problems with this technology mainly due to poor 3G coverage in some areas as no single provider of broadband services has good coverage across Oxfordshire.</td>
<td>With the implementation of national clinical systems such as RiO and SystmOne there is a requirement by clinicians for instant access to the clinical information in these systems from any location including the patient’s home. Further pilots are planned with BT and other providers such as Blackberry which uses 2G to access clinical systems. Functionality is being developed in both RiO and SystmOne which will allow users to download a subset of patient records and then upload the updated records when they get back to their base.</td>
</tr>
<tr>
<td>Network</td>
<td>Access to clinical systems is mainly via</td>
<td>One of the precursors to greater sharing of</td>
</tr>
<tr>
<td>Organisation</td>
<td>Current systems</td>
<td>Planned developments</td>
</tr>
<tr>
<td>--------------</td>
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</tr>
<tr>
<td>infrastructure</td>
<td>the OxNet network from trust sites that are on the COIN (Community of Interest Network) or in the case of GP practices the practice network. There is some mobile working and remote access but this is limited. Oxfordshire Trusts mainly use Cisco Virtual Private Network (VPN) to remotely access clinical systems such as RiO and SystmOne as well as email, personal folders and other documents. GP practices use a different system as they have individual networks and separate N3 connections to the practice. They use the BT VPN solution to access their clinical systems from home and other remote sites. Clinicians who require access to the GP clinical system from other locations are doing so via a port being opened through the practice firewall. Access to the Oxfordshire County Council network for NHS clinicians to use their systems is currently via a port being opened through the OCC network and a reciprocal arrangement is also in place for OCC staff needed to access NHS systems. Appropriate governance and security agreements are in place to allow this.</td>
<td>information is ensuring the current network infrastructure can support this and removing any barriers such as having multiple networks across the County which restrict access by uses not on that particular network. Further expansion of the COIN is planned during 2011 to add more GP practices to the Oxnet network which will enable clinicians to share information more easily.</td>
</tr>
</tbody>
</table>

Fiona Robertson, Health Informatics and Intelligence.
Oct 2010
Appendix C – Interoperability; an introduction

Interoperability – Some Approaches and Experiences Elsewhere

1. Introduction

Health services are inevitably delivered by varied providers and professional groups and interoperability is simply the ability of the diverse systems used to work together effectively. Successful interoperability is difficult and needs to take account of organisational, process and technical dimensions. Frequently problems and inefficiencies arise in the handover of care between settings and informatics has a key role in helping address these issues.

This section looks at some of the possible approaches and experiences elsewhere to help inform local debate. It is not a comprehensive market assessment and further work is needed to identify work elsewhere that has most in common with local needs, including the national CAF demonstrator projects undertaken under the Health and Social Care Integration Programme.

2. Approaches and Criteria for Successful Interoperability

a. Techniques

The list below illustrates some of the techniques used to provide the information and support the transactions necessary to deliver health care:

- **Human and paper** – often multiple data entry, prone to error and not easily searched
- **Bar coded forms** – generated in one place and read in another (e.g. primary care test requests auto read in pathology at the ORH – reduces data entry time and improves data quality)
- **Reciprocal access to systems and information** – providing extended access to systems (e.g. viewing the A&E system in MIUs and the urgent care system in A&E; hospice access to the GP record, etc.)
- **Electronic messages** – ranging from unstructured (but often effective) e-mail enquiries through to structured messages (e.g. pathology test results, radiology reports, discharge summaries)
- **Interoperable systems** – systems that are capable of working together, normally using standard electronic messages. (e.g. pathology laboratory system receiving requests, communicating with diagnostic machines, publishing results; the Oxford Clinical Intranet)
- **Data repository** – a secondary store into which agreed information is placed for controlled wider access (e.g. the Oxford Clinical Intranet for test results, discharge letters, some assessment forms; national Summary Care Record; Hampshire Health Record)
- **Integration hub** – brings together many of the tools into a framework capable of receiving and merging information from different sources, controlling access permissions, providing tailored views and messaging onward to other systems
- **Integrated systems** – where different systems are developed so that they operate as one e.g. OXNAS and sub systems, Millennium

This is not an exhaustive list and there is no single technical solution to interoperability. Some of the initial conclusions that can be drawn from this list are:

- Full integration isn’t on the agenda – too rigid and complex to suit rapidly changing models of health provision
b. Criteria for successful interoperability

The following criteria are suggested as a foundation for successful interoperability:

- Approaches need to be informed by the service model – crucially reflecting organisational responsibilities, the care pathway, imperatives for change and using the right technology to match the problem and timescale
- Trust and information governance issues have to be addressed up front
- Robust underpinning systems are needed in each sector – there has to be something to interoperate with
- Standards and willing suppliers
- Agreement between partners on the approach

3. Shared Records and Repository Projects

a. Hampshire Health Record

Summary Scope

The Hampshire Health Record is one of the longest established schemes in the country to provide a shared record to support cross sector care. The project started in mid 90’s and was developed in partnership with Graphnet (see section 4).

A combined primary and secondary care record has been developed comprising:

- An extract of the main elements of the primary care record from participating practices (e.g. allergies, medication, diagnosis, tests, treatments, based on Read coded data). Some sensitive items (e.g. sexual and mental health) are excluded. This is updated overnight.
- Discharge summaries, other correspondence and diagnostic results from participating hospitals. This is provided in near real time once the communication is available.

The system is also used to collect some data – e.g. for Portsmouth community services.

Current Participation
107 practices form Hampshire, Southampton and Portsmouth (roughly 66%)

Southampton, Portsmouth and Winchester & Eastleigh acute hospitals

**Governance**

Good progress has been made over many years with collaborative working and information governance issues.

An overarching management board with cross sector participation has been in place since inception.

The scheme has been communicated widely to patients and they are assumed to opt in to having their information shared (provided the Practice subscribes). Consent from the patient is required to view the record, and controls are in place to monitor this.

Patients can request opt out at any time and following which their record will be removed from the system.

**Benefits**

The main benefits cited are from urgent care in MIUs and A&E and access to information at admission (e.g. drug record).

**Further Plans**

The system has potential for wider use and further developments are being considered:

- To support the Common Assessment Framework (National Demonstrator) pilot by underpinning the information sharing needed for integrated community services
- As a messaging hub – relaying discharge and other communications between providers
- For patient and carer access to health records and wider information

Plans for further use will include a technical assessment of the suitability of the current platform and the case for updating this to make it more scalable and adaptable.

**b. Oxford Clinical Intranet**

**Summary Scope**

The Oxford Clinical Intranet has been in place for over a decade as a secondary care derived repository.

The system scope includes:

- Pathology (from both secondary and primary care requests) and radiology results
- Clinical communications – e.g. Immediate Discharge Documents
- Smart Forms – increasing use for assessments and referrals

An access control framework has been developed that controls the view of information a user can see – for primary care clinicians the view is limited to patients within their practice.

**Participation**

Hospital wide and GP specific data views possible:

- Very widely used within the ORH for viewing of test results and some correspondence
- Assessments, created on Level 7 in the John Radcliffe, are available to SPARC (Single Point of Access to Rehabilitation and Care) as part of the discharge planning process
• Steps are being taken to provide access from urgent primary care as a means of informing care
• More patchy use in primary care, often for GPs on an exception basis

Governance
The system is managed within the ORH, ultimately through the Information and Communications Strategy Management Board.

The PCT and wider health community has had an interest in the project since inception, has provided some development funding and the LHC IM&T Strategy Group has an oversight role in this respect.

Benefits
The system is essential to hospital clinicians for results reporting.

In primary care it is used more intermittently but is used by a significant no. of GPs when they wish to search for test results for their patients. It is also used as a repository from which clinical communications are downloaded.

The system improves communications to SPARC, via a discharge planning that starts at admission. Assessment forms are completed on the ward and then available for planning care for discharge.

Further Plans
The use of the system for results reporting will decline as Cerner Millennium is rolled out over the next few years

As part of the overall systems architecture, steps are being taken to improve patient identification through a joint patient index with the NOC, with the aim of avoiding multiple separate IDs leading to crucial information being missed or tests repeated.

There is the potential to develop this more widely into a community index around which other information could be associated – perhaps key patient status notes for those at risk of re-admission or on end of life care.

Current obstacles to wider use are the lack of a system wide patient index and the lack of data from primary care, urgent primary care, community and social care.

Since the system supplier went into liquidation in 2008 support for the system has been provided by OHIS, who have recruited specialist staff to do this. Developments are therefore limited by internal capacity.

c. Liverpool PCT

Summary Scope
Health challenges & financial pressures are driving a primary care strategy for care outside hospital, based around extended services delivered from 3 neighbourhood treatment centres and 22 health centres.

EMIS web provides a hosted version of the clinical system used by EMIS practices that enables records to be viewed in a variety of settings. Access controls and data views can be tailored to needs.
This system and wider interoperability are seen as an essential enabler to the overall strategy by supporting access to records for urgent care, closer team working and smoother clinician to clinician communications.

Liverpool PCT were an early adopter of EMIS Web and started implementation in mid 2008. Current scope includes:

- Integration with Adastra, testing with Anglia ICE and INPS Vision
- Integration with System C at University Hospital Aintree, giving urgent care clinicians access to the primary care record

The system also supports the workflow associated with some extended primary care services (anti-coagulation, minor surgery, joint injections).

The approach involves service by service implementation – agreement to information sharing, data capture forms, etc.

**Participation**

95 practices (EMIS, INPS, iSoft), although only EMIS currently able to share data

Access to EMIS web from urgent primary care – out of hours and pre A&E triage

Integrated access available from University Hospital Aintree systems to EMIS web – 6 other secondary care providers part of the health community, but not yet integrated.

**Governance**

Collaborative model led by Liverpool PCT with involvement from all services within North Mersey IM&T clinical leads in each of the PBC consortia

For access to EMIS Web, a consent to view model has been adopted

**Benefits**

Secondary care benefits cited from use in emergency departments, Heart Emergency Centre, Acute Medical Unit, specialist CCU

Primary care benefits cited from use by out of hours, city wide minor surgery, anticoagulation service, joint injections and community matrons

**Further Plans**

Further candidates for extending the use of EMIS web include primary care services for diabetes, dermatology, respiratory services, gynaecology and ENT

Further integration sought by extending access in secondary care settings and with social care

Longer term joint North Mersey EPR cited in plans with all organisation support, but timescales not clear

4. **Supplier Offerings**

a. **Cerner Health Information Exchange**

   **Approach and Scope**

The Informatics Strategy Roadmap

- *Supporting the programme for Creating a Healthy Oxfordshire (CAHO)* -
Standards based (HL7 & other) platform for developing a longitudinal record for collaborative care, based on:

- Clinical portal - web type access to customisable continuity of care documents
- Document registry – pointer to and data about each registered document
- Repository of documents

Not an EPR in itself – draws information from elsewhere

Flexible design choices around centralised, federated or hybrid repository architecture that can help address information governance and data ownership concerns

Direct patient and carer access is possible, supporting the drive for greater autonomy and self reliance

Supplier Experience

The product is used in the USA, including by some multi state providers, but not currently within the UK

Service and technology platform offering from a leading health informatics specialist supplier

Assessment

Robust platform and framework capable of supporting a wide range of future developments

Supplier with knowledge of health sector and potential for partnership development - perhaps as first of type in the UK

Access to source data systems is a concern – RiO, TPP Urgent Care and Cerner

b. Carefx and Imprivata

Approach and Scope

Imprivata provide a single sign-on solution that simultaneously logs a user into multiple applications and is currently deployed via OHIS (e.g. in cancer services where many systems need to be used)

Carefx is also available via OHIS and provides a suite of tools to support interoperability and context sharing.

Context sharing allows context specific switching between applications, for example based on a NHS no., and in principle allows users to switch between records for the same patient on disparate systems

Carefx tools include:

- Management of data retrieval from a variety of sources into a single view, via live links
- Federated data model, drawing data from source systems rather than consolidating in a repository
- Web based flexible forms to support specific workflows, onward communications etc.
- Assembly of longitudinal record

Supplier Experience

Service and technology platform offering from a leading health informatics specialist supplier
Carefx have strong experience in the USA, but also experience and partnerships within the UK. These include at Addenbrooke’s and as a partner supplier to CSC (who supply the TPP Urgent Care solution used in Oxfordshire) for clinical portal development.

Assessment

Tools already licensed for local use and could be applied pragmatically to existing systems
This may be less costly than a repository based solution, but possibly higher risk
Templates exist from pervious use that could provide insights and a basis for local development
Access to source data systems is a concern – RiO, TPP Urgent Care and Cerner

c. Graphnet

Approach and Scope

Tools and platform to aggregate information from existing NHS and social care systems across the community and present in an integrated record at the point of care, based on a document repository
Experience of filtering data from primary care to take account of recorded preferences of patients to opt out of information sharing
Adaptable web based portal views of data specific to care settings – offers the facility to record data when appropriate and therefore provide some direct EPR type facilities
Deployment can be scaled to suit specific circumstances
Role Based Access Control (RBAC) and smart card authentication compliant, can interoperate with national spine services (e.g. NHS no. tracing)
National (CfH) interoperability toolkit compliance accredited.

Supplier Experience

Health specialist supplier – relatively widely used in the UK e.g. for the Hampshire Health Record and Heart of Birmingham PCT repository
Experience of building interfaces with many UK suppliers in primary, secondary and social care and well versed with information governance issues and accreditation processes for interface development with suppliers

Service and technology platform offering from a health informatics specialist supplier

Assessment

Credible supplier with significant and directly relevant experience
Document repository based approach rather than the dynamic access to source systems offered by Carefx
Platform similar in many ways to the Oxford Clinical Intranet – Graphnet were a direct competitor to CSW before the latter failed commercially

Access to source data systems is a concern – RiO, TPP Urgent Care and Cerner
d. **EMIS Web**

**Approach and Scope**

Next generation clinical system from EMIS – fundamentally a primary care system that will replace EMIS LV and PCS, but with far greater potential to support interoperability

Offered as a hosted solution with local server to buffer and cache transfers

Has greater Practice level functionality and more flexible access controls – allowing:

- Cohorts of patients to be defined for viewing by a service or staff group – e.g. Case management, assessment hub, minor surgery service in Liverpool
- View of record for each staff group/service can be tailored

EMIS and INPS have jointly formed Healthcare Gateway to promote their ‘Medical Interoperability Gateway’ (MIG), which has now achieved national (CfH) accreditation against the interoperability toolkit

iSOFT, Adastra and CSE Servelec (RiO) have all been cited as parties to the MIG.

Full roll-out approval given for EMIS Web on 7th September after successful testing and likely to take 2-4 years

**Supplier Experience**

Very strong primary care experience and well established in the UK market

Experience from Liverpool appears to be very relevant and very persuasive

The joint venture with INPS to establish the Medical interoperability Gateway is a very promising development – although the extent to which other suppliers will deliver through this framework remains to be demonstrated

Although some good experience, EMIS is a primary care system supplier, rather than an integration services supplier

**Assessment**

Long awaited primary care product offering better support for urgent care and extended primary care services

Early indications are that practices are very keen to take this replacement for their current systems and likely to be an important part of the systems architecture in Oxfordshire, given the prevalence of EMIS practices in Oxfordshire

Need to assess how far the product is will support new services within Oxfordshire and what further interoperability tools are required

e. **INPS Vision 360 (further details awaited)**

**Approach and Scope**

Repository offered by INPS as a basis of both the interoperability of Vision practices (i.e. the route through which they communicate with other systems) and a platform for wider integration
Further details have been requested, but the product is pitched as covering similar ground to Graphnet

INPS do not see this as an equivalent system to EMIS Web. It does not offer the extended functions claimed for the core EMIS Web product (e.g. in Liverpool) but rather the tools to build wider interoperability

Isle of Wight are adopting for all their practices (all Vision) and will use for both access to shared records, but also plan to use for data entry purposes (remote updates to source systems)

Offered as a hosted and local solution

**Supplier Experience**

Very strong primary care experience and well established in the UK market

The joint venture with EMIS to establish the Medical Interoperability Gateway is a very promising development – although the extent to which other suppliers will deliver through this framework remains to be demonstrated

Mainly known as a primary care system supplier, although wider experience in other settings (pharmacy, other European countries). Experience of interoperability not clear.

**Assessment**

Likely to need to deploy Vision 360 to support interoperability for the 15 Vision practices in Oxfordshire

Need to assess how far the product is capable of supporting wider interoperability

5. **Health and Social Care Integration Programme and National CAF Demonstrator Projects**

The CfH Health and Social Care Integration Programme (HSCIP) is an initiative to help integrate services by improving information sharing between the NHS, local government and other agencies through a Common Assessment Framework (CAF).

The programme is piloting adoption of the NHS number in social care via use of the patient demographic service and system to system electronic messaging of assessments via the spine messaging service.

The nine demonstrator projects (including Hampshire) are determining the data sets needed to support the exchange of information between services, including those to cover the process of releasing patients with social care needs from hospital, and the underpinning technical standards to allow the systems to interoperate.

Some of the suppliers outlined above (e.g. Graphnet, EMIS, INPS) are involved and attempts are being made to draw information from community and mental health RiO systems in London.

The programme is a source of experience on interoperability and some of the developments started, such as messaging to and from INPS and EMIS, may be of benefit locally.

The demonstrator programme is led by local authorities and is due to conclude in March 2011.

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