



National Audit Office

DEPARTMENT OF HEALTH
The National Programme for IT in the NHS

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SUMMARY



1 The National Health Service (the NHS) depends on the successful handling of vast quantities of information to function safely and effectively. The National Programme for Information Technology in the NHS (the Programme) is a ten year programme which presents an unprecedented opportunity to use Information Technology (IT) to reform the way the NHS in England uses information, and hence to improve services and the quality of patient care. The core of the Programme will be the NHS Care Records Service, which will make relevant parts of a patient's clinical record available to whoever needs it to care for the patient. The Programme also includes many other elements, including X-rays accessible by computer, electronic transmission of prescriptions, and electronic booking of first outpatient appointments.

2 The Programme was launched by Ministers in June 2002. Following the announcement of the Programme, the Department of Health (the Department) established a unit to procure and deliver the IT systems, headed since October 2002 by its first Director General for NHS IT. In April 2005 this unit became an agency of the Department called NHS Connecting for Health.¹

3 In the past, individual NHS organisations procuring and maintaining their own IT systems and the procurement and development of IT within the NHS has been haphazard. The Department did not consider this approach to have been successful, and one of the aims of the Programme has been to provide strong central direction of IT development, and increase the rate of take up of advanced IT. The Programme is being delivered mainly through contracts negotiated by NHS Connecting for Health with IT service suppliers.² Once systems have been developed by the

suppliers, further action is needed to bring them into use, such as integrating with existing IT systems and configuring them to meet local circumstances, training staff to use them, and adapting ways of working to make the best of the solutions. Four Local Service Providers are primarily responsible for organising this work, but much work is needed by local NHS organisations – Strategic Health Authorities, NHS Trusts and other providers working for the NHS, such as General Practitioners (GPs) and Pharmacists.

4 The Programme's scope, vision and complexity is wider and more extensive than any ongoing or planned healthcare IT programme in the world, and it represents the largest single IT investment in the UK to date. If successful, it will deliver important financial, patient safety and service benefits. The main implementation phase of the Programme and the realisation of benefits is mainly a matter for the future and it will therefore be some time before it is possible fully to assess the value for money of the Programme, as this will depend on the progress made in developing and using the systems it is intended to provide. It is therefore important for taxpayers and patients that this investment pays off, and for the Programme to be well managed and open to public scrutiny. Accordingly, we examined the progress being made in delivering the systems against the original plans and the costs of the Programme (Part 1); the steps taken by the Department, NHS Connecting for Health and the NHS to deliver the Programme (Part 2); how the IT systems have been procured (Part 3); and how the NHS is preparing to use the systems delivered (Part 4). We have examined progress to date in these areas and may return to carry out a further examination at a later date should this appear necessary. Appendix 1 sets out our methodology.

¹ In this report, we have used the term NHS Connecting for Health to represent both the current NHS Connecting for Health agency, and the former National Programme for IT unit.

² The four principal suppliers are BT, Accenture, Fujitsu and CSC, supported by numerous others.

5 The main projects making up the Programme are listed in Figure 3, which also shows the estimated timetable and cost of each. On the basis of our examination of the Programme, we conclude that:

- a** The Programme has strong ministerial and senior management support and commitment. The Department and NHS Connecting for Health have put in place best practice arrangements that will support the IT elements of the Programme and the Department has established best practice structures to deliver the Programme. The implementation of the Programme does not feature in current Department of Health Public Service Agreement targets nor supporting targets, but it is a necessary enabler for a number of Ministerial commitments.
- b** The Programme has the potential to generate substantial benefits for patients and the NHS. The main aim is to improve services rather than to reduce costs. The Department has put a financial value on benefits where it could, but as the main aim is to improve services rather than reduce costs, it was not possible to do so in all cases. As a consequence, it was not demonstrated that the financial value of the benefits exceeds the cost of the Programme. The Treasury's guidance³ states that benefits should be valued when possible, but recognises that sometimes they cannot be. In this case, the Treasury has accepted the Department's approach and has approved all expenditure so far made and planned.
- c** Considerable efforts were made to specify and describe the high level benefits that the different projects within the Programme are intended to deliver, for example in the agency's National Programme Implementation Guide,⁴ and documentation setting out the intended timeline and milestones for delivery of benefits.⁵ In addition, savings are expected, for example by using NHS Connecting for Health's buying power to drive down the prices paid for IT goods and services and in staff time saved through using the Programme's services, and some of these savings are planned to contribute to the Department's Gershon economies. NHS Connecting for Health has negotiated the renewal of the Department's NHS - wide licence for Microsoft desktop products, securing the lowest prices in the world. NHS Connecting for Health estimates that this and similar agreements with other suppliers will save £860 million.
- d** The procurement of the contracts centrally, rather than through local NHS units as had been the practice in the past, is independently estimated, in a report commissioned by NHS Connecting for Health, to have saved £4.5 billion in terms of the prices paid for goods and services.
- e** NHS Connecting for Health secured vigorous competitions for the IT contracts, maintaining competitive tension by negotiating contracts with at least two final bidders before selecting a winner and dispensing with the preferred bidder stage. Through the use of standard financial model templates NHS Connecting for Health made like for like comparisons of bids which, together with the vigorous competition, enabled it to achieve significant price reductions from the eight prime contractors, the difference between their initial and final bids totalling £6.8 billion.
- f** Procurement of the contracts was completed commendably quickly – all of the contracts were procured in under a year between February 2003 and February 2004, and most were concluded within ten months. Speed can help to contain the costs of procurement and this experience compares to an average of 27 months for the procurement of a single major PFI project. The Office of Government Commerce considered there to be many good features in the procurement process for wider application to government IT procurement. These included elements of contract innovation, which it has built on to develop its good practice guidance.
- g** NHS Connecting for Health bought the systems at a fixed competitive price transferring financial and delivery risk to the suppliers, and it does not pay suppliers until services are proven to be delivered and working. So, although there have been delays in delivering the NHS Care Records Service, the suppliers have borne the cost of overcoming difficulties in delivering the software and not the taxpayer. Strong incentives for the suppliers to deliver to timetable and mechanisms such as tight change control procedures are in place with the aim of providing continued value for money over the life of the Programme. The speed of the negotiations and the inclusion of a sound balance of incentives and penalties within the contracts have put NHS Connecting for Health in a strong position in its relationships with suppliers, and one that is stronger than previous government procurement practice.

³ The Green Book. *Appraisal and Evaluation in Central Government*. HM Treasury, 2004.

⁴ Accessible at <http://www.connectingforhealth.nhs.uk/implementation/>.

⁵ http://www.connectingforhealth.nhs.uk/all_images_and_docs/benefits_timeline.pdf

- h** NHS Connecting for Health has taken positive action to ensure the contractors are managing their tasks well. It has taken an intrusive but supportive approach to the management of its suppliers. Where it has identified problems, NHS Connecting for Health has taken action to address deficiencies in suppliers' performance.
- i** There has been continuity in the leadership of the central IT elements of the Programme, the Director General for IT and the Chief Operating Officer have been in post continuously since October 2002 and September 2003 respectively. But national leadership of engagement with NHS organisations and staff in implementing and making best use of the systems has changed a number of times and resource constraints limited the scale of early engagement efforts. Responsibility for this work was given a higher profile with the appointment of National Clinical Leads in late 2004 and the introduction of stronger management arrangements during 2005.
- j** The Department and NHS Connecting for Health decided to conclude the bulk of procurement activities before focussing on communicating with and engaging NHS staff. Wider engagement and mobilisation of the NHS was not started until NHS Connecting for Health judged that procurement had reached a sufficient stage of maturity to be able to communicate its outcome in a meaningful and efficient way. It was concerned that to have done so earlier might have raised expectations which were either speculative or may not have been met and there were also resourcing constraints.
- k** There is support amongst NHS staff for what the Programme is seeking to achieve, but also significant concerns amongst some staff: that the Programme is moving slower than expected, that clarity is lacking as to when systems will be delivered and what they will do. Particular concerns were raised by GPs that they would be forced to replace their existing IT systems. In response to this, NHS Connecting for Health is finalising an agreement with suppliers intended to make it much easier for GPs to stay with their existing suppliers. Conversely, other systems have been well received by users including GPs.
- l** Some elements of the Programme had already been delivered, including some elements added to the Programme and outside its original brief. Achievements to early April 2006 included:
- The Quality Management and Analysis System (QMAS) to support the new contract for General Practitioners from April 2004 was delivered on time and budget and is being used by all GPs.
 - A new NHS wide directory with half a million entries and an email system (NHSmal) with 80,000 active users and 168,000 staff registered to use the system.
 - The first 14,130 connections (compared to a target for March 2006 of 12,000) of the 18,000 eventually planned for the new NHS secure communications network, the New National Network (N3).
 - Initial milestones for new systems to deliver Ministerial targets for Choice and the Electronic Prescribing Service, and deployments of X-ray and other diagnostic images systems (Picture Archiving and Communications Systems – PACS), with PACS systems installed at 30 Trusts out of the planned final total of 130.
 - The Choose and Book system available at all relevant locations, and being used for 12 per cent of bookings. A total of 261,983 Choose and Book bookings had been made to 3 April.
 - The Electronic Prescribing Service available at around 15 per cent of GP surgeries and pharmacies, and used to issue a total of 726,843 prescriptions by 3 April.
 - A total of 9,600 initial deployments of software of various types, the registration of 208,990 staff for issue with Smartcards for secure access and 45,000 NHS staff accessing the NHS Care Record Spine every day.
 - Availability of the Programme's services has for the most part exceeded the contractual targets.

- m** However, achievement of other milestones has been deferred:
- The National Data Spine first went live on time, in June 2004, but achievement of later milestones for building up its functionality has been delayed by up to ten months.
 - Local Service Providers' delivery of the first phases of the NHS Care Records Service and the advanced integrated IT systems that are central to the long-term vision for the Programme will now be later than originally planned. Deployment of the national clinical record is now planned in pilot form from late 2006, compared to the original plan of December 2004, and in its full form from late 2007. In the interim, Local Service Providers have provided Patient Administration Systems; these are linked to the Spine for security, single sign-on, Choose and Book, Personal Demographic Services (PDS), Electronic Prescribing Service and together with other Programme systems, to support NHS organisations in urgent need of new or replacement IT systems. However, the plan remains for the entire implementation to be completed by 2010 in accordance with originally contracted timescales.
 - While the software for Choose and Book was delivered on time, the take up of the system to support patient choice has been slower than initially planned as a result, amongst other things, of an extension of the scope of the system to support the introduction of patient choice and the time needed by suppliers of existing IT systems to make their systems compliant. Deployment of the Electronic Prescribing Service and PACS (which was added to the Programme in September 2004) has also started more slowly than initially planned, but NHS Connecting for Health expects Ministerial targets for the later stages of deployment to be achieved.
- n** In May 2005 the Department published the NHS Care Record Guarantee setting out the principles it intends to apply to protect the confidentiality of electronic patient records. Work continues on a number of important practical issues, including sharing information with non-NHS bodies, such as local authority social services, and the working of 'sealed envelopes' intended to allow patients to limit the sharing of information about themselves.
- o** The full gross cost of the Programme includes the nationally agreed contracts, including approved additions, other central expenditure and the local implementation costs. Whilst some of this expenditure is directly managed by NHS Connecting for Health, management of local IT expenditure is a matter for the local NHS bodies concerned. NHS Connecting for Health does not seek to maintain a detailed estimate of overall expenditure on the Programme but makes broad projections of expenditure. Our analysis of these projections indicated that provision had been made for total spending on the Programme (at a gross level, i.e. without deduction for possible savings or benefits) of £12.4 billion (at 2004-5 prices)⁶ over the ten year life of the main contracts, to 2013-14. This is not a budget but an amalgamation of fixed price contracts, extrapolation of costs beyond the contract periods and provisional forecasts of other costs.
- p** The elements comprising this total are:
- **£6.2 billion** by NHS Connecting for Health on the fixed price contracts let in 2003 and 2004, in line with the announcements made at the time of contract awards. These contracts are being managed within this total.
 - **£382 million** contracted expenditure on new projects added to the original scope of the Programme, predominantly PACS, where the cost of providing central data stores is £245 million.
 - **£239 million** on additional services to be purchased beyond the scope of the original core contracts (a mixture of contracted expenditure and estimated costs).

6 Including capital investment but excluding depreciation.

- **£1.9 billion** in other central expenditure, primarily by NHS Connecting for Health on centrally managed projects and services within the Programme and running NHS Connecting for Health, based on current estimates of likely expenditure. NHS Connecting for Health told us that on the current scope of the Programme, they expect that actual expenditure will be less than this amount, because once the initial stages of system development and deployment have passed, NHS Connecting for Health's task will diminish and its continued existence as a separate organisation would need review in accordance with the principles of the Department's 2004 review of its Arm's Length Bodies. NHS Connecting for Health told us that it expected the maximum outturn for the management of the Programme to be less than £1.5 billion over the ten-year term.
 - **£337 million** on the estimated cost of replacing core contracts that expire before the end of the ten year period to 2013-14. This is a notional allowance to recognise that expenditure will be required to continue these services, but it is too early to make a more precise estimate of their likely cost.
 - **£3.4 billion** in expenditure by local NHS organisations, for example on local IT and training and ensuring compliance of local systems with Programme delivered systems. It is not committed expenditure but is based mainly on the forecasts of expenditure made in the investment appraisals carried out at the time of the award of the main LSP contracts in late 2003 and early 2004. Approval and management of this expenditure is a matter for local management.
- q Up to the end of March 2006, actual expenditure on the contracts let in 2003 and 2004 has been lower than planned, with £654 million (estimated outturn) spent against expected expenditure of £1,448 million, reflecting the slower than planned delivery of some systems and the successful operation of contractual provisions that suppliers will only be paid once services are proven to be delivered and working.
 - r The Programme is also expected to release IT funds within the local NHS, for example when the deployment of new systems paid for by NHS Connecting for Health replaces systems that local NHS bodies had previously been paying for. NHS Connecting for Health does not monitor systematically the actual impact the Programme is having on local IT spending or the extent to which the initial estimates of its impact are being borne out in practice. However, it believes that experience of individual deployments so far has confirmed the scope for local savings on a substantial scale. NHS Connecting for Health also believes that the patient safety benefits expected from the Programme could be worth many billions over ten years.
- 6 On 30 May 2006, the Minister of State for Reform (Lord Warner of Brockley) who is responsible for the Programme, was reported in the media as having said that the full cost of the Programme was likely to be nearer £20 billion. NHS Connecting for Health has told us that he was not referring solely to the costs of the Programme but to the total expenditure on NHS IT over ten years.



CONCLUSIONS AND RECOMMENDATIONS

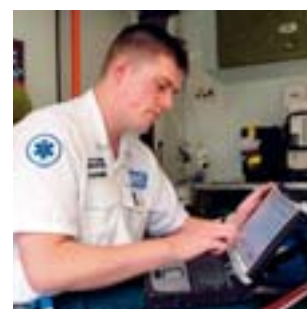
7 The Department and NHS Connecting for Health have made substantial progress with the Programme. They have established management systems and structures to match the scale of the challenge. They successfully placed contracts very quickly, after securing large reductions in prices from bidders, and including contract terms that include important safeguards to secure value for money for the taxpayer. Deployments of operational systems have begun and NHS Connecting for Health has taken on, and in some cases already delivered, several additional tasks which were not within the original brief for the Programme. NHS Connecting for Health has adopted many of the key lessons of prior public IT failures. The notable progress and tight control of the central aspects of the programme are to be commended.

8 Successful implementation of the Programme nevertheless continues to present significant challenges for the Department, NHS Connecting for Health and the NHS, especially in three key areas:

- Ensuring that the IT suppliers continue to deliver systems that meet the needs of the NHS, and to agreed timescales without further slippage.
- Ensuring that NHS organisations can and do fully play their part in implementing the Programme's systems.
- Winning the support of NHS staff and the public in making the best use of the systems to improve services.

9 In going forward, we make the following recommendations:

- a** The Department of Health and NHS Connecting for Health should provide greater clarity to organisations and staff in the NHS as to when the different elements of the Programme will be delivered. NHS Connecting for Health should ensure that it has a robust engineering-based timetable for delivery, which it is confident its suppliers are capable of achieving.
- b** NHS organisations should communicate to members of staff how such a timetable will affect them, and forewarn them of the challenges facing the Programme, so that the setbacks and changes of priority inevitable with a programme of this size do not cause a loss of confidence.
- c** NHS Connecting for Health should continue its strong management of suppliers' performance, including its imposition of contractual penalties where needed to encourage suppliers to deliver on their commitments, including if necessary termination and replacement of contractors. Whilst some adjustment of suppliers' milestones for the delivery of functionality may be a necessary pragmatic response to suppliers' difficulties in delivering, it should not allow this to compromise the eventual achievement of the vision of the fully integrated care record service that was the objective of the Programme at its inception.



- d** The Department and the NHS should prepare an annual published statement quantifying the benefits delivered by the Programme. The main justification of the Programme is to improve services to patients, rather than merely to make economies in providing pre-existing standards of service. Quantification of benefits, including financial benefits and quality improvements delivered, set against the costs incurred, will help to demonstrate the actual benefits achieved across the Programme and improve the transparency of value for money being achieved through its implementation. It will also highlight where efficiency improvements are being made.
- e** The Department, NHS Connecting for Health and the NHS should commission a study to measure the impact of the Programme on local NHS IT expenditure – both costs and savings – where systems are now being deployed, and, together with its quantification of financial and non-financial benefits (recommendation (d)), use this to provide an up to date assessment of the overall investment case for the Programme.
- f** The Department and the NHS should continue to evaluate the experience of NHS organisations that have recently introduced IT systems similar to those to be provided by the Programme, to use their experience to help identify and quantify the service and efficiency improvements that such systems can deliver.
- g** The Department, NHS organisations and NHS Connecting for Health should put in place training and development programmes to strengthen capability, including project management and IT skills available to the wider NHS, continuing its work with the Office of Government Commerce. The shortage of such skills is an immediate risk to the timely implementation of the Programme, and strengthening capacity in these areas will be a long-term asset for the NHS.
- h** The Department and NHS Connecting for Health should build on the early success of the National Clinical Leads by designating further Leads using individuals of similar calibre, to help build momentum for the Programme as it is deployed across the NHS.
- 10** We also believe that other organisations could learn lessons from NHS Connecting for Health's experience so far, in particular the advantages that were gained through the swift procurement exercise, the incentives and penalties included in the contracts and the robust management of the suppliers. These lessons are set out in Appendix 2.