Hampshire and Isle of Wight Strategic Health Authority

Central Hampshire Electronic Health Record Demonstrator

April 2003

M2 – Project Closure Report

Final Version

AMENDMENT HISTORY

Version	Date Issued	Brief Summary of Change	Author
0.1	March 2003	Headings for Completion	Trina Adams
1.0	April 2003	Draft release	Martin Budden
2.0	April 2003	Update Change Request add Financial Statements	Trina Adams
Final	April 2003	Update following distribution to Project Board	Trina Adams

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1 Introduction

1.1 Purpose of the Report

This report documents the closure of the Central Hampshire Electronic Health Record (CHEHR) demonstrator project. It summarises the project activity and funding and details unresolved issues and follow-on actions.

1.2 Background

The Central Hampshire Electronic Healthcare Record (CHEHR) demonstrator has been one of the NHSIA ERDIP demonstrators aimed at investigating the issues associated with the development of electronic patient records.

Originally a different version of the project proposal, specifically excluding clinical governance, was submitted in October 2000 as a potential ERDIP pan-community demonstrator bid. Unfortunately that proposal was not successful.

The current project was the result of a subsequent modified proposal as an ERDIP focus demonstrator, that is, smaller in scale and concentrating specifically on particular areas. The proposal was successful. Commissioning and negotiations took place in the Spring of 2001 and the project started in July 2001.

Originally the demonstrator was viewed as an 18 month project finishing in November 2002. Like most demonstrators, patient consent has been a major issue, causing roughly eight months delay. When delay became evident the project received approval for an initial extension from November 2001 to March 2003.

For 2002/03 the project was one of a small number to be granted an additional extension, specifically to develop new additional products associated with the three main development areas for integrated records, Integrated Care Records Service (ICRS), National Patient Record Analysis Service (NPRAS) and Health Records Infrastructure (HRI).

The CHEHR project has involved stakeholders from the following organisations:

- Winchester and Eastleigh Healthcare Trust
- Mid Hampshire PCT
- Eastleigh and Test Valley South PCT
- Winchester GP Out of Hours Services
- Hampshire Social Services
- Hampshire Ambulance Trust
- Hampshire NHS Direct
- Winchester and Eastleigh CHC

Following the preparation of a number of Products including a User Requirement and a Technical Specification the project tendered for a supplier and chose Summit Health Limited as a collaborative partner to provide the data repository for the CHEHR.

The Patient Master Index (PMI) for the CHEHR has been provided by a combination of data from the Exeter system, the Social Services system and the Winchester Trust PMI. The combined data was expected to be held in the e*Index system that provides the matching facilities for records without NHS numbers present.

The clinical data feeders are catalogued below.

- GP practice data uploaded daily through an intermediary, Newchurch.
- Out of Hours data collected using the Knight Owl software and loaded in real time. (later abandoned)
- Ambulance data collected by the Tenax System. Four ambulances equipped with the system for the pilot. Data is uploaded daily.
- Social Services data extracted from the Social Services in-house system. Data is pre-populated with NHS numbers. The information will be uploaded weekly.
- NHS Direct in Hampshire uses an system based on an Excel spreadsheet. In the interim before this is replaced only simple information flows will be implemented.
- Winchester Trust data including information for acute, community and mental health services. It includes information from the main Hospital Information System plus pathology, radiology and pharmacy data. Most data is sent out in real time using the Trust's e*Gate interface system (an earlier version of e-Gate).

2 Project Aims and Outputs

2.1 Objectives

CHEHR has had two main objectives:

1. To develop an electronic healthcare record that supports 24-hour emergency health and social care for residents of central Hampshire living in Winchester, Andover, Eastleigh and Mid Hampshire.
2. To test the ability of the EHR to provide information for monitoring standards of care across the complete care pathway. (clinical governance analysis)

Patient Access

The project has been commissioned separately by the South East Region Regional Information Strategy Implementation Board (RISIB) to use the electronic health record to allow patients to view their own records. Funding provision was £150,000.

2.2 Achievements

The project has developed a very strong team with good relationships with all the stakeholders.

Slippage

This has been a developmental project in the vanguard of clinical information sharing. Its purpose has been to expose and resolve complex issues. That has meant that slippage had to be expected. That side of the project management is fully covered by procedure. However, it is worth noting that the overall structure and plan for the project has remained valid throughout.

The most significant factor contributing to the slippage of the project was the lack of national guidance on consent. In the absence of national guidance the project team worked with local stakeholders, the BMA, GMC, IPU and the NHSIA to establish a way forward. Working through to a successful conclusion took an eight month period. In this time a numerous letters and emails were exchanged, a

workshop was held and finally through a meeting chaired by a Professor of Healthcare Law was a solution achieved.

Consent

As discussed above patient consent was a major issue involving in depth negotiations with the two LMCs, with the GMC, the BMA and the GPC IM&T Committee. Their willingness to enter into these negotiations and seek resolution is gratefully acknowledged.

It is hoped that the rest of the NHS will learn from this project as any similar implementations will encounter the same problems until such time as there is an agreed and implemented national policy/guidance on consent.

Software Supplier

There have been several problems with the software supplier, not least that they ceased to trade in March 2002. We have been grateful to Health Systems Consultants for picking up the responsibilities of that contract and supporting the project through to March 2003.

Extracting GP data

The GP clinical system suppliers were reluctant to work with the project, as with most of the other ERDIP demonstrators. That meant that, to proceed, a workaround was required. Several options are now available but at the time options were severely limited. The selected option, Newchurch Ltd, fitted the requirement but added to the patient consent issues because it takes data into their own clinical repository and then feeds extracts to CHEHR. The selection of supplier can now be revisited but Newchurch has provided a valuable interim arrangement that allowed the project to proceed.

Overall

The project has now finished but the concepts and the service will continue. The Hampshire and Isle of Wight Strategic Health Authority has agreed to provide continued funding as part of its programme for implementing the National IT Strategy. That work will be a new project using a completely new software supplier, Graphnet, and a new project plan and structure. The original objectives remain and existing users will continue to be supported. However, with the change, new additional objectives are being agreed specifically in the areas of the cancer NSF and PCT information needs.

Overall achievements are documented in the various evaluation reports outlined later. However key points from the project of value to the National IT Programme as quoted in the evaluation report include:

- "A solution, which combines the use of a community-wide Patient Master Index with an interface engine, has been very successful. This architecture may be effective, not only as a component of ICRS in 2008, but also to facilitate the migration of existing solutions used by Trusts to ICRS.

- The fact that the Mid Hampshire CHEHR has not suffered from performance problems may provide useful indications that either the architecture employed by Mid Hampshire or their network configuration is of a type that should be employed elsewhere.

- The model developed by Mid Hampshire (Product T35) to deal with confidentiality and consent issues should be adopted nationally.

- The authentication methods and solutions used by Mid Hampshire should be formally evaluated in order to determine their use within ICRS.

- The coding issues raised by North and Mid Hampshire about mapping between Read V3 and ICD should be resolved as a matter of some urgency. Unless this issue is taken forward there will be little clinical data of any value with which to populate ICRS.

- There is an urgent need to standardise the amount of coding structures used to capture primary care data on GP clinical systems, as it can provide some of the most useful information to support the provision of care in emergency situations. There is currently too much of a focus placed on the collection of acute data, which is useful but often does not provide a full list of medication, allergies and a full medical history.

- Use of the Personal Health Record in Mid Hampshire should be evaluated over the next six months to determine how best to develop the Personal Healthspace on ICRS. The look and feel of the Mid Hampshire solution could provide a blueprint for this."

2.3 Products Delivered

All products planned and commissioned were delivered, although some were subject the change requests catalogued in section 3.

Overall 45 products have been delivered. The funding source column notes the category of product.

• Original product	Part of the original ERDIP agreement
• Product for extension to Mar02	New products linked to the project extension from November 2001 to March 2002
• PEG	Additional work for 2003/03 commissioned by the the main, follow on streams of work within ERDIP
• NPRAS	Additional work for 2002/03 commissioned by the National Patient Record Analysis Service programme
• HRI	Additional work for 2002/03 commissioned by the Health Records Infrastructure programme

The products are listed below.

Technical product		**Funding Source**
T1	Stakeholder workshops	Original Product
T2	User requirements agreed	Original Product
T3	Clinical governance requirements agreed	Original Product
T4	Technical specification agreed	Original Product

T5	Core data set for exchange between social and health care agreed	Original Product
T6	Data standards agreed	Original Product
T7	Technical standards agreed	Original Product
T8	Security and confidentiality policy agreed	Original Product
T9	Information sharing policy agreed	Original Product
T10a	EHR central server procured	Original Product
T10b	EHR central server Yr2 rental	Original Product
T11	EHR output from GP systems developed	Original Product
T12	EHR output from Trust systems developed	Original Product
T13	EHR output from Hampshire Ambulance, NHS Direct and GP Out of Hours Services developed	Original Product
T14	Data loaded to database	Original Product
T15	Ambulance	Original Product
T16	Out of hours	Original Product
T17	Social services	Original Product
T18	Accident and Emergency	Original Product
T19	Education and training to end users provided	Original Product
T20	Clinical governance evaluation	Original Product
T21	Evaluation study completed	Original Product
T23	Open days run	Original Product
T24	Participate in cross project forums	Original Product
T25	NHS Direct Training Materials	PEG
T26	'Operational' access of EHR by Ambulance	Product for extension to Mar02
T27	'Operational' access of EHR by Out-of-Hours	Product for extension to Mar02
T28	'Operational' access of EHR by Social Services	Product for extension to Mar02
T29	'Operational' access of EHR by A&E	Product for extension to Mar02
T30	Access Protocols	PEG
T31	Consent Statistics	PEG
T33	Interface Report	PEG
T34	Evaluation Framework	PEG
T35	Consent and Confidentiality	PEG
T36	Migration Issues within Hants and Isle of Wight	PEG
T37	Migration Issues to the NHS	PEG – n/a
T38	Data Quality	PEG

T39	Clinical Governance Evaluation	PEG
T40	NSF Gap Analysis	PEG
T41	Clinical Database Management	NPRAS
T42	Clinical Analysis Feedback	NPRAS
T44	Patient Access and HRI Interface	HRI
T45	Review National Information Sharing Protocol	HRI
M2	Project Closure Report	Original Product

Key products are available on the project web site www.myhealthrecord.org.uk.

The work to allow patients to access their own records was never launched as a project stage pending ensuring that the EHR was fully operational. In the last few months the participating GPs agreed to offer this access to selected patients using the portal developed as part of Product T44, Patient Access and HRI interface. The outcome of that exercise is documented in the evaluation reports.

3 Changes to Plan

The project team has issued 23 change requests or issue reports. They are catalogued below. Most are associated with financial control due to slippage. Slippage was due to the need to address the underlying issues associated with patient consent and lengthier implementation times than anticipated. Other key events were

- Summit Health, the project systems supplier, ceasing to trade,
- The Winchester Out of Hours Cooperative ceasing operations, and,
- The withdrawal of support by the Stockbridge Practice.

Issue No.	Date	Summary
001	20/3/01	Slippage of Product T12a resulting in payment unlikely before the end of the financial year. £50k slippage - £40k paid as work in progress, £10k brokered to following year
002	17/8/01	Redefinition of Products T10a and T10b (Product Licences) to match the payment profiles agreed during the tender process.
003	17/8/01	Slippage for Product T11 – EHR output from GP systems due to GP concerns (later to become patient consent concerns)
004	17/8/01	Necessary Change Request to release the £10k brokered following Issue 001.
005	17/8/01	Redefinition of Product T13 – EHR output from Hampshire Ambulance, NHS Direct and GP Out of Hours to split the product into the constituent parts and add the interface from Social Services. This change request allowed stage payments to be approved for separate interfaces.

006	17/8/01	Product redefinition for Product T14 – Data loaded to database – due to slippage and in recognition that the work needed subdivision.
007	17/8/01	Redefined completion date for Products T15-T18- Testing – due to slippage.
008	3/9/01	Redefined completion date for Product T19 - Education and Training to End Users Provided – due to slippage.
009	3/9/01	Redefined completion date for Product T22 – Learning materials developed – due to slippage.
010	26/11/02	Request for an extension of the project, changing the end date from November 2001 to March 2002. Catalogue of implications of project slippage due to patient consent, specifically dealing with the new payment profiles for remaining products.
011	26/11/02	Delays caused by consent issues meant changing the operational access by ambulance staff to the clinical repository.
012	26/11/02	Delays caused by consent issues meant changing the operational access by social services staff to the clinical repository.
013	26/11/02	Delays caused by consent issues meant changing the operational access by A&E staff to the clinical repository.
014	26/11/02	Delays caused by consent issues meant changing the operational access by NHS Direct staff to the clinical repository.
015	5/2/02	Redefinition of Products defined in the PID following the presentation the Business Case supporting follow on funding by the NHSIA.
016	5/3/02	Brokerage of funds associated with presentation of the Business Case.
017 (linked to 010	5/3/02	Application for additional funds associated with presentation of the Business Case.
018	28/5/02	Documenting the decision of the parent company of Summit Health, our systems supplier, that Summit Health should cease trading and the transfer of the contract to Health Systems Consultants Ltd.
019	28/5/02	Documenting the issues associated with the delivery of patient leaflets, particularly the poor performance by the chosen contractor.
020	28/5/02	Winchester OOH Cooperatives ceasing to operate. (£25,000 wasted)
021	28/5/02	Stockbridge Surgery withdrawing from the Demonstrator
022	17/7/02	Administrative change request changing the associations between products and different NHSIA budgets. No overall financial impact on the project.

023	17/7/02	Issues associated with the cash flow implications of failure to finally complete certain products, i.e. project priorities had necessitated overall work on several products rather than sequential completion of products.
024	6/01/03	The change of name for Product T27 – 'Operational Access to the EHR by OOH' to 'Operational Access to the EHR by GP's'.

4 Project Financial Summary

4.1 National Funding

The table below shows the funding allocation from the NHS IA for the three years up to end of March 2003.

Funding Allocation	**£**
ERDIP 2000/01	370k
ERDIP 2001/02	370k
ERDIP 2002/03	170k
ICRS 2002/03	270k
NPRAS 2002/03	80k
HRI 2002/03	50k
Patient Access 2001/02	150k
Total	**1 460k**

4.2 Expenditure

The table below shows the apportionment of costs over this period.

Apportionment of Costs	**%**
Staffing	40%
Consultancy Services	30%
Hardware/rental	20%
Software/rental	8%
Other	2%

5 Unresolved Issues

Not applicable.

6 Lessons Learned

The results of the project are fully documented in the evaluation reports specifically commissioned by the NHSIA. There are different categories of evaluation report most of which deal with a general overview of learning points from all the ERDIP demonstrators.

The NHSIA evaluation report dealing specifically with CHEHR is N8 – Evaluation: Final Evaluation Report - Mid Hants ERDIP. The report provides a detailed, objective analysis of the project. Overall the assessment is very positive.

7 Follow on Actions

The work of the project now continues, in the form of a new follow on project, with new updated objectives.