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Committee of Public Accounts

Department of Health: The National Programme for IT in the NHS

Twentieth Report of Session 2006–07

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Contents

Report

Summary

The National Health Service (NHS) needs modern Information Technology (IT) to help it to provide high quality services to patients. The National Programme for IT in the NHS ("the Programme" or NPfIT) was set up to provide such services, using centrally managed procurement to provide impetus to the uptake of IT and to secure economies of scale. It constitutes the largest single IT investment in the UK to date, with expenditure on the Programme expected to be £12.4 billion over ten years to 2013–14.

The central vision of the Programme is the NHS Care Records Service, which is designed to replace local NHS computer systems with more modern integrated systems and make key elements of a patient's clinical record available electronically throughout England (e.g. NHS number, date of birth, name and address, allergies, adverse drug reactions and major treatments) so that it can be shared by all those needing to use it in the patient's care. The Programme also includes other services, such as electronic prescriptions, an email and directory service for all NHS staff (NHSmail), computer accessible X-rays (Picture Archiving Communication Systems), and a facility for patients to book electronically first outpatient appointments.

The stakes are high. If it succeeds in its aims, the Programme could revolutionise the way the NHS in England uses information, and make significant improvements to the quality of patient care. But if it fails, it could set back IT developments in the NHS for years, and divert money and staff time from front line patient services.

On the basis of a report by the Comptroller and Auditor General,[1] we examined the progress made by the Department of Health (the Department) in implementing the Programme. In particular we examined the current status of the shared electronic patient clinical record; the costs of the Programme; the local management and implementation of the systems within the NHS; the extent to which clinicians were involved in developing the systems; the management of suppliers; and patient confidentiality. We took evidence both from the Department of Health, including its agency NHS Connecting for Health; from two former senior members of the Programme, Dr Anthony Nowlan, formerly a Director of the NHS Information Authority, and Professor Peter Hutton, former Chairman of the National Clinical Advisory Board; and from Mr Andrew Rollerson, a senior manager within Fujitsu, one of the main suppliers to the Programme, but speaking in a personal capacity. We have also received and reviewed a number of written submissions.

In summary, we draw four overall conclusions:

- The piloting and deployment of the shared electronic patient clinical record is already running two years behind schedule. In the meantime the Department has been deploying patient administration systems to help Trusts urgently requiring new systems, but these systems are not a substitute for the vision of a shared electronic patient clinical record and no firm plans have been published for deploying software to achieve this vision.

1 C&AG's Report, *Department of Health: The National Programme for IT in the NHS*, HC (2005–06) 1173

- The suppliers to the Programme are clearly struggling to deliver, and one of the largest, Accenture, has now withdrawn. The Department is unlikely to complete the Programme anywhere near its original schedule.
- The Department has much still to do to win hearts and minds in the NHS, especially among clinicians. It needs to show that it can deliver on its promises, supply solutions that are fit for purpose, learn from its mistakes, respond constructively to feedback from users in the NHS, and win the respect of a highly skilled and independently minded workforce.
- Four years after the start of the Programme, there is still much uncertainty about the costs of the Programme for the local NHS and the value of the benefits it should achieve.

The conclusions and recommendations in this report need to be addressed and implemented by the Department if the significant public funds being invested in the Programme are to deliver the services expected by the NHS for the benefit of patients.

Conclusions and Recommendations

1. **The delivery of the patient clinical record, which is central to obtaining the benefits of the programme, is already two years behind schedule and no firm implementation dates exist.** By now almost all acute hospital Trusts should have new NPfIT patient administration systems (PAS) as the essential first step in the introduction of the local Care Record Service. As of June 2006 the actual number was 13 hospitals. In June 2006 the Department wrote to us stating that by October 2006 there would be a further twenty-two. So far as we are aware, up to the end of February 2007 the number has increased by only five acute hospitals. The introduction of clinical as opposed to administrative software has scarcely begun; indeed, essential clinical software development has not been completed. The Department should develop with its suppliers a robust timetable which they are capable of delivering, and communicate it to local NHS organisations who may then have greater confidence as to when systems will be delivered.

2. **The Department has not sought to maintain a detailed record of overall expenditure on the Programme and estimates of its total cost have ranged from £6.2 billion up to £20 billion.** Total expenditure on the Programme so far is over £2 billion. The Department should publish an annual statement outlining the costs and benefits of the Programme. The statement should include at both a national and local level original and current estimates of total costs and benefits, costs and benefits to date, including both cash savings and service improvements, and any advances made to suppliers.

3. **The Department's investment appraisal of the Programme did not seek to demonstrate that its financial benefits outweighed its cost.** The main justification for the Programme is to improve patient services, and the Department put a financial value on benefits where it could. The Department should also quantify non-financial benefits, even if they are not valued, to better inform decision making and to provide a baseline for work after implementation to ensure that the intended benefits are being fully realised. The Department should commission and publish an independent assessment of the business case for the Programme in the light of the progress and experience to date.

4. **The Department is maintaining pressure on suppliers but there is a shortage of appropriate and skilled capacity to deliver the systems required by the Programme, and the withdrawal of Accenture has increased the burden on other suppliers, especially CSC.** The Department should review with suppliers their capacity to deliver, and use the results of this review to engage, or to get suppliers to engage, additional capacity where required. It should also regularly review suppliers' performance for any signs of financial difficulties potentially affecting their ability or willingness to discharge their obligations. In view of the slippage in the deployment of local systems, the Department should also commission an urgent independent review of the performance of Local Service Providers against their contractual obligations.

5. **The Department needs to improve the way it communicates with NHS staff, especially clinicians.** The Department has failed to carry an important body of clinical opinion with it. In addition, it is likely that serious problems with systems that have been deployed will be contributing to resistance from clinicians. It should ask the heads of the clinical professions within the Department, such as the Chief Medical Officer, to review the extent of clinical involvement in the specification of the systems, and to report on whether they are satisfied that the systems have been adequately specified to meet the needs of clinicians.

6. **We are concerned that leadership of the Programme has focused too narrowly on the delivery of the IT systems, at the expense of proper consideration of how best to use IT within a broader process of business change.** The frequent changes in the leadership of the Department's work to engage NHS organisations and staff have damaged the Programme and convey that the Department attaches a low priority to this task. The Department should avoid further changes in the leadership of this work, beyond those necessary to improve its links with clinicians, and strengthen the links between the Programme and the improvement of NHS services that the Programme is intended to support.

7. **The Department should clarify responsibility and accountability for the local implementation of the Programme.** At a time when many changes are taking place in the configuration of the local NHS and a range of other initiatives require implementation, it is essential that Chief Executives and senior managers in the NHS understand the role they need to play in the implementation of the Programme. The Department should make clear to Chief Executives and senior managers their objectives and responsibilities for local implementation, and give them the authority and resources to allow local implementation to take place without adversely affecting patient services.

8. **The use of only two major software suppliers may have the effect of inhibiting innovation, progress and competition.** In addition, the fact that the Programme has lost Accenture, Commedica and IDX, three key suppliers, is running late and is having difficulty in meeting its objectives raises doubts over whether the contracts will deliver what is required. The Department should seek to modify the procurement process under the Programme so that secondary care trusts and others can if they wish select from a wider range of patient administration systems and clinical systems than are currently available, provided that these conform to national standards. This approach could have the benefit of speeding up the deployment of new systems and of making it easier to secure the support of clinicians and managers. We are concerned in particular that iSOFT's flagship software product, 'Lorenzo'—on which three fifths of the Programme depends—is not yet available despite statements by the company in its 2005 Annual report that the product was available from early 2004.

9. **At the present rate of progress it is unlikely that significant clinical benefits will be delivered by the end of the contract period.** As a matter of urgency the Department must define precisely which elements of functionality originally contracted for from the Local Service Providers will be available for implementation by the end of the contract period and in how many NHS organisations it will be

possible to have this functionality fully operational. The Department should then give priority to the development and deployment of those systems of the greatest business benefit to the NHS, such as local administration and clinical systems.

1 The Programme's vision

1. The Programme is the most extensive IT healthcare development of its kind in the world and constitutes the largest single IT investment in the UK to date.[2] Its aim is to enable the NHS in England to treat patients more effectively by, for example, making accurate patient records available at all times, transferring information rapidly between different parts of the NHS, and accurately transmitting prescriptions to pharmacies.[3]

2. At present, NHS patient records are primarily retained on paper; and even when information is stored electronically, the large number of incompatible NHS IT systems makes the sharing of information difficult.[4] The central vision of the Programme is therefore to introduce an integrated system called the NHS Care Records Service.[5] This consists of two elements. The first is the local detailed clinical record, for use within local healthcare communities where the overwhelming majority of patient care is delivered. It contains the information which needs to be available to GPs, community clinicians and hospitals (such as pathology test results, drugs prescribed or hospital discharge notification) and it enables clinicians to record diagnoses, order tests and prescribe drugs. The second element is the national summary clinical record which aims, for example, to support emergency care for people injured or taken ill while away from home. The Programme will also provide additional services, such as electronic transmission of prescriptions, an email and directory service for all NHS staff (NHSmail), computer accessible X-rays (Picture Archiving Communications Systems), a facility for patients to book first outpatient appointments electronically (Choose & Book) and a broadband network (N3).[6]

3. Most of the planned expenditure on the Programme is on local systems (**Figure 1**). The Department believes that the Programme's integrated national IT system will deliver significant financial, service and patient safety benefits.[7]

2 Q 9; C&AG's Report, para 4

3 C&AG's Report, para 1.4

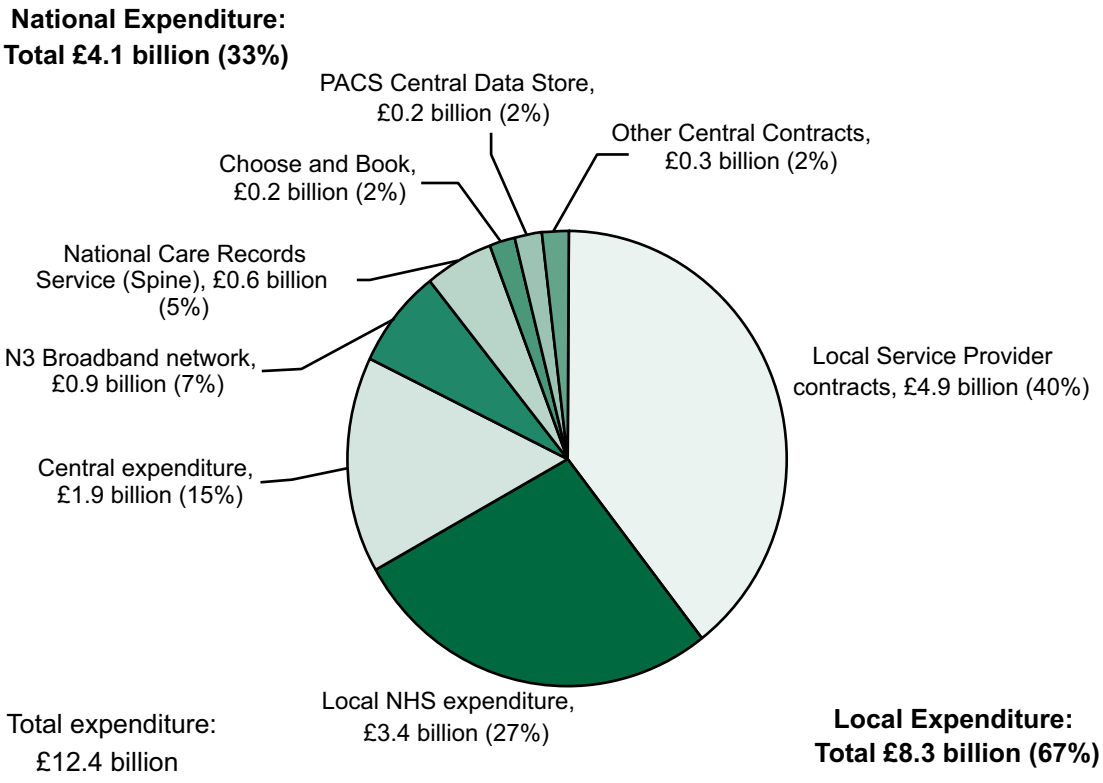
4 C&AG's Report, paras 1.1, 1.2

5 C&AG's Report, para 1

6 C&AG's Report, paras 1

7 Q 7

Figure 1: Planned local and national expenditure on the Programme



Source: C&AG's Report, paras 1.19–1.26

4. The National Programme was established in 2002 and follows Information Technology Strategies for the NHS in 1992 and 1998 which were examined by our predecessors in 2000.[8] In their examination our predecessors noted that the NHS Executive had recognised the need to take a stronger lead in the procurement of core NHS IT systems and were in discussions with suppliers and government advisory bodies about drawing on government catalogues for systems and were thinking about piloting a collaborative procurement for an agreed short list of suppliers so that local organisations would have some form of limited discretion[9]. With the National Programme, the contracts for the Programme were procured centrally rather than locally. This change in practice was driven by the Department's desire to overcome the past poor track record of the NHS in procuring and delivering IT systems, to get value for money and to deliver integrated systems that could be upgraded in the future at reduced costs.[10]

5. The Department recognised that this approach carried many risks and that implementation needed to be local and tailored to local characteristics. Moreover, whilst other countries are seeking to adopt elements of the services within the National

8 Committee of Public Accounts, Thirteenth Report of Session 1999–2000, *The 1992 and 1998 Information Management and Technology Strategies of the NHS Executive*, HC 406, para 9 (vi)

9 *Op cit*, para 9 (vi), paras 31, 34

10 Q 8, C&AG's Report, para 2.5

Programme, such as electronic patient records, these are not being introduced on a country-wide basis elsewhere.[11]

6. The Department estimated that the central procurement of the contracts through the Programme would result in a saving of £4.5 billion,[12] although any final figure for savings is contingent on the successful implementation of the Programme. Competition for the IT contracts was secured by avoiding a preferred bidder stage and procurement of the contracts was completed in under a year, and in most cases within ten months.[13] The Department's aim from this speed of procurement was to reduce risks from technology obsolescence and from higher costs as suppliers attempt to recover the cost of lengthy procurements.[14] However, Dr Nowlan told us that the production of the specification was done at breakneck speed, and largely by putting together, and then reducing, a wide range of previous specifications. Professor Hutton had been concerned at the safety of the process, and that it might result in a product that would not fulfil the Department's goals.[15] In a submission to us Mr Thomas Brooks, a member of the Worshipful Company of Information Technologists and of the all party Parliamentary IT Committee, stated that he considered the view that central procurement would produce systems that met local requirements was a fundamental error.[16]

11 Q 10, C&AG's Report, para 1.8

12 Q 120

13 C&AG's Report, paras 3.1 and 3.4

14 Q 116; C&AG's Report, para 3.4

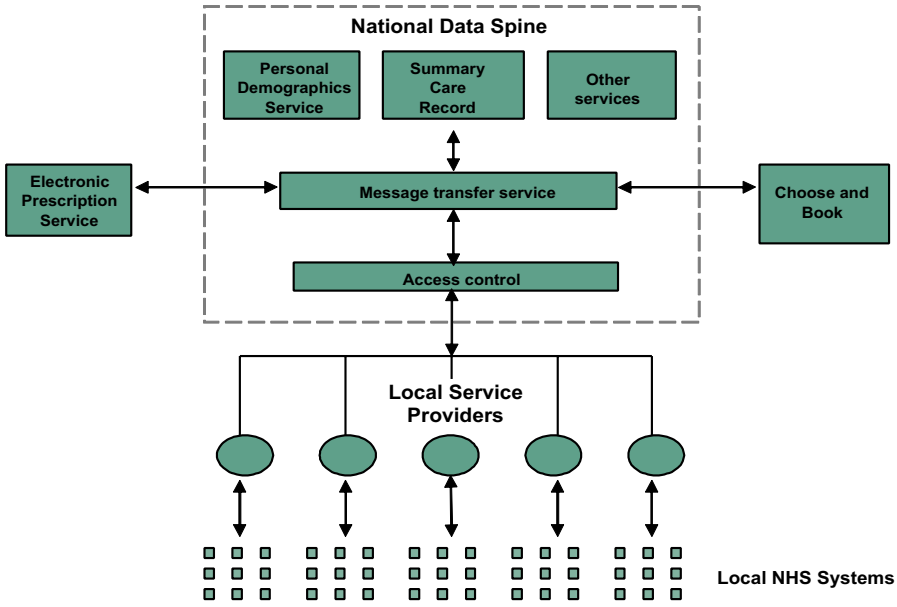
15 Qq 57, 189

16 Ev 100

2 Delivering the systems

7. The patient clinical record is to be delivered through a combination of a central system called the Spine and local systems delivered by Local Service Providers. The central and local systems work together to operate the National Care Records Service, which, in addition to the clinical record, holds non-clinical information on patients through the Personal Demographics Service, controls access to many of the Programme's service and handles the transmission of information between systems (**Figure 2**).[17]

Figure 2: NHS Care Records Service



Source: C&AG's Report, paras 5m, 1.8, 1.12; Figure 3

8. The Spine first went live in June 2004 as scheduled but the achievement of later milestones for increasing its functionality was delayed by up to ten months. By the time of our examination, the Personal Demographic Service held 72 million live records, 375,000 patient searches were being conducted every day and over 240,000 users had been registered, although this is only a small part of the overall scheme.[18]

9. The patient clinical record itself, however, had not yet been deployed at any location. It was due to be available in pilot form in late 2006, and in full form a year later, two years later than originally planned.[19] The Department told us that the decision to delay had been taken because some suppliers were having difficulty in meeting the timetable and because clinicians wanted to pilot the scheme. It hoped to have implemented most of the system by

17 C&AG's Report, paras 5m and 1.11–1.12; Figure 3

18 Qq 6, 233; C&AG's Report, para 5m

19 On 19 July the Department announced that the first phases of the patient clinical record would be introduced in a small number of locations from early 2007, with wider roll out during 2008 (Department of Health Press Release 2006/0265, 19 July 2006).

2010, but the scale of the implementation and the risks associated with it needed to be recognised.[20]

10. At the time of our hearing in June 2006, some 13 acute Trusts had had their Patient Administration System (PAS) replaced, which itself provides no care record functionality beyond what they already had. In those regions where iSOFT is the main software supplier, the replacement has been an old iSOFT PAS which pre-dates the Programme because the PAS element of the new system, Lorenzo—which is being developed for the Programme and which the company stated was available from early 2004[21]—is not yet available. In those areas in which GE/IDX was originally contracted as the main software supplier but has now been replaced by Cerner, there are delays in anglicising the Cerner product. A considerable number of Primary Care Trusts and mental health Trusts who previously had no corporate patient administration system at all have been supplied with iSOFT's old PAS. No published plans exist for implementing shared electronic patient clinical records in line with the original vision for the Programme.

11. The other projects making up the Programme have made varying degrees of progress.[22] The New National Network (N3) was three months ahead of schedule.[23] Choose and Book, the electronic system to enable patients to book first outpatient appointments, had been deployed to over 7,600 locations by April 2006, but accounted for only 20% of referrals from GPs to first consultant outpatient appointments in the week preceding our examination.[24] The Department accepted that some GPs had not had a good experience of using the system, which it believed was often attributable to local implementation issues or to the hospital's patient administration system not being up to date.[25]

12. Deployment of the electronic prescription service and the computer accessible X-ray systems had been slower than anticipated, but the Department believed that later deployment targets would be met.[26] It reported that many other local systems had been deployed, including 13 acute hospital patient administration systems.[27] Two thirds of people had access to services that were dependent on services delivered by the Programme, and the Department said that would move to 100% over the next twelve months.[28] However, in June 2006 the Department told us that it would deliver at least 22 new Patient Administration Systems (PAS) to NHS Acute Trusts between June and October 2006. But even by the end of February 2007, only a further five had been deployed, suggesting that the Programme is still unable to meet short term targets.[29]

20 Qq 1–7, 233; C&AG's Report, para 5m

21 iSOFT Group PLC 2005, *Annual Report and Accounts*, page 6

22 C&AG's Report, Figure 3

23 C&AG's Report, paras 3.17–3.19

24 Q112; C&AG's Report, para 1.13

25 Qq 112–113

26 C&AG's Report, para 5m

27 Qq 226–228

28 Q 118

29 Ev 52-54, NHS Connecting for Health website Deployment statistics

13. The experience of PAS systems that have been delivered has been patchy. Some Trusts have experienced problems including inability to report activity statistics,[30] missing patient records[31] and extended shut-down of some systems.[32] Clinical consequences have included waiting list breaches[33] and significant delays in providing inoculations to children.[34]

14. Plans published by NHS Connecting for Health in January 2005 indicated that by April 2007, 151 acute hospital Trusts would have implemented Patient Administration Systems of varying degrees of sophistication.[35] As of February 2007 only 18 had been deployed.[36] Such delays can cause considerable cost and disruption to Trusts, since they may have to replan expected live dates and spend money on preparing for expected dates that are not met. Mr Brooks told us in his submission that in his view there was no evidence that Local Service Providers have added any value to the National Programme and a cluster wide contract has not delivered any identifiable benefits.[37]

15. Total expenditure on the Programme to the end of March 2006 was £1,542 million.[38] This comprised £654 million on the contracts with suppliers against expected expenditure of £1,448 million; and a further £888 million on new projects added to the scope of the Programme, additional services, non-core projects, National Programme support for local NHS implementation, expenditure by local NHS organisations, and central administration.[39] The shortfall in expenditure on the contracts with suppliers reflected the slower than planned delivery of some systems and contractual provisions that suppliers would only be paid once services were delivered and working.[40] The Department told us that although it retained a timescale risk, it had transferred finance and completion risk for the most part to the suppliers.[41] However, the Department told us it also made advance payments to suppliers covered by a letter of credit from a bank or a charge on the company's assets of at least an equal value. By 31 March 2006 the Department had paid £443 million in forward payments to Local Service Providers and by December 2006 this figure had risen to £639 million.[42]

16. The Department told us that central expenditure on the Programme between the end of March 2006 and 31 December 2006 had risen by £532 million from £1,083 million to £1,615 million.[43] The Department had no information on expenditure by local NHS

30 Ev 93

31 *Loc. cit.*

32 *e-Health Insider*, 1 August 2006

33 Ev 93

34 CDR Weekly Volume 16 Number 25 page 11. Published by Health Protection Agency, 22 June 2006

35 NHS Care Record Service: Indicative Deployment Plan—January 2005

36 NHS Connecting for Health website Deployment statistics

37 Ev 100

38 Ev 55

39 *Loc. cit.*, C&AG's Report, para 1.22

40 C&AG's Report, para 5q

41 Q 117

42 Qq 150-152, Ev 55-58 and 81-82

43 Ev 81-82

organisations after 31 March 2006, but even counting in local expenditure only to that date, total cumulative expenditure on the Programme to the end of December 2006 is not less than £2,074 million; and because of the unknown amount of local expenditure must in practice have substantially exceeded this amount.

17. The Department had brought in resources from abroad, though with poor results for some suppliers which were requiring close attention.[44] The Department regularly assessed the financial capacity and fitness of its prime suppliers in conjunction with Partnerships UK, whose most recent review had confirmed that all the key suppliers had sufficient financial capacity to fulfil their liabilities and continue to discharge their obligations under the contracts.[45]

18. However, continuing financial problems with key suppliers including iSOFT have been widely reported.[46] Shares in iSOFT lost more than 90% of their value after a series of profit warnings and the discovery of alleged accounting irregularities.[47] The company is now under investigation by the Financial Services Authority, while its former directors and former auditors are under investigation by the Financial Reporting Council's disciplinary body, the Accountancy Investigation and Discipline Board.[48] Although iSOFT has received loan support from its banks, there is a continuing risk to the National Programme if it is overly dependent on the future stability of a small number of suppliers.

19. In September 2006, the Department, Accenture and CSC announced that Accenture was to transfer its responsibility as local service provider for its two clusters to CSC by 8 January 2007, further reducing the supplier base, though Accenture would retain its responsibility for computer accessible X-ray systems in these clusters.[49] Commedica, the PACS supplier in the North West and West Midlands cluster, has also been replaced, and IDX has been replaced by Cerner as the main software supplier for the Southern and London clusters.[50]

44 Qq 53–54

45 Qq 12–14, 53, 121–122

46 Qq 42–43

47 http://www.isoftplc.com/corporate/investor_centre/share_info.asp; http://www.isoftplc.com/corporate/news_media/2633.asp

48 http://www.isoftplc.com/corporate/media_files/Interim_Results_111206.pdf

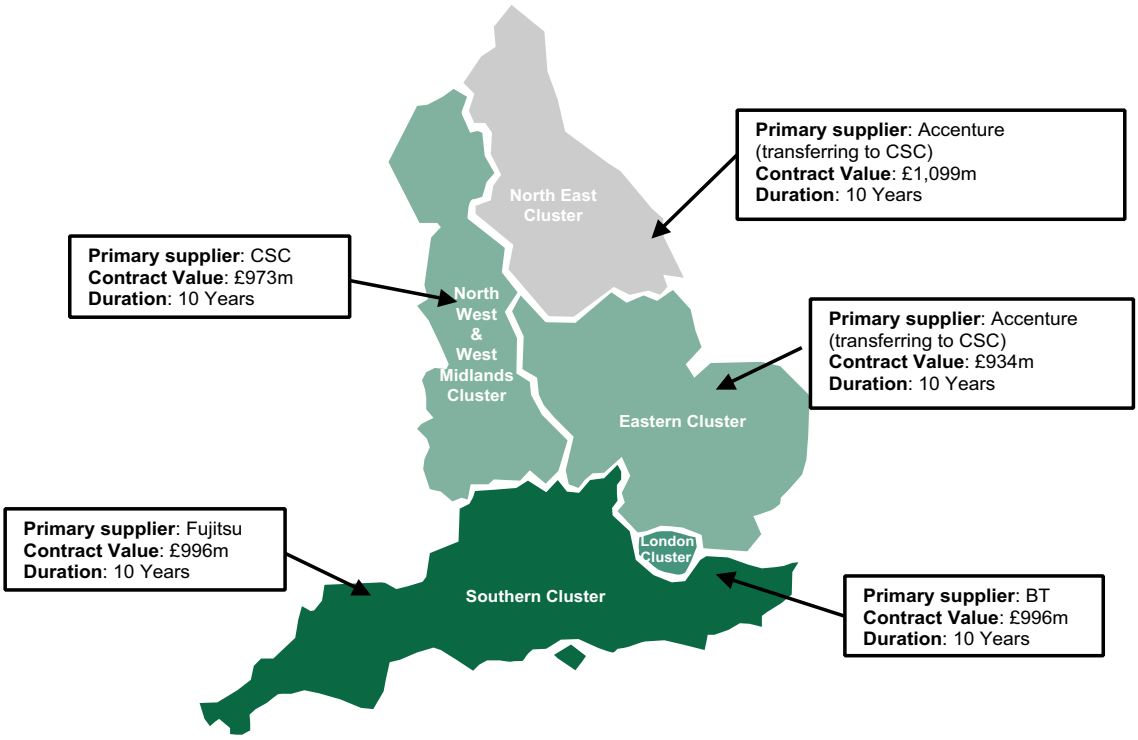
49 Accenture, CSC and NHS Connecting for Health press notices, 28 September 2006

50 C&AG's Report, Figure 3; Q 46

3 Managing implementation and ensuring that the systems meet the needs of the NHS

20. The Programme is a combination of national and local projects, with local implementation organised in five regional clusters (**Figure 3**). Each cluster has a Local Service Provider which is responsible for delivering services within the cluster, working in conjunction with the Strategic Health Authorities and local NHS organisations within the cluster.[51]

Figure 3: The five regional clusters and their current local service providers



Source: National Audit Office

21. The scale, specialisms and fragmentation of existing IT systems has made the delivery and implementation at each NHS site more complex than other IT implementations, and the Programme is being implemented against a background of change in the configuration of the NHS.[52] The Department told us that although procurement had been carried out centrally, implementation was local through each NHS organisation. Every local implementation had its own characteristics and needed to be locally tailored.[53] It had established a system where the chief executives of the new strategic health authorities that came into operation on 1 July 2006 were accountable for overseeing implementation in

51 C&AG's Report, para 3

52 Q 94; C&AG's Report, para 1.8

53 Q 10

their local NHS.[54] Within each organisation, the chief executive was responsible, and at both levels, chief executives should be supported by a chief information officer.[55] If anything went wrong in a particular implementation, the strategic health authority would intervene, and NHS Connecting for Health would intervene if the programme was going wrong on too big a scale.[56] It is unclear how much the localising of responsibility will help unless local Trusts are also given flexibility in the choice of systems so that local needs can be taken into account.

22. The procurement of the systems was based on an "Output Based Specification", a statement of the functions that the system was intended to perform. Development of the specification began in February 2002, and drew on information from various sources, including specifications developed by NHS bodies for their own patient record services and consultation with NHS staff. The specification was initially published for consultation in July 2002. Following further revisions, it was issued to potential suppliers in May 2003. After contracts had been placed, clusters also established clinical advisory groups to obtain clinical input as specific systems were developed.[57]

23. An appraisal commissioned by the National Audit Office of the development of the specification found that it was developed after engagement with a broad spectrum of NHS stakeholders but that there was no recorded link between the detailed items in the specification and the person or group making that contribution.[58] The Department's explanation was that NHS Connecting for Health had not had the resources to record the attributions individually.[59] Dr Nowlan told us that in his view this explanation for the lack of documented validation was not credible.[60] Professor Hutton also told us that there was no good audit trail for clinical input into the production of the specification, and that key decisions were taken in the early period of the Programme without proper clinical input.[61] He and Dr Nowlan also both told us that they felt that clinicians and the local NHS were not taken into account and did not have sufficient say.[62] The Comptroller and Auditor General told us that "the approach from the top down had not permitted the full degree of consultation".[63]

24. The Department commented that hundreds of people had input to the design process. Not only had there been clinical input in the original specification, but as the Programme had proceeded clinicians and other users had been involved in much more detail. For example 470 clinicians had recently been involved in looking at the national requirement to support e-prescribing, although this appears a very late point at which to do so, since the

54 Q 8

55 Qq 96–97

56 Qq 100–101

57 C&AG's Report, paras 2.10–2.13, 4.3

58 Q 26; C&AG's Report, paras 2.11–2.13

59 C&AG's Report, para 2.13

60 Ev 29

61 Q 18

62 Q 59

63 Q 218

specification of the solution and the terms of the contract had been set before it began.[64] Other action had included establishing the Care Record Development Board to strengthen patient involvement, and the appointment of national clinical leads.[65] In their examination of NHS information technology our predecessors stressed the need to involve end users, noting that getting the commitment of everyone is crucial to successful implementation of complex IT projects.[66]

64 Qq 63, 205, 209

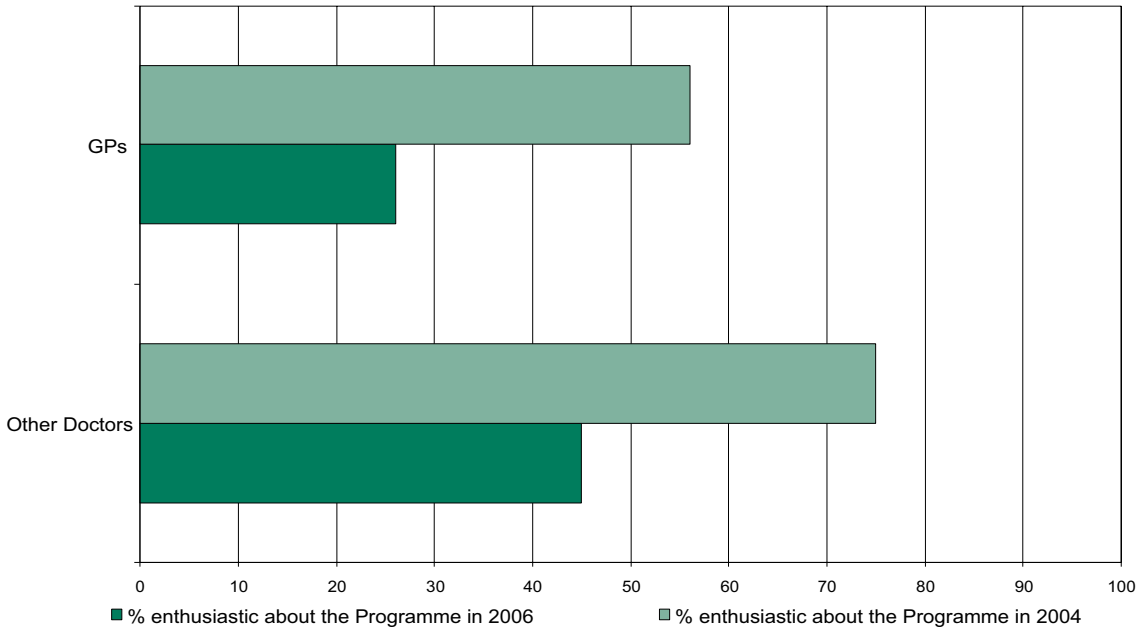
65 Q 26

66 Committee of Public Accounts, *The 1992 and 1998 Information Management and Technology Strategies of the NHS Executive*, HC (1999–2000) 406, para 33

4 Securing the benefits of the Programme

25. One of the conclusions of our predecessors' examination of the 1992 and 1998 Information Technology Strategies for the NHS was that getting ownership of developments by clinicians, general practitioners and other healthcare staff was essential.[67] However, although there was support for what the Programme was seeking to achieve among NHS staff, there were also significant concerns, for example that the Programme was moving slower than expected, and that deployment plans had been unreliable.[68] Professor Hutton told us that the Department did not adequately engage the medical community, and surveys of staff by Medix indicated that support for the Programme had fallen between 2004 and 2006 (**Figure 4**).[69] The Department's own Ipsos MORI surveys of NHS staff also showed a decline between 2005 and 2006 in favourability towards the Programme so far, with reasons given for unfavourable ratings including not enough input or communication with the people that would be using it, and poor organisation and planning.[70]

Figure 3: Support for the Programme has fallen amongst GPs and other Doctors



Source: C&AG's Report, 4.13

26. In the case of the Programme, the Department decided to conclude the bulk of procurement activities before focusing on communicating with and engaging NHS staff.[71]

67 Committee of Public Accounts, *The 1992 and 1998 Information Management and Technology Strategies of the NHS Executive*, HC (1999–2000) 406, para 9 (v)

68 C&AG's Report, paras 5k, 4.14

69 Qq 19, 31; C&AG's Report, para 4.13

70 A Baseline Study on the National Programme for IT, MORI, 9 September 2005; Wave 2 Study on the National Programme for IT, Ipsos MORI, 20 July 2006.

71 C&AG's Report, para 4.2

Wider consultation on the Programme with NHS staff did not commence until the procurement phase had concluded at the end of 2003, working initially through the clusters.[72] Leadership in securing support from NHS staff and organisations has changed several times over the life of the Programme: at the time of our examination, responsibility for this task had passed between six Senior Responsible Owners.[73]

27. The Department told us that some systems, such as the new network connections, had been well received by clinicians, but that clinicians found it more difficult to assimilate systems that were more disruptive to their working practice.[74] While it was necessary to recognise that a Programme of this scale would cause a degree of controversy and dissent, the Department said thousands of clinicians were already using the system and quietly getting on with it.[75] The Department had been working to establish further support for the Programme through the Care Record Development Board, for example in building a consensus over the last year on the content of the clinical record.[76] It said it had engaged clinicians, but recognised that there was very much more to be done.[77]

28. One issue causing concern among GPs was the future of their IT systems.[78] Under the General Medical Services contract, Local Service Providers were required to offer a choice of systems to GPs, but had only been contracted to provide two and it very quickly became apparent that one of these was not being delivered.[79] The Department had now attempted to address this problem through an initiative called GP Systems of Choice.[80] The development and implementation of the scheme was subject to discussions with suppliers.[81]

29. Another issue that has prompted concerns amongst doctors and others is the protection of patients' confidentiality, where Dr Nowlan told us that the most important issue was the arrangements for governance and trust, and compliance with these arrangements.[82] The Department told us that the security systems in place will be more secure than the Chip and PIN arrangements utilised by credit and debit cards in the UK. It was also supporting the Information Commissioner in his demands for higher penalties for information abuse.[83]

30. When the main contracts for the Programme were let in 2003 and 2004, the Department announced that they would cost £6.2 billion.[84] Subsequent estimates of the

72 C&AG's Report, para 4.3

73 Qq 168–175, 200

74 Q 31

75 Q 62

76 Q 217

77 Q 205

78 C&AG's Report, paras 3.27–3.28

79 Q 64 ; C&AG's Report, para 3.28

80 Q 64–65

81 C&AG's Report, paras 3.27–3.28

82 Q 28; C&AG's Report, paras 2.17–2.18; Appendix 3

83 Q 89

84 C&AG's Report, para 1.20

cost of the Programme reportedly attributed to the Department have ranged up to £20 billion, but the Department clarified that this figure relates to total IT expenditure within the NHS during the life of the Programme and that it expected the cost of the Programme itself to be £12.4 billion.[85] Amongst other things, this higher figure includes, on top of the cost of the original contracts, central expenditure; contracts and projects added to the scope of the National Programme; additional services to be purchased beyond the scope of the original national core contracts; extrapolation of costs beyond the terms of the existing contracts; and an estimated £3.4 billion local NHS expenditure.[86]

31. The estimate of local expenditure on the Programme of £3.4 billion dated from the time the contracts were let and the actual level of ongoing local NHS expenditure on the Programme was not systematically monitored.[87] Further costs have arisen for the local NHS Trusts where they have been required to pay suppliers a total of £24 million in order to be released from contractual obligations to provide staff to help suppliers develop the systems.[88] Delivery delays have also had an impact on local NHS expenditure, with a number of Trusts having had to renew their own patient administration systems, for example because they were time expired, or upgrade them to make them compliant with the National Data Spine. Deploying such interim systems would affect both costs and benefits.[89] The Department was providing some financial support to Trusts for upgrading, and where new systems came in, Trusts did not have to pay for the old system anymore.[90]

32. In the business cases for the various elements of the Programme, the Department sought to put a financial value on the benefits of the Programme where it could.[91] Its main aim with the Programme, however, was to improve services to patients rather than reduce costs, and there was a gap between the estimated financial value of the benefit of the Programme and its costs.[92] The Department was unable to give a full statement on the extent of this gap but said that the business case for the computer accessible X-rays contract had identified cash savings of £682 million against a contract cost of £1.3 billion.[93]

33. The Department believes that the patient safety benefits achieved through the Programme's successful implementation could be worth many billions over ten years, for example from reductions in preventable fatalities arising from medication errors; the number of patients requiring treatment as a result of medication errors; and in the amount paid by the NHS each year to settle clinical negligence claims. No detailed analysis had been carried out in order to substantiate these estimates.[94] The Department also predicts that the Programme will result in further savings by improving staff efficiency, by for example reducing the amount of time spent repeatedly taking patients' medical histories

85 Qq 47–48

86 C&AG's Report, paras 1.20–1.28

87 Qq 15, 47, 123–124, 130; C&AG's Report, paras 5r, 1.26, 1.33

88 Qq 234–247; DoH note on Qq 242, 247

89 Ev 97

90 Q 128–129

91 C&AG's Report, para 1.29

92 Q 153; C&AG's Report, para 1.29

93 Qq 15, 153–159

94 C&AG's Report, paras 1.29–1.32

and demographic details.[95] The Programme would also help standardise practice and allow people to move between employers without re-training, improve information available when patients were referred to hospitals, and improve resource use and efficiency.[96]

34. The Local Service Providers were contracted to deliver Local CRS systems to NHS organisations in three phases. Phases 2 and 3 are the key to the delivery of clinical benefits and were the core of the business case for the high cost LSP contracts. Phases 2 and 3 provide the NHS with functionality that would enable organisations to support integrated clinical care processes (scheduling, investigating, prescribing, treating, assessing, etc.) by healthcare staff no matter in what organisation (hospital site or GP practice) or in what care setting (primary, mental health, community, tertiary). Phase 1, the least important from a clinical point of view because it contains mainly administrative functionality, is already late with no published dates for its completion. The implementation of Phases 2 and 3, may, therefore, scarcely have begun by the time the Local Service Providers were originally contracted to have implemented completely all three Phases to all hospitals and Trusts in England.

95 C&AG's Report, para 1.4

96 Qq 8, 66–70, 99

Formal Minutes

Monday 26 March 2007

Mr Edward Leigh, in the Chair

Mr Richard Bacon	Mr Sadiq Khan
Helen Goodman	Mr Austin Mitchell
Mr David Curry	Mr Don Touhig
Mr Ian Davidson	Mr Alan Williams
Mr Philip Dunne	

Draft Report

Draft Report (Department of Health: The National Programme for IT in the NHS), proposed by the Chairman, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 34 read and agreed to.

Conclusions and recommendations read and agreed to.

Summary read and agreed to.

Resolved, That the Report be the Twentieth Report of the Committee to the House.

Ordered, That the Chairman make the Report to the House.

Ordered, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

[Adjourned until Wednesday 18 April at 3.30 pm.

Witnesses

Monday 26 June 2006

Sir Ian Carruthers OBE, Acting Chief Executive of the NHS, **Mr Richard Granger**, Director General of IT, **Mr Richard Jeavons**, Director of IT Service Implementation and Director of Service Implementation, NHS Connecting for Health, **Sir Muir Gray**, Director of Clinical Safety for Connecting for Health, **Dr Mark Davies**, Primary Care Medical Director for the Choose and Book programmes and practising GP in Hebden Bridge, **Dr Gillian Braunold**, National Clinical Lead, NHS Connecting for Health and practising GP, Department of Health; **Professor Peter Hutton**, and **Dr Anthony Nowlan.** Ev 1

Wednesday 7 March 2007

Mr Andrew Rollerson, Formerly Practice Lead, Business Consulting Unit, Fujitsu Ev 147

List of written evidence

List of Reports from the Committee of Public Accounts Session 2006–07

First Report	Tsunami: Provision of support for humanitarian assistance	HC 25 (*CM 7018)*
Second Report	Improving literacy and numeracy in schools (Northern Ireland)	HC 108 (*Cm 7035*)
Third Report	Collections Management in the National Museums and Galleries of Northern Ireland	HC 109 (*Cm 7035*)
Fourth Report	Gas distribution networks: Ofgem's role in the sale, restructuring and future regulation	HC 110 (*Cm 7019*)
Fifth Report	Postcomm and the quality of mail services	HC 111 (*Cm 7018*)
Sixth Report	Gaining and retaining a job: the Department for Work and Pensions support for disabled people	HC 112 (*Cm 7019*)
Seventh Report	Department for Work and Pensions: Using leaflets to communicate with the public about service and entitlements	HC 133 (*Cm 7020*)
Eighth Report	Tackling Child Obesity—First Steps	HC 157 (*Cm 7020*)
Ninth Report	The Paddington Health Campus scheme	HC 244
Tenth Report	Fines Collections	HC 145 (*Cm 7020*)
Eleventh Report	Supporting Small Business	HC 262
Twelfth Report	Excess Votes 2005–06	HC 346
Thirteenth Report	Smarter Food Procurement in the Public Sector	HC 357
Fourteenth Report	Ministry of Defence: Delivering digital tactical communications through the Bowman CIP Programme	HC 358
Fifteenth Report	The termination of the PFI contract for the National Physical Laboratory	HC 359
Sixteenth Report	The Provision of Out-of-Hours Care in England	HC 360
Seventeenth Report	Financial Management in the NHS	HC 361
Eighteenth Report	DFID: Working with Non-Governmental and other Civil Society organisations to promote development	HC 64
Nineteenth Report	A Foot on the Ladder: Low Cost Home Ownership Assistance	HC 134
Twentieth Report	Department of Health: The National Programme for IT in the NHS	HC 390

The reference number of the Treasury Minute to each Report is printed in brackets after the HC printing number

Oral evidence

Taken before the Committee of Public Accounts

on Monday 26 June 2006

Members present:

Mr Edward Leigh, in the Chair

Mr Richard Bacon	Sarah McCarthy-Fry
Annette Brooke	Mr Austin Mitchell
Greg Clark	Dr John Pugh
Mr David Curry	Kitty Ussher
Mr Sadiq Khan	Mr Alan Williams

Sir John Bourn KCB, Comptroller and Auditor General, National Audit Office was in attendance and gave oral evidence.

Ms Paula Diggle, Treasury Officer of Accounts, HM Treasury, was in attendance and gave oral evidence.

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL

DEPARTMENT OF HEALTH

THE NATIONAL PROGRAMME FOR IT IN THE NHS (HC 1173)

Witnesses: **Sir Ian Carruthers OBE,** Acting Chief Executive of the NHS, **Mr Richard Granger,** Director General of IT, **Mr Richard Jeavons,** Director of IT Service Implementation and Director of Service Implementation, NHS Connecting for Health, **Sir Muir Gray,** Director of Clinical Safety for Connecting for Health, **Dr Mark Davies,** Primary Care Medical Director for the Choose and Book programmes and a practising GP in Hebden Bridge **Dr Gillian Braunold,** a National Clinical Lead, NHS Connecting for Health and a practising GP, Department of Health, **Professor Peter Hutton, Dr Anthony Nowlan** and **Mr Chris Shapcott,** Director of Health VFM, National Audit Office gave evidence.

Q1 Chairman: Good afternoon. Today we are considering the Comptroller and Auditor General's Report *The National Programme for IT in the NHS* and I should like to welcome the following witnesses: Sir Ian Carruthers, who is the Acting Chief Executive of the NHS, Mr Richard Granger, who is the Director General of IT, Mr Richard Jeavons, who is the Director of IT Service Implementation, Professor Hutton and Dr Anthony Nowlan. You are all very welcome to our hearing. You will see that there are quite a few Members present today, so may I please appeal for short answers because otherwise it will be a very long hearing. If I feel that the answers given are unduly lengthy, the only result will be that the hearing itself will lengthen, so I appeal to you for crisp answers. Although I appreciate that you will want to get your entire answer out quickly, because you are obviously very heavily briefed on this, you will have the best part of two hours to get your case across, so you will have plenty of time to get it across. I shall address my remarks, if I may, to you Sir Ian because you are the Accounting Officer, but please feel free to bring any of your team in, either those sitting on either side of you or anybody indeed sitting behind you. This is not a point-scoring exercise: we are simply after the evidence here, so feel free to bring anybody in. Could you please start by looking at the Summary on page four where it says in point 5m: ". . . 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". I am sure you will agree that the National Care Records Service is the central part of this programme. Why is it running two years later than originally scheduled?

Sir Ian Carruthers: Before answering that Chairman, may I introduce the colleagues with me because we shall call on them. On my far left is Dr Mark Davies, who is the Primary Care Medical Director for the Choose and Book programmes and a practising GP in Hebden Bridge. Next to him is Professor Sir Muir Gray, who is the Director of Clinical Safety for Connecting for Health and next to him is Dr Gillian Braunold, who is a national clinical lead and a practising GP. Your first question was about the delay in the National Clinical Record. It is important to recognise that the programme is amongst the largest in the world and it is extremely ambitious. The delay was actually a decision that was taken following two things: first of all some suppliers were having difficulty in meeting the timetable and clinicians wanted to pilot the scheme and see how it operated. It is for those reasons that

the timetable was deferred until 2006 when we hope to pilot it and it will be operable in 2007. It is important to recognise that with a programme of this scale there is bound to be risk, there is bound to be some delay. However, as the National Audit Office Report says, what we have achieved is substantial progress in many, many other areas where targets have been exceeded and indeed in some cases accelerated. We need to see this in a wider context where much has been achieved with over 10,000 installations already in place.

Q2 Chairman: It is not just delays, important as those are. There are about 170 acute hospitals, are there not? In terms of patient administration, the National Clinical Record system has been deployed into just 12 hospitals and no clinical systems have been deployed into any hospital. Is that right?
Sir Ian Carruthers: No. PACS (Picture Archiving and Communications Systems), for example, have been employed across various parts of the country and large numbers of other programmes have been done. If I may, I shall ask Mr Granger to take that forward in detail.

Q3 Chairman: May I just ask the National Audit Office? Are those figures right that I quoted of 170 acute hospitals and the system only being deployed into 12 of those hospitals in terms of patient administration alone?
Mr Shapcott: I believe there are 172 hospital trusts; a number of those may be on more than one site. The clinical record element in the National Care Records Service is not in yet, but there are other types of systems.

Q4 Chairman: Has not been deployed? Has it been deployed into any hospitals?
Mr Shapcott: As I understand it, not at all.

Q5 Chairman: Okay. Mr Granger, do you want to comment?
Mr Granger: There is a highly selective marshalling of the data about the 10,000 or so deployments that have been achieved in the last 24 months. It is important to note that 33 acute trusts are now not using X-ray film. I think if you were having an X-ray, you would not draw the distinction between a system which required a clinician to type and one which required them to hold an X-ray film up to a light box.

Q6 Chairman: I am not sure that is answering the question that I put. What is actually key about this, you will accept Mr Granger, is the National Clinical Record. My clinical record being able to be deployed into any hospital in the country is the key part of it, is it not? What I was told was that there are 170 hospitals and my clinical record, under the systems that you are developing, cannot be deployed into any hospital. Is that right or not?
Mr Granger: What is correct is that every day 375,000 patients have their details searched on the demographic database which is a core part of the National Clinical Record and there are over 240,000 people registered in the NHS to use that system already and that covers all the major acute hospitals. They are all now connected up to a secure national network as well.

Q7 Chairman: Right. Well I cannot pursue this point but other Members can come in on it. Sir Ian, how are you going to make up for the lost time in implementing the National Care Records Service? What is your plan? When will it be delivered? You are two years behind already, although there is some argument about the basis of the discussion. My essential point is that it has not been delivered in essence to any hospitals yet. How are you going to make up for lost time?
Sir Ian Carruthers: We have to see the piloting, we have then to move on to implementation and the overall part of the programme is that we would hope, as the National Audit Office Report says, to have implemented most of the compliant system by 2010. However, the scale of implementation and the risks associated with it, because we are trying to do something here that has not been done on this scale before, do need to be recognised because what we want is a system that works rather than a system which is put in quickly for its own sake. The overall benefits that we shall achieve, clinically and in terms of patient safety as well as value for money, will be significant.

Q8 Chairman: That is precisely the point I want to take you to, because it is important that you answer this essential criticism of what you are trying to do. This is dealt with on page 29 of the Comptroller and Auditor General's Report "Taking account of earlier experiences, the Department decided to procure and manage the Programme centrally". Why are you seeking to impose such a massive system from above on the NHS instead of building on local initiatives?
Sir Ian Carruthers: First of all, it is important to say that there are two parts to the programme: one is the national procurement and the second is the implementation. The national procurement is being undertaken nationally, but actually implementation is locally driven. The reason why we are undertaking it nationally is because we want to overcome past poor track record, we want to get value for money, we want to deliver integrated systems which we can upgrade and change in future at reduced costs. There is a whole series of benefits such as standardising practice and allowing people to move between employers without re-training. It is the procurement that is being driven nationally and in fact that has paid off, because the National Audit Office have been very clear in saying that the procurement has brought with it great benefit in terms of value for money, it has brought with it a lot of good practice that others can learn from. Of course within that we have tried to adopt the advice of this Committee itself which is about saying "Can we be contestable? Can we pay only on delivery?" and, firstly, "Can we actually not rely on any single supplier?". So good practice elements have been built in. The delivery locally is through each NHS organisation and we

have established a system where the chief executives of each of the new strategic health authorities which come into being on 1 July 2006 will be accountable for overseeing the actual delivery in their local NHS. In any hospital or in any PCT, the implementation will take place locally with national support, so it is not centralised in that way at all.

Q9 Chairman: On the other hand, if we read the key paragraph in this Report which you can find on page 11, paragraph 1.8: "The scope, vision, scale and complexity of the Programme is wider and more extensive than any ongoing or planned healthcare IT development programme in the world. Whilst other countries are seeking to adopt elements of the services within the National Programme, such as electronic patient records, these are not being introduced on a country-wide basis". So you are doing something that no other country apparently is attempting. Is this not unwise?
Sir Ian Carruthers: It is true that we are doing it; we think it is the right way, but I shall hand over to Mr Granger.

Q10 Chairman: May I just add a rider to that? The NHS itself is very diverse. You are attempting to impose centrally-imposed procurement from above on what is a very diverse organisation in the biggest IT health project in the world. Is this not a very dangerous undertaking you are engaged on Mr Granger?
Sir Ian Carruthers: If I may, there are risks, we have said that. I have also said that nationally we are only procuring and the benefits of that have come through. Implementation will be local and in fact, elsewhere in the Report, it says that every local implementation has its own characteristics and needs to be locally tailored. Yes, it is diverse but we need to handle that in a local sense.
Mr Granger: The statement that no other countries are implementing systems such as this is only partially accurate.

Q11 Chairman: It is in the Report which you spent a whole year arguing with the NAO to get right. I have just read to you from the Report and one of the reasons why you apparently had to "fight, street by street, block by block with the NAO"—their own phrase to me—was that you wanted to agree on this. I have just read it to you, so please do not come back to me and say it is only partially true. Why has this NAO Report been delayed a whole year then, if it is not right?
Mr Granger: Let us clear that point up. The Department of Health had possession of the Report for review for 59 days[1] out of the last year and a half. Aside from that, if we look at what other countries are doing, many of them are now looking at implementing a central infrastructure that will move patient information around. It is already present in Holland, it is already present in Denmark, it is being implemented in Sweden, Canada has a scheme to do the same thing which is rolling out across several provinces at the moment, Australia are procuring a system to do that as well. Some of these are procurements which are ongoing or schemes which have been partially implemented to date. Many countries are looking carefully at what the NHS is doing; it is at times uncomfortable being in a leadership position. As the NHS is a diverse organisation, one of the things that binds it together and moves millions of messages between trusts and between GP practices right now today is the Spine infrastructure which is live; that provides a coherent backbone to the NHS to move clinical messages around in a secure and reliable manner.

Q12 Chairman: Let us go on as quickly as possible. Can we look at some of these contractors, some of whom are showing signs of strain? Is it right that Accenture has made provision for £450 million losses on this contract?
Mr Granger: No, it is not.

Q13 Chairman: $450 million sorry, dollars not pounds.
Mr Granger: They have made a provision against potential future losses which have not crystallised.

Q14 Chairman: Are some of your suppliers showing signs of strain on this?
Mr Granger: They are and better they are than the taxpayer.

Q15 Chairman: Can you be sure that they have the strength to handle these risks?
Mr Granger: Yes. We regularly, in conjunction with Partnerships UK, the Treasury agency, assess the financial fitness and capacity of our prime contractors. At the last report from Adrian Kamellard of Partnerships UK, a body of the Treasury, he confirmed that all the key contractors have sufficient financial capacity to fulfil their liabilities and continue to discharge their obligations under the contracts.

Q16 Chairman: Page 27, paragraph 1.33 on the cost of this. Why do you not know how much the NHS is spending on implementing the programme? "NHS Connecting for Health has not sought to monitor systematically the actual impact the Programme is having on local IT spending." Is that not a fairly key point?
Sir Ian Carruthers: First of all, as you have just said, we want to do this as locally as possible. On that page, if we go back to the earlier paragraphs, what people are saying is that £3.4 billion is based on forecasts which have come from business cases, £770 million of that, or thereabouts, is from PACS and the other is £2.6 billion. Individual business cases are actually being prepared and have formed the basis of that and we shall not know the true savings until

[1] *Clarification of matters of fact (by witness):* The NAO provided the Department with a draft accompanied by supporting evidence on 17 March 2006. It was some 59 working days later that the final Report was agreed. In this time, the NAO was waiting for responses from NHS Connecting for Health during two distinct periods between 17 March and 7 April and between 12 May and 22 May.

they are implemented. If I might ask Mr Jeavons, he could give you one or two examples because significant savings are being made.
Mr Jeavons: On PACS, for example, where we projected £682 million worth of cash savings against the contracts, we are already seeing clear evidence from both business cases and post-implementation reviews that the scale of those cash releasing savings are there. That is not surprising because they are extremely clear and very predictable.

Q17 Chairman: Are you worried at all about patient confidentiality? My records are potentially going to be driven around the countryside, if this works. Am I really happy with that idea? I know some doctors have expressed concern about this.
Sir Ian Carruthers: What we should say is that obviously we recognise the importance and Mr Jeavons, who is leading that part of the programme, will comment.

Q18 Chairman: Can you give me an absolute reassurance that your systems are sufficiently robust that there is no way in which my clinical records can leak out?
Mr Jeavons: The position is that the policy has always been implied consent, the programme is implementing the highest levels of security and access ever seen in any public project and so is setting standards which have never been surpassed.

Q19 Chairman: Lastly, there has been a lot of criticism from the doctors, that this is being imposed by diktat from above rather than getting the consent of the medical community. Do you have any comment to make on this Professor Hutton?
Professor Hutton: I do feel that the clinical community was disadvantaged in the early stages of the programme and that this has led to some of the problems we now see. I am pleased that you have concentrated on the issue of the healthcare record because it is absolutely central and does not really get very much mileage in the Report. The Report fails to emphasise that key decisions were taken in the early period without proper clinical input and that the resulting consequences are still having a major impact on the viability of the core programme. Nowhere does it mention that the recommendations on the care record were actually only developed towards the end of the contracting process, so one can ask what was actually being contracted for. It fails to state that there is no good audit trail for clinical input into the production of the output-based specification, which was the basis of the contracts and the placing millions of pounds of public money.

Q20 Chairman: May I just say Professor Hutton, as the afternoon wears on, that it is better if you do not read. Talk to us. Lift up your head and talk to me, do not read from a long prepared script; it is not going to help your case. Just talk to me. In your own words, was this imposed by diktat from above or did it engage the medical community?
Professor Hutton: It did not adequately engage the medical community and there is good evidence for that.

Q21 Chairman: Thank you. Mr Granger, do you want to comment on that point before I pass on to my colleagues?
Mr Granger: Yes I do. I want to supply you with a note[2] which will include a copy of an e-mail from Peter Hutton to me, marked confidential, 18 November 2003 at 11:27: "I am seriously concerned that everyone who contacts you about clinical engagement is made welcome by you. This will lead to chaos and undermine those of us who are trying to prevent that. We will need meetings with a plan, not a random selection". On 21 November at 9:09 I asked Professor Hutton to provide a plan. I am still waiting for it.

Q22 Chairman: Right, well Professor Hutton, you will have a chance later to come back on that because I know that some people wish to ask you questions.
Sir Ian Carruthers: May I just make one point? When you look at the National Audit Office Report, there is a big debate about what is adequate and what is fair. What is beyond doubt is that there was clinical engagement. If I may look at this, I have been in the health service for 37 years and I have never known the NHS go to so much trouble to identify what clinicians would feel in any project as they have for the output-based specification,
Chairman: Thank you for that. It is an important point and we shall discuss it in the course of the afternoon.

Q23 Sarah McCarthy-Fry: My first question is to Sir John Bourn. We only received this Report last week; it has been very quick. Most of your Reports are externally evaluated. Has this Report been externally evaluated?
Mr Shapcott: No, it has not. This went into clearance before we started that as a routine process, so it did not go through that.

Q24 Sarah McCarthy-Fry: I rather guessed it had not. I am also concerned about the length of time it has taken to get published. We have had all sorts of newspaper articles; we have had briefings about the horse-trading that went on. May I ask you whether you are happy that the Report you have done fully reflects what you found that you have not been compromised in any way?
Sir John Bourn: Yes, I am happy with the Report. It is a complicated subject. It took a long time to prepare. It was discussed in detail between ourselves, the Department and the National Health Service. Although reference was made in the media to delay, the only date to which we were ever committed was today; that was the only date on which we ever said we should produce a Report in time for the Committee's discussion. It took some time to do, as you would expect for a professional piece of work

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which is directed to produce a statement of the facts which were agreed by the external auditor and by the auditee, which is what the Report is.

Q25 Sarah McCarthy-Fry: May I ask the same question of Sir Ian and Richard Granger? Are you happy that the Report reflects adequately your reading of the situation?
Sir Ian Carruthers: From my perspective, as Sir John said, there was a lot of discussion and it does reflect our reading of the situation; we should not have agreed it otherwise.
Mr Granger: It is an agreed Report.

Q26 Sarah McCarthy-Fry: There is nothing in the Report that you take issue with; you are perfectly happy with the Report.
Sir Ian Carruthers: No, nothing.

Q27 Sarah McCarthy-Fry: Okay, having got that one out of the way, I have the two written pieces from Professor Hutton and from Dr Anthony Nowlan. Picking up the point you made about engagement with clinical staff, what was the process that you underwent?
Mr Granger: The process was that in 1992 a strategy was produced which led to very little in the way of implementation in the NHS. In 1998 another strategy was produced. A number of pilots occurred after that known as ERDIP pilots. In 2002 a further strategy was produced. Dr Nowlan and other people have been interested in this for a number of years, have been involved in extensive consultation and piloting. It has been described to me by medical colleagues as a bad case of "pilotitis". There has been extensive clinical engagement. When I started this process, we took all the outputs from those pilots and consultations, some of which were undertaken by Dr Nowlan when he was employed by the Information Authority and we put those into a structured requirements-evaluation process. This was not perfect and I fully accept the criticism that is made in the NAO Report that we failed to map input from every single clinician who had input—there were thousands of them—into a requirements document which, unusually for a government department, we then published. Since the production of that requirements inventory, further structures have been set up, one of which was chaired by Professor Hutton and we have had a more stable and long-term structure in place for about a year and a half now, a care record development board with structured clinical and patient engagement. I should emphasise that last point: patient engagement. I should just like my colleague Sir Muir to comment because he has been involved in this for many years.
Sir Muir Gray: I shall answer your question briefly. I have been involved since 1998. We started with the National Clinical Advisory Board chaired by Professor Hutton. That made very good progress across the whole piece, but there were three things that it became apparent we wanted to strengthen. One was patient involvement, so we set up the Care Record Development Board. The second was to get some people giving significant amounts of time, so we employed national clinical leads and that has been very highly praised in the Report. The third key issue is that when you get these big medical committees together, medicine is a bit of a gerontocracy, there are older people like me. We want to get people who are committed to 2015–20, so we now have some younger people involved. That is what we have done.

Q28 Sarah McCarthy-Fry: A few more points I want to raise. I want to come to Dr Nowlan and to Professor Hutton. Do you believe in the principle, do you believe that there is one standard UK system that can deliver what the project is trying to deliver? Is it the principle of one standard UK system you object to or the way that this particular system was procured?
Dr Nowlan: Certainly the way it was procured. To answer the question, unless you test whether it will fit, how do you actually know? The problem was that the urgency to procure really trumped all other aspects of consideration. Clearly there are parts of this that are very innovative and without proper work to assess the need and the chance of success, it is rather hasty to proceed on some of these matters. The focus of the national clinical leadership in 2002-03 was to find something which they believed was highly useful, but also achievable and that is the one piece that was subject to reasonable scrutiny.

Q29 Sarah McCarthy-Fry: You mentioned that you felt there was a danger about patient confidentiality.
Dr Nowlan: The danger is not a system danger. The whole thing hinges on trust and governance really and if you carry people with you and you have the right oversight, then, like anything in healthcare, it can be made to work. There are always risks and benefits and trade-offs. It is not a technological system fix, it is about the arrangements for governance and trust and people supporting and following it. If that is not there, that is where the risks then come in of transparency and what is happening really.

Q30 Sarah McCarthy-Fry: May I come back to Mr Granger? Do you believe you do have a buy-in from clinicians? Is that what you fundamentally disagree with?
Mr Granger: I shall just answer in summary and then I should like a couple of the GPs who are using these systems every day to comment on this. Dr Nowlan produced a document on 16 December 2002 entitled, *Confidentiality work stream technical implementation project*, which set out his opinion, and I summarise for you Anthony, that opt-out was the best model. We know that there are significant and legitimate concerns from patients and the clinicians who serve them, which is one of the reasons we have taken a more gradualist approach to the introduction of summarisation, not just summarisation on a read-only basis as exists in some parts of the UK, but summarisation with people able to input things as well as just read them.

Q31 Sarah McCarthy-Fry: I only have two minutes. I should love to hear from the GPs.
Dr Gillian Braunold: In answer to why things have been delayed, one of the reasons is in order to get that very consensus around some of the really complex issues around exactly how the workforce changes will work which are implicit in how we consult and how we jointly publish with patients information to the Spine and to the other shared care bits of the record. So although theoretically technically lots of very complex models are possible, sometimes we as clinicians have had to pull back and say yes, we know that you can create 1.3 million different roles within the health service to access the security arrangements, but when we have consulted with the colleagues within the BMA and within the colleges, we have found that we do not really need more than ten. Although the technology can do it and the provision is there and all this stuff is being built, when you then work with the colleagues, you find that that is going to be undermined by human beings who are going to undermine the very information governance structures that you are putting in place. As national clinical leads we have been doing a lot of work, influencing and bringing together colleagues in the national advisory groups that are mentioned in here and consulting with them on some of the technical issues and how they will work in implementation, to make sure we do not build something so complex that it will be undermined by the human beings trying to implement it.

Q32 Sarah McCarthy-Fry: May I come to Mr Granger? If you believe you have the support of GPs, why does the medics' survey on page 47 of the Report suggest that support for the new system is falling and that over the space of two years a 30% drop in enthusiasm has been recorded? Why do you think that is?
Mr Granger: I will just say that GPs are very, very shrewd consumers. They are very happy with the QMAS system which is paying them more money and they are very happy with the network connections. They find systems which are more disruptive to their working practice more difficult to assimilate to start with.
Dr Gillian Braunold: The most important thing to remember is that GPs thrive on being able to consult in a ten-minute window which is very, very concise and they have their current systems smoothly flying to be able to deliver that. Anything that they need to take on board to deliver something else has to be accommodated and they are very resistant to that. They were very resistant to the negotiators within the General Practitioner Committee over-delivering them a 30% pay rise because the way they had to do it was to put in more data and that was resisted fiercely and still is frankly. Nevertheless, as patients benefit, then the GPs stopped complaining. We have now started to ask GPs whether they would like us to take Choose and Book away and there is resistance amongst those who are actively delivering patient benefit and clinician benefit with Choose and Book. They are actually saying that they are going home for the smartcards they have forgotten. The medics' survey, if you look at when it was done on the Choose and Book curve, was very early in the curve against the number of deployments of Choose and Book and 54% of GPs are using it now.

Q33 Greg Clark: May I start my questions to Sir John? Sir John, we have a conundrum here. In a year on the Committee I have read 62 NAO Reports. This is easily the most gushing and yet we know that the Report was published on the very last day that it could have been to be in time for this Committee because it had been, we assume, haggled over. How can you square these two things? Is it that Mr Granger was bashful at the extent of the praise that was being lavished on him? What were the concerns?
Sir John Bourn: What we needed to do was get it right, to catalogue those things which had gone well and to underline those things where improvements could have been made. The Report does that. Although, as I said a few moments ago, it took a long time to take it forward, it did reach an agreement, as it were, warts and all. Therefore I was glad to be able to present it to the Committee in the form that they asked: facts agreed.

Q34 Greg Clark: What were the areas that you had trouble agreeing for so long?
Sir John Bourn: I personally had no trouble at all. I do not want to say "trouble", because that suggests an antithetical relationship, which is not right. We should probe and we should press and we should get out the facts and that is what we did. It is a very long subject with many, many aspects to it, the biggest programme in the world, so it is not surprising that it took a long time to do it. Yes, of course, as we came towards 26 June, there was concern. As I have told the Committee, I was very keen that you should have it in time to have two clear weekends, which is your rule and so I pressed forward to get it to you at that time. From my point of view, it is a Report on an important subject, perhaps the biggest subject we have ever done since you were on the Committee, Mr Clark and it covers the waterfront, pluses and minuses.

Q35 Greg Clark: Nick Timmins of the FT says that the NAO's Report was the outcome of one of the fiercest Whitehall battles in recent years. Can you explain the background to that?
Sir John Bourn: I am not responsible for what appears in the newspapers and I do not see it as a battle between us; I see it as an important subject in which both sides were anxious to get at the truth. Of course there was proper debate and of course one side argued with the other. I do not regard it in any way as an illegitimate series of discussions which led up to that.

Q36 Greg Clark: Sir John, I am keen on getting to the areas of contention. As you know, this is the world's biggest civilian IT project, funding up to £12 billion and IT projects are notorious for going wrong. We rely on you to alert us to the areas of major concern and I was struck by the very positive,

almost universally positive tone of this Report. Could we perhaps turn to your conclusions, page 50 of the Report, appendix one, "Methodology". This was the methodology you applied to answer the Committee's questions. The first aspect of the methodology raised the question of whether the programme's vision is soundly based. What is your conclusion on that? Is the programme's vision soundly based?
Sir John Bourn: My conclusion is that for a system of the kind it is, it is soundly based.

Q37 Greg Clark: That is helpful. The second aspect is whether the contracts are likely to deliver value for money. In your view are the contracts likely to deliver value for money?
Sir John Bourn: I think they are because, unlike most contracts in this field, they do involve payment for results which often has not been the case with IT contracts.

Q38 Greg Clark: Part four of your methodology is whether you consider the project management is fit for purpose.
Sir John Bourn: Yes, I do. The point that I would make about that is the one that has been implicit in discussions and that Sir Ian and Mr Granger have said. Of course in a project of this kind there is the question, as the General Practitioner herself said, in which you are developing a system and you want, as it were, to take the customers with you. That is a very difficult thing to do; it has not been done with 100% success but, given its size, scale and nature, I do regard the project itself as well conceived.

Q39 Greg Clark: That is extremely helpful because it is an ambitious project and it is helpful to be able to assess it. We know that it is risky and that it is innovative. From where we are sitting today, are you confident that this programme will deliver on schedule its core objective of transforming patient care by providing an integrated healthcare record?
Sir John Bourn: If the recommendations I have made are followed out, then it will.

Q40 Greg Clark: Would it be fair to summarise your view that at the moment there are no material grounds for concern that that should not be the case?
Sir John Bourn: Of course a difficult challenge remains and there is no gainsaying that and I do not want to diminish that. Recognising it is not easy, I still think that it can be done.

Q41 Greg Clark: We know from other studies that have been before this Committee that IT projects and public sector projects in general are often criticised for a lack of clear leadership or protracted procurement processes, for risks falling on the taxpayer, overruns in time and incompatible systems. I assume you would agree that there is an attempt here to break out of that and to learn some of those lessons.
Sir John Bourn: That is right, there is clear leadership here in a way that has not been the case with all projects, but of course it is a scale larger than any other project which has been attempted in British Government.

Q42 Greg Clark: Can I turn to Mr Granger then, who is the leader of this project? I was intrigued by a quote of something you said which I read, which was very consistent with what we have said. You referred to the management of this project—I am sure you know what I am going to say—being a bit like a sled pulled by huskies. You said that when one of the dogs goes lame and begins to slow the others down, it is shot. It is then chopped up and fed to the other dogs. The survivors work harder, not just because they have had a meal but also because they have seen what will happen should they themselves go lame. That is an accurate quote, a very vivid one.
Mr Granger: I am delighted that it will now endure in the Official Report.

Q43 Greg Clark: This stands in contrast to some of the approaches which have been taken and there is something to admire in that. Just to look at the other side of this. You are placing a lot of risk on sub-contractors, are you not? I read recently that the share price of iSoft, which is one of the providers, has taken a tumble and some people say is vulnerable. Is the network of suppliers robust enough to withstand this pressure that you are putting on them?
Mr Granger: It is a matter which we are concerned about. Having broken away from a pattern that was described in the First Report of the 1999–2000 session of this Committee, where large contracts were let with single suppliers, and moved into a contestable framework, there is a balance to strike between the inefficiency of having lots of suppliers and the efficiency of single supply and we are three years into a ten year programme.

Q44 Greg Clark: What happens if iSoft goes bust?
Mr Granger: Technically, according to information that is in the public domain, iSoft may have breached their banking covenants. What will happen, if that impairs their delivery, is that the prime contractors with whom they have contracted to supply the NHS, namely Accenture and CSC, will have either to put money or resources, human resources, into bolstering their delivery. I suspect that the capital markets will respond to the opportunity to acquire them through an appropriate mechanism should their stock price continue to fall.

Q45 Greg Clark: What is the other alternative? You said either/or.
Mr Granger: Or, in some parts of the country alternative suppliers may exist.

Q46 Greg Clark: Will it delay the programme or will it end up costing the taxpayer more?
Mr Granger: It has led to delay.

Q47 Greg Clark: How long will the delay be?
Mr Granger: If we look at picture archiving in the North West and West Midlands, the key sub-contractor there, a company called ComMedica, failed to provide us with a reference solution which has led to between nine and 12 months' delay and I am sorry for that delay. In fact I live in that part of the country and in my bag I have an X-ray taken of one of my daughters. It is not an ideal situation, but it is a better situation than spending tens or hundreds of millions of pounds with a supplier that then fails and the taxpayer owning the problem of dealing with partially completed work.

Q48 Mr Mitchell: Why, if the programme was originally estimated to cost £6.2 billion and then £12.4 billion did Lord Warner say it cost £20 billion?
Sir Ian Carruthers: It is important to distinguish the differences in the cost. The £6.2 billion refers to the national programme: it is within budget and in fact, as the Report says, there is an under-spending on it. As Mr Clark has said, that is rather rare for a national IT project. We need to be clear about the £12.4 billion. That is made up of the £6.2 billion and a number of other elements: £382 million brought forward from additions to the programme and a further £239 million for approved additions to the programme. Then there is a sum of £1.9 billion for some associated costs which, as the Report says, we think will be lower. We then move on to the forecast of £3.4 billion for the NHS and in fact £337 million, which is the extrapolation of contracts.

Q49 Mr Mitchell: That does not take us near £20 billion.
Sir Ian Carruthers: No; I am going to take you to the £20 billion. The first point I want to make is that the £12.14 billion[3] is a mixture of actual costs, extrapolation and forecast. As the Report rightly says, it is not a budget and it is not something you can measure against. The £20 billion relates to the overall spend within the total NHS, not only for this programme but for everything else. May I just mention that if we look at the Wanless recommendation, that is substantially less, even at the end of this period, than he would recommend.

Q50 Mr Mitchell: Is it possible that you are facing problems because you have tried to do too much with this programme, tried to do too many things, added things on later and, secondly, because you have used it as an agent of centralisation to impose the central will on the disparate parts of the health service? Are those the two reasons why it is going wrong?
Sir Ian Carruthers: First of all, it is not going wrong.

Q51 Mr Mitchell: Facing problems then.
Sir Ian Carruthers: Apart from the care record everything is going right and that is what is causing the Committee's surprise.

Q52 Mr Mitchell: Put it that way: facing problems. Is it too ambitious?
Sir Ian Carruthers: It is ambitious and, as Sir John has said, in a programme of this scale, there are risks, but we are where we are and we need to progress it and it does mean that we need to move on and handle implementation and other facets. You are suggesting that the national procurement decision was somehow made without reference to the NHS. That is not so. The decision was taken by the top team of the NHS where the 28 strategic health authority leaders, who are accountable for implementing this, took part and agreed to that way forward. So there was consultation with the NHS and the reason why the NHS felt, in its leadership, that we should move to this national procurement was actually to get the best practice benefits and the value for money that have turned out well incidentally.

Q53 Mr Mitchell: Okay. Your husky image is very vivid, but have you not been a bit over-heavy with the husky killing?
Mr Granger: I am a cat lover myself. We need to look at the history of public-sector IT programmes.

Q54 Mr Mitchell: You have Accenture with estimated losses of half a billion dollars, you have iSoft going belly-up fairly soon, IDX which is blamed by BT and Fujitsu and from which BT wants to walk away and you have Cerner brought in, which, I am told, is only able to support one hospital in one region using their standard software, yet it has been stretched to two regions. So there are problems, are there not? You are killing too many huskies.
Mr Granger: There is a more fundamental problem than the analogy around huskies. It is a very ambitious programme, we are trying to do an awful lot of work very quickly and we are trying to catch up with around 20 years of under-investment in IT in the NHS.

Q55 Mr Mitchell: History tells us that all these rushes to catch up and then to do things which have not been done for 20 years and then to cram other things on top lead to a mess.
Mr Granger: There is a shortage of capacity in the healthcare IT industry and we have had to bring in a lot of resources from abroad, from India and the USA in particular, and some things have unfortunately gone wrong as a consequence of that with some of their suppliers. We knew that was a risk when we started and it will, I am afraid, continue to be something that requires close attention.

Q56 Mr Mitchell: Did it turn out to be a bigger risk than you thought?
Mr Granger: I thought it would be a big risk from day one because when we started this programme the NHS was spending roughly half what it is now on IT.

Q57 Mr Mitchell: While you are busy killing huskies, the huskies are fining the NHS locally, are they not?

[3] *Correction of matters of fact (by witness):* This should have been £12.4 billion as in the answer to question 47 above.

Mr Granger: "Fine" is a word which grabs a headline.

Q58 Mr Mitchell: They are having to cough up.
Professor Hutton: The situation we are in was entirely predictable in the early part of 2004. I wrote then to the Chief Executive of the NHS, Sir Nigel Crisp and these are the words: "I remain concerned that the current arrangements within the programme are unsafe from a variety of angles and in particular that the constraints of the contracting process, with its absence of clinical input, may have resulted in the purchase of a product that will not potentially fulfil our goals". Within 10 days of writing that, I was asked to resign. My feeling is that the contracting process did not purchase what we wanted. In those early days, it was like being in a juggernaut lorry going up the M1 and it did not really matter where you went as long as you arrived somewhere on time. Then, when you had arrived somewhere, you would go out and buy a product, but you were not quite sure what you wanted to buy. To be honest, I do not think the people selling it knew what we needed. I do feel that at that early stage the accepted clinical bodies that were around were not consulted.

Q59 Mr Mitchell: You were asked to consider your position were you not? Dr Nowlan was pushed out, made redundant. You are both suffering from sour grapes, are you not?
Professor Hutton: We are not suffering from sour grapes; we have both got on with our lives. There is plenty to do and I earn more now than I did then.
Dr Nowlan: Absolutely not. In many ways personally it was an enormous relief because I was increasingly feeling my position was so compromised.

Q60 Mr Mitchell: But you both feel that the clinicians and the localities were not sufficiently taken into account and did not have sufficient say.
Dr Nowlan: Yes.
Professor Hutton: That is correct. In the latter part of 2003, a senior person in the management of the programme spoke to me saying that he felt that the consultation as it had been carried out was a sham. We used to meet secretly at Starbucks on Leeds station to talk about it. I tried to find out exactly how it had been done. Indeed, I asked Mr Granger—and he cooperated in this—whether I could have a list of the names of the people who were involved in that consultation.

Q61 Mr Mitchell: Were you not asked to pump up the number?
Dr Nowlan: Yes, I was approached and they wanted hundreds of names of people who supported it and I refused to support that. I said it was not on.
Professor Hutton: I was sent a list by somebody within the programme which I have submitted to the Committee.[4] I rang up 10 people at random on that list only last week. None of them has any memory of having any meaningful input into the programme.

Q62 Mr Mitchell: Let me stop you there. Mr Granger, there is a point there, is there not? You did not really want to consult the clinicians and you did not want the localities making too much fuss because that would stop your husky-taming ambitions. It would make it far more difficult to negotiate the contracts. Clinicians are quite a querulous lot, are they not? They raise all kinds of doubts and hesitations. You did not consult them because they would have raised all those doubts and hesitations.
Mr Granger: I am sorry but that is neither my recollection of events, nor is it borne out by the evidence. In fact there are three clinicians sitting to my left.

Q63 Mr Mitchell: Surely it is borne out by the evidence now there is so much protest among clinicians and among the localities that they do not want the system, it is not going to work and they have had no real input and no benefit.
Mr Granger: There are thousands of clinicians every day using the systems which we have already delivered who are quietly getting on with it. One needs to recognise that a system programme of this scale is going to cause a degree of controversy and dissent, but to delay and have another decade of consultation.

Q64 Mr Mitchell: Yes, but the people who are going to use it centrally, for whom it is going to be important and who are going to be making their own clinical demands on it, are crucial.
Mr Granger: There has been massive input to the original design documents that went into procurement and on an ongoing basis; hundreds of people.
Sir Ian Carruthers: I do not want to enter a debate about Professor Hutton and Dr Nowlan, but if we look back, the issue is, as the National Audit Office Report says, that steps were taken to engage with chief information officers, clinicians of the academies of colleges, there was consultations with 400 or more clinicians, which is the biggest I have ever known in the NHS. More importantly, there is a lot of work going on behind that. I can only talk about what happened in my area where in fact we had clinical inputs to some of the submissions that were sent back. In fact at the same time, there was a bit of anger in some parts of the country because more clinicians had a chance to take part. In the South West we were all ready to go with our own version of this. In reality, from my experience, there has been more involvement than ever before.
Mr Mitchell: But there has still been a chorus of grumbling.

[4] Evidence received but not printed.

Q65 Annette Brooke: I am particularly interested in how the top-down approach then actually has an impact on local services. May I start by looking at paragraphs 3.27 and 3.28, where we have a series of different decisions made in terms of the GPs' ability to choose and use their own systems? In fact we have one decision in 2003, something happened in 2004, March 2005, then in March 2006 the Department announced its GP Systems of Choice initiative. Why all that chopping and changing? Why was there not an overall vision for the top-down system which started much earlier than all this chopping and changing?

Sir Ian Carruthers: The best thing is for us to ask a GP to explain what it was like and why.

Dr Gillian Braunold: The GP contract that was being negotiated at the same time as these contracts were going out was being negotiated at the same time by a different section of the Department of Health. The negotiated settlement for the new GP contract required the choice of GP systems. It was therefore required for each cluster to offer a choice of systems and it started off really being that they were offering an alternative system or their own reference solution. It became very evident very quickly that the LSPs were not going to be delivering what was called the reference solution, their own contracted solution, for quite some time and GPs understandably were very concerned that they were not being given a real choice, but a Hobson's choice. When the GP national clinical leads were appointed we asked from the word go whether we could tackle this problem and look at it from the bottom of the problem up, from the fact that we have got very good GP systems which are capable of integrating with the rest of the national programme, if we leave aside the integrated Care Records Service, but the Choose and Book, ETP, GP to GP and lots of the other work that was perfectly capable of moving forward and being invested in. Also there was a threat and a problem with the number of migrations of patient data if people were changing systems all the time and we wanted to limit that. We have worked very hard to provide the GP Systems of Choice model which is now being negotiated with suppliers which provides a safe way for the NHS to invest in current systems.

Q66 Annette Brooke: May I just cut across and ask a simple question? Looking at this in retrospect, was there not a case for consultation with GPs at an earlier stage?

Dr Gillian Braunold: I do not dispute that, because I was sitting on the other side of the fence then and we were bashing at the door. The first time we were let in that was the first thing that we addressed. It is fair to say that from the general practitioner community the importance of GP records, where we are already in a paper-free environment, needed to be explained and articulated very clearly within the programme and that is what we have done.

Q67 Annette Brooke: So we do have a gap between local decision making and the top-down approach. I should really particularly like to ask some questions on Choose and Book, if I might? You mentioned earlier that 54% of GPs are now using Choose and Book. What I should like to have is some understanding, when the Choose and Book decision is made by a patient, presumably recorded at the GP level, of how the primary care trust monitors the bill it is going to have to pick up at the end of the day with all these IT systems.

Dr Mark Davies: The situation, as far as Choose and Book is concerned, is when a GP is sitting with a patient and agrees a referral is appropriate to secondary care what will happen will be that the GP will select a list of clinically appropriate choices for that patient to choose from. They may well make the appointment there and then; they may well issue a document which allows the patient to go off and book in a variety of different ways, according to their own convenience. Your question in terms of the monitoring of the contracts depends on where the commissioning actually sits and historically the commissioning has sat with PCTs, but increasingly that will, in the future, sit with the practices themselves. There is an interface within the Choose and Book system for the commissioners to be able to monitor that activity. In fact one of the benefits of the Choose and Book system is that we shall have the kind of quality of referral data and the robustness of the referral data that in fact we never have had before in the NHS.

Q68 Annette Brooke: Are you aware of any problems within the NHS which have actually stemmed from the Choose and Book system in terms of disputes between a primary care trust and a NHS trust hospital?

Dr Mark Davies: I do not understand the question. Could you explain?

Q69 Annette Brooke: There is a situation locally where part of the issue appears to be that the primary care trust has not budgeted for all of the choosing by the patients and there is a stand-off and patients are not going to be admitted to hospital under certain circumstances, which is seriously worrying. What I wanted to know in my question was how the bits of the NHS link up so that we do not have a dispute. You are saying this might be sorted, but here and now there are patients in my area who will possibly not be admitted to hospital as a consequence of this.

Sir Ian Carruthers: I think you are referring to the Royal Bournemouth Hospital and Bournemouth Primary Care Trust. That is not about Choose and Book; that is really about whether in fact there should be an agreement on the payment by results system. It is not to do with the Choose and Book methodology. One of the things you will also know about your area, is that it is one of the biggest users in the country; in fact it has the most functioning there. It is not related to Choose and Book itself; it is related to the incentive system of payment by results where there is a difference of opinion between the primary care trust and the hospital.

Q70 Annette Brooke: Are you giving me assurance that the primary care trust can actually monitor what is happening through Choose and Book in terms of budgeting?
Sir Ian Carruthers: Each month they will receive how many people have chosen and booked. The reality is that when you are hitting a rate of only 34% to 35%, which we are, the issue is that there are many more patients going into hospital where the system is not being used, but ultimately that should be the way of doing it. At the present time, until take-up is fully undertaken, that will not be the case. One of the things we are looking at is the fact that quite often one of the problems with GPs' experience is that they want a Choose and Book within the requisite timeframe, but there are no slots available in the hospital. One of the things we need to look at is how we help hospitals make more time and slots available so that the system can expand. This is work in progress. We have incentivised GPs, we need now to look at incentivising the hospital system to make that work.

Q71 Annette Brooke: Finally, can you actually give me a categorical assurance that all the different parts of the commissioning, the provider and obviously a strategic health authority are actually going to be joined up and that there will not be any gaps at all from now on?
Sir Ian Carruthers: You should never give a categoric assurance, as you well know. The point is that Choose and Book is a system that is building up at the moment. When it gets to its ultimate, we should be able to identify and GPs should be able identify, where they have referred people to and they should be able to translate that back into what care they have had and how they have been able to fund them out of their practice-based indicative budget. When it is fully operational, that should be done in large measure.
Annette Brooke: Just to reiterate, I am concerned about the gaps locally.

Q72 Mr Khan: Can you reassure me those medical notes lying on the floor over there are not the Chairman's that he is worried about?
Mr Granger: I can.

Q73 Mr Khan: I just wanted to make sure that my Chairman's privacy had not been breached. That is fine.
Mr Granger: These are very important because these are notes that we have consent to have here and this is where we are today. This is one patient.

Q74 Mr Khan: Superb. I hope they are better. Sir John, nobody has criticised the NAO for what some of us would call a balanced Report, others a gushing Report. Mr Clark put to you the FT article by Nick Timmins. I am going to put to you another quote which is quite a serious one. It is written by a specialist, one of the country's leading IT journalists and he says, and I quote, "Sources suggest that the NAO was ground down in a war of attrition with Connecting for Health who fought a dogged rearguard action to keep back criticisms it found unpalatable or unacceptable". Were you ground down?
Sir John Bourn: I was not ground down: the Department may feel that they were ground down. I refute what the journalist said.

Q75 Mr Khan: I am relieved. The second very serious allegation and aspersion cast against the NAO is in this week's *Computer Weekly*, also by one of the country's leading health IT journalists, Tony Collins. He is talking about the senior executive observer at Connecting for Health and comments "The potential placement leaves the NAO vulnerable to a perception of a potential conflict of interest. Could the National Audit Office criticise a programme that has been advised by one of its senior executives, even if he did not take part in decision making?".
Sir John Bourn: I am not constrained in any way in what I say.

Q76 Mr Khan: I am surprised that you are not angrier than you are. People are casting aspersions at the quality of your work over a long period of time, examining a major IT project.
Sir John Bourn: I bring my work to Parliament and I am satisfied that what I have brought to you is work of high quality, done by my staff. I do not seek to engage in discussion with the media and play some game of exchanging slogans and points with them. I come with my views to you.

Q77 Mr Khan: I am grateful. My final question is to you Sir John. I read from your NAO Report that the NHS appears to have followed the recommendations made by the PAC in its Report *Improving the delivery of Government IT projects,* before my time, in 1999–2000. One of them, to do with an incremental as opposed to a big-bang approach to IT projects, is mentioned on page 11 of your Report; another one is to do with the importance of risk management and professionalism for successful implementation of IT systems. Are you reasonably happy that your best practice advice has been followed by the NHS?
Sir John Bourn: I am. The emphasis on professionalism has been taken forward. This programme is run by people who actually have experience rather than by generalist civil servants. I should pick up the particularly crucial point that the PAC have discussed in the past that you should only pay for what you get and this is absolutely following that principle.

Q78 Mr Khan: Hardly surprising that your Report is gushing.
Sir John Bourn: Yes, you are right. If doing it properly is gushing, then it is gushing, but if it is proper, I should say so.

Q79 Mr Khan: Absolutely; I agree. Thank you Sir John, that was very helpful and the brevity of the answers was one of the strengths. May I move on to a question to you Sir Ian? Why does the

implementation of the programme feature neither in the current Department of Health's PSA targets nor in the supporting targets?
Sir Ian Carruthers: Normally the PSA targets are about service outcomes in the main. It is clear though that this particular grouping will have an impact on the wide range of targets. Whilst it is not specifically mentioned, it will impact upon them all.

Q80 Mr Khan: Why is it not specifically mentioned in the PSA targets?
Sir Ian Carruthers: I do not know. We can let you have a note on that.[5]

Q81 Mr Khan: Please.
Sir Ian Carruthers: We shall do that.

Q82 Mr Khan: Okay. Despite this slippage, you are still extremely confident and you have persuaded the NAO that the entire implementation will be completed by 2010 in accordance with the originally-contracted timescales. How can you be so confident?
Sir Ian Carruthers: What we have is an end-point. What I have also said, and I have said it earlier this afternoon, is that it is a large project, it has its risk and it has its delay. Whilst we are working to those timeframes, it is more important that we have safe systems which are right and appropriate and with value for money. That will be the emphasis because at the end of the day we want those ingredients rather than a system that is put in quickly and less good than it should be. We are working to that.
Mr Granger: Two further reasons. One, when one looks at BT's core contract to deliver the Spine, they had five software deliveries to make last year, they made each of them on schedule. Secondly, the work in progress that has been carried on the balance sheets of the suppliers is a strong incentive for them to catch up. They will only get to a position of financial balance by doing it; the dogs will then get fed.

Q83 Mr Khan: In percentage terms, how confident are you of us reaching completion by 2010?
Mr Granger: I am confident that by 2010 we shall have done far more work than was set out in 2002 and the core elements of the programme will be in place.

Q84 Mr Khan: Are you 100% confident?
Mr Granger: 100% is a dangerous statistic.

Q85 Mr Khan: The question was: what percentage? How confident are you?
Mr Granger: We shall have done more work by 2010. There will be more benefits out there and more systems out there.

Q86 Mr Khan: You do not want to answer the question. That is fine. May I put to you Sir Ian an article in one of yesterday's newspapers, I am sure you have read it, in *The Observer*? There is a heading saying, "NHS computer chaos puts patients at risk". Have you not read this article?
Sir Ian Carruthers: We have read that but not the one you were brandishing.

Q87 Mr Khan: It starts by saying that people could be put at clinical risk. What do you say to that?
Sir Ian Carruthers: We should like Professor Sir Muir Gray to answer that.
Sir Muir Gray: Like all technology, information technology has a clinical risk. Everything we do is a clinical risk.

Q88 Mr Khan: So what do you say in relation to the specific example they gave about the e-mail in February from one of the managers in West Midlands who acknowledges the potentially "significant" clinical risk?
Sir Muir Gray: We have a system now to identify potential clinical risk. We deal with that at the design stage, the build stage and the test stage when it is first put into practice and then we shall be monitoring when things are in practice.

Q89 Mr Khan: You are not reassuring my constituents. Are you saying my constituents are at risk because of problems with the implementation?
Sir Muir Gray: Everything is a risk; a balance of risk. There is a risk with all technology, but when this is in, at minimal risk, which we shall do through our risk and safety process, this will dramatically reduce the risk of prescribing and of lab tests.

Q90 Mr Khan: My time is running out. Could you please do me a note on the very serious points made in this article and your reassurance for me, my constituents and colleagues about the points they raise.[6] My final area of questions is on the area around an issue raised by the Chairman and I raised it earlier on. How are you going to make sure that staff follow the rules so the security and confidentiality of patients' records is protected?
Mr Granger: Gillian will say a few words on this as somebody who carries one of these smartcards which are more secure than the instruments we are all using to access money in this country. This is more secure than single factor authentication chip and PIN technology. We are supporting the Information Commissioner in his demands for higher penalties for information abuse and you will be aware that the penalty for information abuse in this country is currently capped at £5,000. That is not a sufficient penalty, given the risks that are carried there, but you have to look at the risks that paper itself carries in the absence of audit trails.
Dr Gillian Braunold: I shall not keep you long because I know that time is very short. We try to make sure that through all of the—

Q91 Mr Khan: I am sorry but may I be very rude and cut you short? Could you do us a note about that as well, because my time is up?[7]

[5] Ev 38–40

[6] Ev 40–41
[7] Ev 41–42

Dr Gillian Braunold: Yes, we could

Q92 Mr Khan: My final question, with the Chairman's indulgence, is that the main aim of the programme is clearly to improve services rather than reduce costs. Why have you been so poor at selling the benefits of the programme?
Sir Ian Carruthers: The benefits of the programme are clear.

Q93 Mr Khan: Why have you been so poor at selling them?
Sir Ian Carruthers: There is a matter as to whether we are so poor. Many clinicians, as the Report says, think that this will very much improve their working life. Secondly, seven out of 10 know a great deal about the programme and to one of the questions before where you were saying that the clinician impasse was reducing, it was because they are keen to get hold of it. It depends what you mean.[8]

Q94 Mr Khan: Sorry, my time is up. What I mean is the research carried out by MORI on pages 45, 46, 47, 48 and 49. My time is up and the Chairman has indulged me. Can you also do a note on those comments on pages 45 to 49 please?***Sir Ian Carruthers:*** Yes, we can do that.

Q95 Mr Curry: I do think that if we do have doubts about the inherent quality of the NAO Report, then we ought to discuss those in private before we have witnesses, rather than make it part of our public debate. Sir Ian, what bothers me is the local end of this. If I look at my local NHS, at the moment it is in turmoil. We have a reorganisation of the PCTs, we have a reorganisation of the strategic health authorities and we have the GPs pretty disaffected by what is happening. How confident are you? It only has to go wrong in one place, has it not, for the system to go wrong? How confident are you that in these very difficult circumstances for the local NHS, this is going to be okay on the night?
Sir Ian Carruthers: Firstly, we are going through a period of structural change as you rightly mention. During the course of this year, we shall have new leaders in place, new organisations and it will be their responsibility to take forward the programme. In actual fact, it is only at that level where this can be implemented in the most appropriate way.

Q96 Mr Curry: How is that going to happen in practice? We have PCT reorganisation, we discussed this before, we are moving to much larger PCTs. Some of them are serving a population of 650,000 to 750,000 and some are inheriting huge deficits they have to work through the system and at the moment they are trying to work back through the system, which is why a lot of people are disaffected and fed up and then the strategic health authorities. Is there one person who has specifically been told that he is in charge of getting this thing delivered?
Sir Ian Carruthers: Yes.

Q97 Mr Curry: Who is it and how did you choose him or her?
Sir Ian Carruthers: The senior responsible officer for the programme in each area is the chief executive of the new strategic health authority and there are 10 of those. The responsibility for delivering in each organisation is the chief executive of that organisation. As the end of the Report says, we are putting in monitoring systems to check that.

Q98 Mr Curry: Is it your advice to them that they should have a Mr Granger alongside them, as it were, to deliver this? They are going to have lots of other things to deliver, are they not? They have to live within their means, to quote the Government's favourite expression at the moment and lots of other things.
Sir Ian Carruthers: As the new strategic health authorities are established, we are making sure that each one has a senior chief information officer who will be accountable to the chief executive for taking it forward. We would expect that to be mirrored in more local organisations. So we do have that. Whether it is another Mr Granger remains to be seen, but we want someone to be accountable for that particular area.

Q99 Mr Curry: So we shall be able to see this handful of people. Are they going to be Mr Granger's disciples in the new strategic health authorities?
Sir Ian Carruthers: No, they are going to be accountable—

Q100 Mr Curry: I do not wish to push the analogy too far Mr Granger.
Sir Ian Carruthers: There will be people who will be working to their chief executive to deliver this programme and this programme is important for the reasons of patient safety, improving resource use, better operational efficiency. I cannot imagine an NHS in the years to come where we are not going to maximise the benefits of using IT.

Q101 Mr Curry: What would happen if in just one of them though things were not . . . They are bound to be different in their performances, are they not? We have seen in the PCTs how different the performances are and in the NHS trusts.
Sir Ian Carruthers: There are two things. If something goes wrong, it will go wrong in a particular implementation. One would expect that the strategic health authority would intervene in that. If we felt the programme was going wrong on too big a scale, we too would intervene.

Q102 Mr Curry: By what means would you intervene? Who is your fire brigade?
Sir Ian Carruthers: Through the performance management process. We would discuss with the strategic health authority chief executives, if it went wrong in a place, how we could support them, what we would need to do and that is what we would actually do.

[8] Ev 42–43

Q103 Mr Curry: How long would that take? How long would it be between the perception that there was a problem and the identification of the fix?
Sir Ian Carruthers: We do monitor this regularly. At the moment it is on a quarterly basis, is it not?
Mr Jeavons: We actually monitor on a monthly basis already against performance targets.

Q104 Mr Curry: So you have a failsafe mechanism. Somewhere a red light goes on in your office.
Sir Ian Carruthers: Not in my office, but yes, a red light does go on.

Q105 Mr Curry: And he is immediately on nuclear alert, is that right.
Sir Ian Carruthers: I should not quite put it like that.

Q106 Mr Curry: It is important because I must emphasise that an awful lot is changing locally in the NHS at the moment, there is a great deal of turmoil, the financial problems are causing severe problems and of course they are causing disaffection amongst the GPs; there is no point pretending that is not the case. I think you were here before when we were talking about the Paddington Health Campus Scheme and what we discovered there was that, after having conceived the project, they then went and asked the users what they thought it ought to be doing and they said that it ought to be doing something slightly different. So when they reconfigured the project, they did not have any land for it. There is a bit of a history here of conceiving projects in abstract from the people who might have to use them. I am just anxious to make sure that this disaffection by what one might call the poor bloody infantry, which is how the GPs might see themselves, would be important.
Sir Ian Carruthers: Two things. First of all, it was not a discussion on Paddington Basin with me, it was with my colleague Hugh Taylor, but the point that you make is well made. In many local areas, and I can only speak for mine, what we do have are local implementation systems where in fact there are groups of managers, hospital clinicians and GPs who are working together with clinical advice and support to avoid some of those. Mr Jeavons can add to that and reassure you a bit more.
Mr Jeavons: It is important to recognise that that is the model that we are pursuing. A national programme backed by a national policy that is the responsibility locally to implement. Just to counter some of the suggestions there, just as some are struggling, others are seizing these opportunities and are taking them as part of moving their services forward very positively and the role of the centre is to do two things: one is to make sure that that which we know works is explained and understood by everybody; secondly, where we can offer national support, we do exactly that. Our job is not to go and do it all for people locally. It is that clarity about local accountability and the capability to do it which we really need to concentrate on.

Q107 Mr Curry: In Skipton there is a system called EMIS which is used by my GPs which they like and say it works very well and is better than anything else that is currently on offer. When I spoke to them a month ago, the only problem was that the PCT had not actually paid the licence fees for it, several months late, so that every time they switched on their computer, they got a big thing on the screen telling them that if the fees were not paid shortly, the whole thing would go bust. That sort of thing is what might well undermine their confidence in even more complex machines, is it not?
Mr Jeavons: It is very important that primary care trusts are clear about their responsibilities for supporting local information technology for general practitioners. As it happens, I am actually aware of some of the issues in that particular primary care trust and we have given them an absolutely clear statement about what the primary care trust's responsibilities are.

Q108 Mr Curry: In the past we have had discussions in which we have agreed that when one is trying to estimate the cost of things in an organisation as big as the NHS, it is quite difficult to have sufficient data to be able to come to proper costings. In the out-of-hours service we came across you had uprated the tariffs to pay for this. How confident are you that the up-rating, which is quite a precise sum, will actually pay for it and what danger is there that that will not go right? Again, quoting one of my Harrogate trusts, Harrogate Hospital was delivering services for less than the tariff, so it now gets paid more for doing the same. How confident are you that that figure is right, whatever it was?
Mr Jeavons: Those figures were based on data that were taken from typical hospitals for the costs of those implementation, so inevitably, as you would with a national tariff, they are average figures. The purpose of that was to ensure that through the tariff system, trusts that needed to take on the cost of implementation and new systems had the money channelled to them through the tariff. It was an addition to the cost up-lift and then it was of course netted down for productivity and so forth in the final tariff calculation.

Q109 Mr Curry: You mentioned the deadly word "average". Average is by definition something which nobody performs, is it not?
Mr Jeavons: But that is the definition of the tariff. It is a national tariff, so it has to be an average.

Q110 Mr Curry: Is there a danger that this tariff may not be sufficient for certain areas or trusts?
Mr Jeavons: We are talking about acute hospitals here because that is where the tariff applies. Acute hospitals will all be starting in slightly different places with their IT implementation. That is a fact and that is noted in the NAO Report. Individual circumstances will differ. However, over a period of time, they will all need to invest in information technology, if nothing else to see the rise in expenditure that we expect through Wanless and this

programme, so we have to direct money to trusts. The way to direct it now is through the tariff, the tariff is a national calculation.

Q111 Mr Curry: So you are confident that if there is a problem, let us say in North Yorkshire, they will not say "My gosh, we are going to have to find some extra money, so we shall close the remaining beds in the community hospitals". You can give me the assurance that funding this will never cut into other services.
Mr Jeavons: We are absolutely clear that the evidence that was laid out in the business cases gives you a very clear direction in terms of pursuing benefits of these investments. Individual organisations put their own business case together for investing in this technology and it is that business case they sign off and they should sign it off on the basis that it will deliver the benefits and will allow them to meet their other responsibilities. That is the model.

Q112 Mr Curry: But if it did not, they would have to find the money from somewhere else.
Mr Jeavons: They take the decisions to do it and then they live with that.
Sir Ian Carruthers: The underlying point which you are after is the cause of problems or deficits. The Audit Commission have recently produced a report on the financial management of the NHS and in that they say two things: one is that there is no single reason in any organisation why the deficits occur because it is a multiplicity of things and the real point is that although they get average prices, people manage them differently. It is a test as much of local management, of financial position as it is of the allocations. The second thing is that it lists in paragraph 8 of that report a number of things that may have contributed, whilst saying that there is no single cause and Connecting for Health is not listed in that list because they do not believe that it is the cause of any of the financial problems in the NHS at the present time.

Q113 Kitty Ussher: A lot of the questions I had, have already been asked, so I just want to ask two additional ones. The first concerns Choose and Book. I had a little delegation of GPs come to see me on Friday in my constituency of Burnley in Lancashire and they were actually coming to discuss some rather worrying proposals locally to change the A&E configuration, which I will not trouble you with at this point, although I am happy to come back to you later. In the course of the conversation they said, and I wrote it down "Choose and Book, why does it not work?". They had an example. They are in their GP surgery and then various options come up on the screen, all of which seem quite far away. They try to choose one of them and either the technology fails or there have been situations where they have then rung the local hospital and said "Why do you not have any places available for this outpatient appointment" and they said "But we do, we have loads". Why does it not work?
Dr Mark Davies: Speaking as a GP who uses Choose and Book on a daily basis when I am not working for Connecting for Health, I am telling you that it certainly does work. In fact in the last working week, almost 20% of the referrals that were from GPs to consultants went through Choose and Book, which is evidence of that. It is interesting. There are two groups of people who talk about Choose and Book who are using it: those who are using it every day, whose patients love it and have a positive experience of it; those perhaps who have had one or two goes who are really struggling. It is undoubtedly the case that there are some GPs who have had a go and, for whatever reason, have not had a good experience of it. Often the reason they have not had a good experience is down to the local implementation issues that we were just discussing, for example how a local workstation might be configured or indeed the availability of slots of appointments at a hospital. It is certainly not the case that it does not work.

Q114 Kitty Ussher: That has not quite answered the question. Could you explain specifically what has gone wrong, when on the screen it says there are no appointments available, but if you pick up the phone to speak to the hospital, they say there are lots of appointments available?
Mr Granger: That is very simple. The patient administration system in the hospital they are trying to book into is not up to date. It would be very, very similar and you might have seen only today EasyJet finally announcing they are going to offer something about 1% as complicated as Choose and Book and you will be able to book all slots on-line. You have had a situation where an airline has been trading as an internet airline that has not had most of its inventory available on the internet. We have NHS trusts that have been putting up appointment availability which has not been updated.

Q115 Kitty Ussher: So East Lancashire Hospital Trust, which owns and manages the hospital in my constituency simply does not have their software in place and has not sorted it out.
Mr Granger: And they are due for their system to be replaced in October of this year.

Q116 Kitty Ussher: That is an extremely useful clarification. I shall feed that back to the GPs. My other question was about the procurement process generally. We have seen quite a lot of these processes in front of this Committee, as you probably gathered, and I am intrigued by how successful on paper the process appears to have been compared to the traps that various government departments have fallen into in the past. The NAO says, for example, that you have managed to get the lowest prices in the world for Microsoft products. My understanding seems to be that you have managed to push all the risk onto the supplier companies to protect the taxpayer and obviously this Committee will be delighted by that. Could you say perhaps what are

the key elements that have been learned from problems in the past and can we spread these out across the Whitehall machine? Where is it working?
Sir Ian Carruthers: There are some in the back of the document, but I shall ask Mr Granger to comment because he led most of this.

Q117 Kitty Ussher: What was it that made it work? What was new?
Mr Granger: We put a team together, not without difficulty, at the same time as starting the procurement process. We got work packages, the LSP contracts, each around £1 billion, of sufficient magnitude to attract high quality, large suppliers to bid and the NHS had not had that supplier base for the preceding decade. We were very clear and before we put the procurement advertisements in we published a procurement strategy which we have endeavoured to adhere to. We were transparent about the nature of the terms and conditions and in fact the terms and conditions owe their provenance to contracts I put in place for congestion charging. Clearly, for those of us who use the roads in London, you can see that they worked. Capita did deliver to schedule. We undertook financial analysis as to the capacity of the suppliers and their delivery capacity. Some things have gone wrong. We also undertook a *prima facie* evaluation of their ability to work together and to get different components to work together as part of a technical design study. As much as possible we tried to stick to a timetable, recognising that some other public sector procurements take 27 months; the NAO referred to standard PFI transactions. That is generous for some large-scale IT procurements and that carries significant risks around technology obsolescence, cost over-run and the taxpayer ends up paying for that process through inflated costs because the suppliers have to recover the costs somehow. We have been very clear about what we wanted to buy, very clear about the basis we wanted to buy it on and very clear about the consequences of delivery or non-delivery. I tried to apply some of the principles that you would want if you were buying consumer goods to the more complex world of IT procurement.

Q118 Kitty Ussher: Am I right in thinking therefore that the risk is in the timescale rather than the costs? Is that right?
Mr Granger: Yes. Because we have transferred finance and completion risk for the most part to the suppliers, the primary risk that we continue to bear is a timescale risk.

Q119 Kitty Ussher: Is that built into your deadline for the completion of the roll-out of the entire project? Are you on track still?
Mr Granger: We are on track for the deadline of the programme. Nothing is ever totally certain, but if you look at the rate of progress we are achieving now in terms of volumes of users picking up every week, we shall be in a place where, for most of the MPs here, at least two thirds of your constituents now have access to a number of NHS services which are dependent on things that my organisation delivers. We shall move to 100% position on that over the next 12 months. Already the NHS cannot function without the things we have delivered: passing messages, pathology results, e-mail, a number of GP systems and, as Dr Davies said, 20% of appointments now into secondary care. There is a large volume of core NHS services now being delivered by electronic means under these contracts.

Q120 Kitty Ussher: In terms of spreading best practice on procurement, how will that be done across Whitehall? Are you working with the OGC and Gershon processes?
Mr Granger: We made available to the OGC, when they were producing new guidance to replace the Treasury task force on standard terms and conditions for PFI contracts, all our contracts and indeed some of the lawyers we had worked with participated in that and our head of procurement, Patricia Kelsey, participated as well. They took on board our terms and conditions and negotiation approaches, some of which are set out in this Report, and have made those available to other departments.

Q121 Dr Pugh: Can we test this hypothesis that robust procurement saves the day? May I start with the big numbers first? In the NAO Report it said that £6.8 billion was saved from the initial bids and £4.5 billion through central procurement. These are very big figures and I cannot help speculating on how you arrive at them. Do you simply take up the gross bids and add them all up and put them down as savings or does a more subtle process take place?
Mr Granger: Those numbers are not my numbers; those numbers are numbers which owe their provenance to Ovum, who are respected independent industry analysts who looked at the cost of comparable systems when procured on a trust-by-trust basis.

Q122 Dr Pugh: You did say before that as part of the procurement process you looked at the delivery capacity of whatever suppliers came forward. EDS were replaced eventually by Cable and Wireless on NHSmail. Why was that? What happened there? What were they paid for their efforts?
Mr Granger: I am afraid I do not have the exact figure with me that they were paid to termination of the contract. I shall let you have a note on that.[9] The reason the contract with EDS was terminated was because, in our opinion, the service which was being delivered was not sufficiently reliable and the new functionality we required was significantly delayed.

Q123 Dr Pugh: So they did not have the delivery capacity.
Mr Granger: I did not let the contract with EDS. The contract with EDS was let by the organisation of which Dr Nowlan was a director.

[9] Ev 43

Q124 Dr Pugh: One way of reducing procurement costs is obviously to shift some of the cost to the local NHS. The figure for additional income is £3.4 billion but presumably this excludes what they would normally spend on IT prior to that. I understand there are savings in the process for introducing the new schemes and so on, but that is not all they are going to spend on IT, is it, by any stretch of the imagination?
Mr Granger: That is correct. From our business cases it looks as though that number might be a bit high as we get into large-scale deployment. That number was the total estimated cost three years ago in the Treasury business cases around what it would cost the NHS to take on board these systems, not their net cost, and it looks as though the actual cost is going to be significantly lower.

Q125 Dr Pugh: Significantly more?
Mr Granger: No, significantly lower.

Q126 Dr Pugh: Significantly lower?
Mr Granger: Yes.

Q127 Dr Pugh: One feature which has been commented on is that some of the contracts appear to be let on the basis that the NHS trusts themselves, willingly or not, will provide IT specialism. Is that the case?
Mr Granger: It is the case that it is good practice, as set out in many reports from this Committee and indeed significant commentary this afternoon, that significant user involvement is key to the successful delivery of IT programmes. The strategic health authority is committed to provide a number of clinicians primarily rather than IT staff.

Q128 Dr Pugh: You said earlier—I heard the very words—that there is a known shortage of capacity in NHS IT. Against that background was it wise to construct contracts like that?
Mr Granger: I am sorry but I was talking about suppliers' capacity. There is a shortage of supplier capacity, which is why capacity has come from other jurisdictions.

Q129 Dr Pugh: You had no doubts about the trusts' capacity.
Mr Granger: We left the trusts' capacity intact, rather than having an outsourcing arrangement under TUPE and effectively asset-stripping the trusts out to the supplier communities. We did not repeat a mistake which has been made with some traditional outsourcing arrangements. We recognised that it was essential to have sufficient end-user input to the design and deployment as well. We undertook obligations to make that available as a fair bargain.

Q130 Dr Pugh: The delays have to some extent cost the trusts money, have they not, because some of them have had to go ahead with renewing their own patient administration systems and so on, as well as making them compliant with the Spine? Can you quantify the cost of that or have you been able to quantify the cost of that?
Mr Granger: A number of trusts have had to extend their existing systems and they do therefore have cost. When the new systems come in, after the implementation of them, they do not have to pay for that system any more. I do not have an exact number, but in many cases we are providing financial support to trusts for upgrading their existing systems and indeed some of the £80 million support around Choose and Book implementation is to upgrade their existing systems.[10]

Q131 Dr Pugh: I understand that some of the GPs are very fond of their own kit and software and that you tried to make the system more compliant with that. There is going to be a significant write-off cost, is there not, for stuff which is not Spine compliant at the end of the day? Have you quantified that?
Mr Granger: Most of it is life expired. If you look at its position on balance sheets it is either leased or life expired. One of the difficulties we have is that a trust such as the Nuffield, which has been the source of much inquiry, had only one month left in which the hospital could operate with its existing system. The same was true 30 miles up the road with an installation you may not have heard of, University Hospital Birmingham, where there were one to two months of life left in the hardware they were using before the hospital would start to run into problems operating; obviously a much larger hospital in Birmingham than the Nuffield. There is limited investment in the existing installations and in many cases—in fact around 50 cases in terms of application software—their systems have been tested to be partially upgraded and become Spinecompliant. We are making best use of existing investment wherever we can as well.

Q132 Dr Pugh: So you have a fairly shrewd idea of the additional hardware costs for most trusts.
Mr Granger: I do not know exactly what each trust is spending on additional hardware because that cost is an ongoing expenditure and they are standard arrangements. Where we have gone through full-scale upgrades we now have those numbers and can supply them to you.

Q133 Dr Pugh: One thing the NAO say about you is that you exerted downward pressure on sub-contractors which are used by many suppliers, Microsoft was just mentioned and in fact is mentioned in the NAO Report. I know you have met Mr Gates and Mr Baumer. How much does the NHS now spend on Microsoft licences?
Mr Granger: I think you will find the number accurately reflected in this Report. From memory, I think it is something of the order of £50 million a year.

[10] Ev 43

Q134 Dr Pugh: I think it was £53 million in 2003.
Mr Granger: I guarantee we have been spending less per licence than anybody else on the planet.

Q135 Dr Pugh: Is that figure likely to remain somewhat similar.
Mr Granger: Yes, it is. It is important to note that we have a three-year mark and a six-year mark and the opportunity to step out of that contract if we want to move to open source software if that became mature and more cost effective.

Q136 Dr Pugh: You do not accept kit, software, hardware or anything unless it is working and somebody has to decide that it is working. Who makes the decision? I certainly do know general practitioners who feel that is satisfactory. I know others who feel it is not. How is the general verdict arrived at that a piece of equipment, a piece of software is working and now has to be paid for?
Mr Granger: We have a very clear acceptance process. It is agreed with the suppliers during the contracting phase that they sign up to that it goes through this acceptance process. In most cases they are paid, once it has been used, generally 45 days after commencement by users. It has to be in use and accepted by the end-users as well as going through a technical acceptance process.

Q137 Dr Pugh: May I ask you about an article in the *Evening Standard* which suggested that you had said to suppliers that if they complained about the system they would be struck off the bidding list, that you had implied as much. You have not done that presumably.
Mr Granger: Not at all. I think you will find more reliable evidence than the *Evening Standard*.

Q138 Dr Pugh: I am just giving you the opportunity to put it on the record.
Mr Granger: We ran a procurement process which the NAO refer to as bringing the high standards of Civil Service procurements in terms of the probity of the process and we applied those standards. Our suppliers are in many cases somewhat reticent to discuss things but the reticence is for the most part theirs rather than mine.

Q139 Dr Pugh: You recruited some medical advisers at some point by advertisement to advise you on the project. Did you make them sign a confidentiality agreement and if so why?
Mr Granger: The people working on the programme have signed arrangements which are similar to those signed by civil servants. For the most part they are being paid for out of funds which flowed through the Department of Health so I see no reason not to do that. We also caused a degree of consternation in our arrangements under those job advertisements that people declared their conflicts of interest. That was quite a quaint and novel arrangement which caused consternation amongst a number of the specialist IT interest groups.

Q140 Mr Bacon: May I start by asking the Treasury Officer of Accounts how much the Treasury has now agreed to pay towards the National Programme? How much has been irrevocably committed in terms of funding?
Ms Diggle: I have to turn to the NHS and ask Sir Ian for that.

Q141 Mr Bacon: It is the Treasury which is supplying the money, is it not?
Ms Diggle: As part of the overall settlement to the NHS, yes.

Q142 Mr Bacon: How much has been committed irrevocably to the programme so far?
Mr Granger: I do not have that exact figure right now.

Q143 Mr Bacon: You do not know? You do not know? We have been told that this programme is going to cost £2.3 billion, we have been told it is going to cost £6.2 billion, we have been told it is going to cost £6.8 billion and we have been told it is going to cost £12.4 billion or £12.6 billion. Lord Warner, the Minister said only three weeks ago on 30 May that it was going to cost £20 billion and you still cannot tell this Committee how much has actually been committed to it.
Mr Granger: We have under-spent by approximately £700 million.

Q144 Mr Bacon: That was not my question. My question was not: how much have you spent? My question was: how much have you committed? How much is there in terms of secure funding?
Mr Granger: I am sorry. I now understand the question. You have said it would cost £30 billion; if we want to add another number.

Q145 Mr Bacon: If you would concentrate on answering my question rather than saying what I have said, that would be very helpful because we do have a limited amount of time. What I am interested in is how much secure funding there is.
Mr Granger: The committed expenditure for the programme is just over £12 billion as set out in the NAO's Report.

Q146 Mr Bacon: So as far as you are concerned the Treasury has committed to that £12 billion.
Mr Granger: Some of that money is committed through contracts—approximately £9 billion—and the balance is committed through core NHS funding.

Q147 Mr Bacon: How much has actually been spent so far?
Mr Granger: Approximately £1.5 billion.[11]

Q148 Mr Bacon: What is the difference between the £654 million which is referred to in paragraph 1.22 and the £1.5 billion you have just mentioned?

[11] Ev 44

Mr Granger: Some of that is central administration cost, some of that is forward payments to contractors covered by an instrument I am sure you are familiar with, letters of credit from their banks and so on.

Q149 Mr Bacon: Is it possible you could send us a breakdown of that £1.5 billion with its major headlines, so to speak?[12]
Mr Granger: I should be delighted to do that.

Q150 Mr Bacon: Particularly of the difference between the £654 million referred to in the Report and the £1.5 billion you have just mentioned. That would be very helpful. Sir John is it fair to say that you regard one of the central strengths of the whole contracting process as the fact that there is no payment unless there is delivery, so there is no advance payment; it is really payment by results, to coin a phrase? Is it fair to say that you regard that as a main strength?
Sir John Bourn: Yes, that is fair. Payment should be by results achieved.

Q151 Mr Bacon: Mr Granger you would presumably basically agree with that.
Mr Granger: Yes.

Q152 Mr Bacon: So you would not make advance payments.
Mr Granger: There is a difference between an advance payment which is covered by a letter of credit.

Q153 Mr Bacon: Do you mean a letter of credit from a bank?
Mr Granger: Correct.

Q154 Mr Bacon: So you would not make any payments other than those covered by a bank so you were guaranteed by a commercial bank that the money would come back to you?
Mr Granger: Correct.

Q155 Mr Bacon: Mr Shapcott, you mentioned at the press conference the week before last when the Report was published that you had seen a cost benefit analysis of each part of the programme which analysed all the different aspects and that there was a gap between the identifiable costs and the identifiable benefits. I am not sure whether it was done by you, but it was probably done by the Treasury. How big was that gap?
Mr Shapcott: Yes, investment appraisals were carried out for all the big contracts produced by the Department of Health for the Treasury.

Q156 Mr Bacon: How big was the gap?
Mr Shapcott: I do not have the exact figures here.

Q157 Mr Bacon: How big was the gap?
Mr Shapcott: Certainly substantial.

Q158 Mr Bacon: How much: £10 million, £100 million, more than £1 billion, £2 billion? It was the Treasury's analysis was it not?
Mr Shapcott: They are the Department's papers.

Q159 Mr Bacon: Sir Ian, what was the gap?
Sir Ian Carruthers: May I ask Mr Jeavons?

Q160 Mr Bacon: Nobody seems to know the answer to this question. You are doing a project of the scale described in paragraph 1.8 "The scope, vision, scale and complexity of the Programme is wider and more extensive than any ongoing or planned healthcare IT development programme in the world" and it goes on ". . . the programme is developing a system not being attempted elsewhere on this scale" and you are telling me that nobody, not Mr Shapcott, nobody, not you Sir Ian, not you Mr Jeavons, appears to have at his fingertips a figure of the cost benefit analysis.
Mr Jeavons: I was just going to try to give you some numbers, if that is okay?

Q161 Mr Bacon: Please.
Mr Jeavons: On the PACS contract the costs are £1.3 billion for the total cost of the contract. The cash releasing benefits which are identified in the business case are £682 million. So the difference is what are called non-cash-releasing benefits and those are the ones where you need both to measure and then place a value on those in order to demonstrate overall value for money.

Q162 Mr Bacon: What about the other main parts of the programme? PACS is the picture archiving, is it not?
Mr Jeavons: Yes, the picture archiving.

Q163 Mr Bacon: When did that become part of the national programme? Was it at the outset?
Mr Jeavons: It was always identified in the strategy.

Q164 Mr Bacon: Was it always part of the national programme from the outset?
Mr Granger: Yes.
Mr Jeavons: Yes, it was set out in *Delivering 21st Century IT Support to the NHS.*

Q165 Mr Bacon: It was set out in that, was it?
Mr Jeavons: It was indeed.
Mr Granger: You will find it at appendix four.

Q166 Mr Bacon: What was the risk score in *Delivering 21st Century IT Support to the NHS* for this programme? Perhaps you know the answer to that Sir Ian. You do not?
Mr Granger: It is high.

Q167 Mr Bacon: What was it?
Mr Granger: I do not remember the exact number, but it was high.

Q168 Mr Bacon: It was high?
Mr Granger: Yes.

[12] Ev 44

Q169 Mr Bacon: As it happens I have a copy of *Delivering 21st Century IT Support to the NHS* here. It says that the Office of Government Commerce has introduced a system of Gateway Reviews for major public sector projects. You will be familiar with this. It says that the first step is for the senior responsible owner to use the project profile model to determine the overall level of risk for a given project, that an assessment of the strategic programme against the PMDU project guidance for ensuring successful delivery has been undertaken. By the way, while we are on the subject of senior responsible owners, I take it Sir Ian that you are now a senior responsible owner with Mr Granger. Is that right?
Sir Ian Carruthers: Yes, for the moment.

Q170 Mr Bacon: How many senior responsible owners have there been altogether?
Sir Ian Carruthers: First of all, as the Report says, we started off with one, Sir John Pattison. Then there was a change where Mr Granger took on the senior responsibility when Sir John retired.

Q171 Mr Bacon: That is two.
Sir Ian Carruthers: He was the senior responsible owner for the programme and at that time there was an appointment of senior responsible owner accountable to the Chief Medical Officer.

Q172 Mr Bacon: That was Aidan Halligan. That is three.
Sir Ian Carruthers: Then we moved on and Dr Halligan left and Mr Burns—

Q173 Mr Bacon: How long was Dr Halligan there?
Sir Ian Carruthers: I think it says in the Report. I think it was about a year.

Q174 Mr Bacon: We shall look that up later. I think it was about six months. The fourth one was . . .?
Sir Ian Carruthers: Then the chief executive of Trent Strategic Health Authority, Alan Burns came to do that.

Q175 Mr Bacon: Then there was Mr John Bacon—no relation. Was he senior responsible owner? He told me he was at the last hearing.
Sir Ian Carruthers: No, he was to do the benefits realisation. John Bacon, then—I am just looking up the date now—

Q176 Mr Bacon: And then yourself, so there were actually six altogether, six senior responsible owners.
Sir Ian Carruthers: Absolutely.

Q177 Mr Bacon: In how many years?
Sir Ian Carruthers: I think the Report says since 2004.

Q178 Mr Bacon: Could somebody explain to me why, in the copy I have here of *Delivering 21st Century IT Support to the NHS*, the project profile in appendix three has been removed? There are two versions: one with appendix three and one without. The one with says that the score is 53. Why was appendix three with the actual project profile model in it removed from *Delivering 21st Century IT Support to the NHS*?
Sir Ian Carruthers: We shall do a note.[13]

Q179 Mr Bacon: Do not worry. I shall give them both to the Clerk and then he can use them as evidence. I need to move on. Professor Hutton, I know that you have had some concerns about this, as has Dr Nowlan. You already said that you were concerned whether the programme was or was not on schedule to deliver the core objectives. Dr Nowlan, do you have a similar concern?
Dr Nowlan: Absolutely.

Q180 Mr Bacon: What are the consequences for the NHS, for example for Patient Pathways, if the programme is not delivered on schedule?
Dr Nowlan: The way all modern healthcare is going, certainly in the NHS, is moving away from packing people into buildings to do things, to caring for them in many settings; care is a lot more complex. The thing that will hold that together safely and effectively is information. Without certain key pieces it is going to be extremely difficult to practice that healthcare and that is why there is such huge support from the clinical leadership for at least for the principles of the health record.

Q181 Mr Bacon: So you would not describe yourself as a Neanderthal in terms of electronic patient records.
Dr Nowlan: I have made it my career for the best part of the last 20 years.

Q182 Mr Bacon: If you could make this work, you would be in favour of it.
Dr Nowlan: Absolutely; it is the single most important thing to do in healthcare.

Q183 Mr Bacon: May I ask you to turn to page 31? There is a reference here in paragraph 2.12 to these 400 clinicians. You wrote to the Committee about this and said you were asked to find hundreds of clinicians. What exactly did you mean by this?
Dr Nowlan: In preparing for various reviews I was told that they required lots of names of clinicians who had been consulted or involved. I said I did not think that was appropriate.

Q184 Mr Bacon: In your letter you put "hundreds".
Dr Nowlan: Yes, hundreds.

Q185 Mr Bacon: You put "hundreds" in inverted commas.
Dr Nowlan: Yes; "lots", "hundreds".

[13] *Note by witness: Delivering 21st Century IT Support for the NHS* has three appendices and there is no record of any changes since its publication in June 2002. It is usual for draft reports to be changed before publication and the Member may have obtained a copy of an early draft. Such versions are not authoritative.

Q186 Mr Bacon: It was just "Go and find some clinicians".
Dr Nowlan: Yes. I just felt it was not at all a fair representation of the actual situation in the few months that work had been done. Besides which, just having given people a document and got some view is not a satisfactory test of the feasibility of doing this.

Q187 Mr Bacon: Were people on that list people who had signed up to the output-based specification?
Dr Nowlan: I did not take part in producing any list of names for the output-based specification. I know that subsequently Professor Hutton managed to secure some names. The evidence was not there. The main work that was done with the leadership specifically on that common national part of the record, which then became confusingly referred to as the Spine; that was the piece that the main work was done about.

Q188 Mr Bacon: If the clinicians were not really controlling the creation of the specification for the healthcare record, who was?
Dr Nowlan: A design authority was established.

Q189 Mr Bacon: Was this within the NPfIT?
Dr Nowlan: Yes; at the end of 2002.

Q190 Mr Bacon: What experience did the design authority have of healthcare?
Dr Nowlan: In terms of the people who took charge of it, none to speak of.

Q191 Mr Bacon: None? No experience of healthcare at all?
Dr Nowlan: No, not that I can recall. We worked within that team to produce the specification but it was done at breakneck speed and largely by putting together information from a whole raft of previous specifications and then it had to be reduced. I must say it was not exactly the ideal process to commit this sort of resource.

Q192 Mr Bacon: Is it not right that the output-based specification is the thing which drives inside the contract what people get paid basically?
Dr Nowlan: Yes.

Q193 Mr Bacon: In paragraph 2.13 it says: ". . . there was no recorded link between the detailed item in the OBS and the source of the person or group making the contribution. NHS Connecting for Health replied that these links were not directly attributable, given that much of the OBS was developed in workshops involving a cross section of stakeholders and NHS Connecting for Health had not had the resources to record the attributions individually". Of course there was £900 million on top of the £654 million, but plainly not enough resources to do that. I should have thought, would you not, that if you are going to be spending all this money on the world's largest IT programme, having a good audit trail for where you had done your consultation would be paramount, would it not?
Dr Nowlan: It is certainly paramount if things go wrong. It is even more important for getting it right and moving it forward, yes.

Q194 Mr Bacon: Mr Granger may I ask you a question about your contract? Are you incentivised in your contract by the speed with which the procurement took place?
Mr Granger: Are we talking about my personal contract?

Q195 Mr Bacon: Yes, your contract of employment. Are there financial incentives for you relating to the speed of the contracting process or were there for you at the time you were doing the contracting? Everyone commented on the incredible speed with which the contracts were let.
Mr Granger: I am sorry; what a strange question. Are you imputing my motives for driving the programme on time to my personal remuneration?

Q196 Mr Bacon: No, I am asking you a question which admits of a clear answer; there either were or were not.
Mr Granger: My remuneration has absolutely no incentives associated with having concluded the procurement process within a given period of time.

Q197 Mr Bacon: Thank you.
Mr Granger: Dr Nowlan's statement that there were no clinicians involved in the OBS is a slur on the character of three whose names I have here, who were his colleagues: Mike Bainbridge, Steve Bentley and Ian Arrowsmith, who have actually managed to stay the pace and continue to work in a difficult programme environment.

Q198 Mr Bacon: In addition to the PAS timetables which you very kindly sent me, could you send me also the original schedules, this is inside the LSP contract schedules, for what CRS modules would be deployed where and by when? Can you do that? In other words, the original target dates which are contained in the LSP contracts.
Mr Granger: If the LSPs are content for that. If they are not, I shall contact you and the power of this Committee will be used to get them.[14]

Q199 Mr Bacon: Professor Hutton, did you want to come back in?
Professor Hutton: A couple of things. On a point of accuracy, PACS was not part of the original specification.
Mr Bacon: I did not think it was.

Q200 Mr Williams: On page 29 we are told that from the outset this project went ahead with day-to-day oversight provided by ministers. What did that consist of? What did day-to-day oversight mean and who was calling the shots?
Mr Granger: In general, ministers had regular meetings with key members of the leadership of the programme and other interested parties every two

[14] Ev 44–48

weeks, four weeks or so, initially with Lord Hunt of Kings Heath and then with John Hutton and then with Lord Warner.

Q201 Mr Williams: Was it all harmonious and free of confrontation? No-one was talking about seeking directions or anything like that.
Mr Granger: Not in meetings I have attended.

Q202 Mr Williams: I asked that because the leadership seemed to be rather spasmodic in terms of continuity. If you look at page 44, paragraph 4.6 says that at the inception the director of research was the senior responsible owner. "In March 2004 he gave up this role" and you end up with two senior responsible owners with a further senior responsible owner responsible for individual contracts. Then further down we have another four sub-paragraphs of changes, all of which took place in a very short time at the leadership level of this project. Why on earth was so much mobility and lack of continuity permitted?
Sir Ian Carruthers: First of all, there was continuity through Mr Granger and his team on the procurement; that was there. You are well aware of the changes which have taken place in the Department of Health over time.

Q203 Mr Williams: What changes are you referring to?
Sir Ian Carruthers: Sir Nigel Crisp has retired, John Bacon has also retired.

Q204 Mr Williams: Sir Nigel retired relatively recently.
Sir Ian Carruthers: Yes. Changes were made for reasons—

Q205 Mr Williams: Who at official level was in charge?
Sir Ian Carruthers: At official level obviously the Chief Executive of the NHS was in charge. That function, as it says in the Report, was discharged at varying times by the Deputy Chief Medical Officer and the Chief Executive of Trent who was brought in as a director of service implementation. Then Sir Nigel's assistant, John Bacon, who was director of health and social care delivery. Those were the people in charge at that time and since 7 April I am.

Q206 Mr Williams: This Committee has had a whole series of reports to look at where things have gone wrong. We do understand things going wrong; we do not expect infallibility. I regard what you are trying to achieve as eminently desirable. Let us start from that proposition. You had had RISP, the regional scheme which wasted millions of pounds and then did not deliver. Then you had HISP, which was the next major venture into IT. You are not exactly unfamiliar with these matters and indeed it says in the Report that a key lesson for many unsuccessful IT projects is that success requires engagement of NHS managers and clinicians in order to win their support for the overall vision and purpose. In fact, what we have emphasised has been the need to involve the users from the very outset in developing the vision. Do you feel that is what you have done?
Sir Ian Carruthers: I should like to say three things.

Q207 Mr Williams: No, I just asked whether you think that is what you have done.
Sir Ian Carruthers: We have engaged clinicians but, as the Report says, there is very much more to do.

Q208 Mr Williams: But it is a bit late for there to be "very much more to do", because the "very much more to do" was to be done before you placed the contracts, that is if you had learned the lesson.
Sir Ian Carruthers: No, that needs to be dealt with in the implementation phase.

Q209 Mr Williams: No, no, no.
Sir Ian Carruthers: There was engagement with clinicians in doing the specification.

Q210 Mr Williams: The specification has to be drawn up very closely and with very intense input from potential users.
Sir Ian Carruthers: Yes, but the Report says that users were involved.

Q211 Mr Williams: It does not say they were used intensively or to what extent.
Mr Jeavons: If I may, I think I can help here. There was clinical involvement in the original specification but the specification was for a ten-year programme. It is utterly and totally realistic that, as the programme proceeds, clinicians and other users get involved in much more detail. Let me give you one example, e-prescribing, which is one of the most important facets of the care record service because it is directly related to the reduction in medication errors and adverse events, 470 clinicians have been involved in workshops over the last month looking in detail at the national requirement to support e-prescribing across the programme so that could be fed into design with our suppliers and produce a coherent system. It is not a one-off, one-stop shop.

Q212 Mr Williams: I seem to remember that in fact clinicians were confronted with a very large number of very detailed documents and were given about two weeks to try to absorb them. Professor Hutton or Dr Nowlan can clarify this. What really happened?
Professor Hutton: I should like to comment on the e-prescribing. The e-prescribing was a great point of contention because in the original contracts it had been put back to 2008, as I recall, and it has actually been brought forward. That is an example of the fact that the contracts did not actually meet the clinical need. I do repeat what I said earlier, that the core of this programme is the NHS care

record. Other things are very helpful, but it is the care record which matters. That is the picture we have on here: e-learning and the map of medicine are add-ons. The thing which will actually enable this White Paper (*Our health, our care, our* say, published January 2006) to take care back to the community is the NHS care record and that has not moved forward.

Q213 Mr Williams: Is the Spine the essence of it?
Professor Hutton: The Spine does two things: it moves messages across and that is developing well. The Spine is also used as a phrase for a repository of knowledge about individual patients. That particular function, as far as I know but I may be wrong, has not moved forward at all. The specification for that, as to what should go on that record and the criteria for that, was that the information put on that record is that which is required when a healthcare worker sees a patient with a new complaint or at follow-up or after referral from another healthcare worker and what information they then need to pass onto the next person who will see them. That was the novel concept of the Spine. It was not developed until after—

Q214 Mr Williams: Leave it there for the moment because I am limited on time. I want to come to Dr Nowlan and what he has said. I have here a copy of the document you provided. You say "At a meeting of the Ministerial Taskforce in December 2002 several members of the Clinical Care Advisory Group (CCAG) were asked to develop proposals for what they considered the most important health care needs to address". You then go on at the end of that paragraph to say "The principles of the proposal were accepted in March 2003 by a meeting of the CCAG, on the understanding of continuing close involvement in the development of the proposals".
Dr Nowlan: Yes.

Q215 Mr Williams: How important was that commitment which was required that they should have ongoing involvement?
Dr Nowlan: It was essential. They all recognised the enormous value if we could do this particular piece of it, but that to carry it through would be challenging and to implement it in particular would need full support.

Q216 Mr Williams: So it was essential.
Dr Nowlan: It was vital.

Q217 Mr Williams: Vital, essential, critical, you cannot emphasise it too strongly. But, according to your submission—and obviously I shall give you a chance to come back on this in a moment—"Subsequent incorporation of this work into contracts was . . . done without further involvement of the CCAG". So it ended up forming only a relatively small part of the overall specification, yet on the basis of that contracts were placed. Is that what you are saying happened?
Dr Nowlan: Yes.

Q218 Mr Williams: That sounds unbelievable, does it not? Would you like to clarify that Sir Ian? Is that wrong?
Sir Ian Carruthers: We would not entirely agree with that.

Q219 Mr Williams: "Not entirely" but you do agree with some of it.
Sir Ian Carruthers: Dr Braunold is going to give a different version of what occurred and Mr Granger.
Mr Granger: I have to say that when we supply you with the notes, one of the notes you will get is a request from me to Dr Nowlan on three occasions that he supply a structure to the clinicians that he was working with. It is lamentable that his expertise ceased to be available when he left the IA in December 2003, but his recollection of events is somewhat different from that of the people who have been working on the programme for the past four years and of Sir Muir Gray, who tells me that over 6,000 clinicians have been involved in a programme called, *Do Once and Share*.
Dr Gillian Braunold: In particular the bit I really need to clarify is the fact that the content of the shared care record on the Spine has moved forward a great deal. We have been building a consensus on papers which have been published on the CRDB website since last summer. We have had more than 100 unique responses to our consensus-building document, we have been through three iterations of that document and we are now in a position to pilot with the approval of the colleges and the BMA in slow incremental ways so that we can learn the lessons of implementation and test those very access controls and the legitimate relationships that people are concerned about, to make sure that the information governance structures are secure. We are ready to pilot that at the end of this year and that is against specifications which have been agreed in consensus building with clinicians. It is not true to say that we have not moved at all.

Q220 Mr Williams: I have had rather long answers, but it is only fair to allow them to answer fully. Comptroller and Auditor General you, even more than we, are aware of the importance of the involvement of the user early on. I believe the information Dr Nowlan has given us was also made available to the National Audit Office and Professor Hutton. From the examinations you carried out did you feel, given the scale of this and the nature of the contracts, the complexity of the contracts, that there had been adequate time and scope, width of consultation before they entered into the contract-seeking stage?
Sir John Bourn: What I feel about the programme as a whole is that the approach from the top down had not admitted the full degree of consultation with all the members of the National Health Service who will have to operate it, as the general practitioner herself said and as Sir Ian and colleagues have said. There was more that could usefully have been done and the Report has drawn attention to that.

Q221 Mr Williams: We are talking about systems, part of which are two and a half years late, which are dependent upon detail and yet you are saying that there had not been adequate consultation before the contracts relating to this work were placed.
Sir John Bourn: I put it in relation to the development of the system as a whole, for which the contract is an important and necessary aspect. Overall you have a system which is, as we know, the biggest system in the world.

Q222 Mr Williams: It is not working, mind. It is going to be the biggest system in the world if it works and when it works.
Sir John Bourn: It is going to be the biggest system in the world and the design of that system is complicated. It is a system which has to have regard to the thousands of people who will be engaged in working it. Perhaps inevitably there was not a full engagement of both sides.

Q223 Mr Williams: Does the complexity not mean that it was absolutely imperative that there was the fullest possible involvement of users before the contracts were placed in view of the scale of those contracts?
Sir John Bourn: The fullest possible given all the exigencies of the situation in which the programme was sought to be introduced.

Q224 Mr Williams: I appreciate that. What you have had to say is very important; it is also somewhat damning.
Mr Granger: Out in the real world, in the hospital where Professor Hutton works six sessions a week there is a new system with significant clinical functionality as well. One could differentiate between some aspects of the programme where consultation has been ongoing, the summary clinical record, and a significant number of systems which have been implemented.

Q225 Mr Williams: But as Kitty demonstrated and we know from other evidence, it is not working where it is needed. It is not delivering what it is supposed to be delivering even at this stage and it is several years behind meeting targets you set it.
Sir Ian Carruthers: We should be clear about what is not working. I said at the very beginning—

Q226 Mr Williams: Be sure to tell us what is.
Sir Ian Carruthers: Some PACS systems have been introduced.

Q227 Mr Williams: Some?
Sir Ian Carruthers: Yes, because it is part of a rolling programme. There are something like 10,000 applications—9,600 is the actual figure in this Report. We have a Spine which is handling personal demographics and so on which GPs are using every day. The NHS sees delivery. The thing which is behind is the care record and that is behind for two reasons: one is because suppliers felt it would be appropriate, because of the delivery of products and the difficulties with that; secondly, because clinicians said they wanted to pilot it first, which is another way of handling the clinical involvement in a much more dramatic way. So I should say that the pilots which are about to start will do more than any consultation because people have the chance from experience to say how it works and what it can do. The notion that nothing is happening is quite erroneous.
Mr Williams: But contracts have already been placed.

Q228 Chairman: In all fairness I must let Professor Hutton comment on this. Do you remember that right at the beginning of the session I asked about the 170-odd acute hospitals and that the clinical system actually has not been deployed into any of them? Is this right? I did not give you a chance to comment at that stage; Mr Granger commented. This follows on directly from Mr Williams' question and is absolutely key, is it not? What is going on?
Professor Hutton: I have not been in the programme for two years. My understanding is that your assertion is correct. That is my understanding.
Sir Ian Carruthers: That is just not the case. Your question is on clinical systems and we can deal with that.
Mr Jeavons: The heart of this is that there are many systems which have already been deployed which bring real benefit to patients and clinicians in the execution and delivery of care. You only have to go and talk to real clinicians using some of these things to hear that for yourself. The heart of this however is the National Care Records Service.

Q229 Chairman: Are my care records arriving through these systems at the hospital yet? Is the answer yes or no?
Mr Jeavons: There is already national care record functionality available, a personal demographic service—

Q230 Chairman: Is my GP able to send my records to a hospital from London up to an accident I have in Middlesbrough or somewhere? Is that now happening?
Mr Granger: Yes, he can do that because for the first time the NHS has a reliable network of over 14,000 end points on it which are available almost all the time. The point about hospitals and the systems they have is that 13 acute patient administration systems were deployed as of 26 June across 40 sites, 17 community hospital PAS solutions delivered, 129 community care solutions delivered, 13 mental health patient administration systems delivered, 59 child health solutions delivered, 118 different communities with a single assessment process solution delivered, 255 map of medicines solutions delivered, five ambulance solutions delivered, 122 LSP solutions delivered to GP practices, 24 departmental solutions.

Q231 Chairman: We could have a ding-dong here. It is quite useful to know what has been delivered. Professor Hutton, do you want to comment on this? We are only laymen and it is very difficult to find a way through this.
Professor Hutton: Just to sum up, I do not doubt that all those things have been delivered, but they are nothing to do with the NHS care record which is a central repository of key information of each person that is available anywhere within the NHS with their consent.

Q232 Chairman: Yes, that is how I understand it.
Professor Hutton: As far as I know, that has not yet happened.

Q233 Chairman: Mr Shapcott, what is the truth of this. You have been writing this Report for the best part of two years. What is the truth of this?
Mr Shapcott: My understanding of the situation is that there are many systems in hospitals which are delivering some clinical functionality such as X-rays and so on. The core nationally available information on your clinical condition, as I understand it, still has some time to go.

Q234 Chairman: Still has some time to go?
Mr Shapcott: Yes.

Q235 Chairman: So your conclusion is that it has not been delivered.
Mr Shapcott: That is my understanding.
Mr Granger: The demographic component of it is live with 72 million records on it, five million of which have been converted and cleansed in the last year, the name, address and so on.
Dr Nowlan: That has existed in the NHS for many, many years.
Mr Granger: I am sorry, but if you want to come to see what we have done since you left, you might be pleasantly surprised.
Chairman: I should like you to put in a note.[15]

Q236 Greg Clark: Is it true that Fujitsu, who were responsible for the southern region, have fined the local NHS £19 million because the local NHS failed a contract obligation to second 50 employees.
Mr Jeavons: No, that is not true.

Q237 Mr Bacon: What word would you use? Has a £19 million payment been made or is it due?
Mr Jeavons: The original contract included, quite sensibly, recognition of the contribution that local NHS staff needed to make to deliver the types of systems which were required. A contract change notice was done in September 2005. Part of that renegotiation took that part of the obligation out. That is what that number refers to.

Q238 Mr Bacon: This is basically the supplier attachment scheme, is it?
Mr Jeavons: It is called managed employee scheme.

Q239 Greg Clark: Basically no NHS region has been fined or charged a penalty—I do not want to play with words here—had a financial consequence for failing to give enough staff. Can you give me a categorical assurance about that?
Mr Jeavons: Part of the contract change notice included—

Q240 Greg Clark: Just on that, yes or no.
Mr Jeavons:—renegotiation of the commitment from the NHS to the managed employee scheme. In other words, the NHS was committed and that commitment was changed as part of that contract change.

Q241 Greg Clark: That is the same thing, is it not? If they were committed to supplying some staff and they have bought themselves out of that, they have effectively paid commercial suppliers.
Mr Jeavons: That was part of the overall negotiation.

Q242 Greg Clark: You seem to be playing with words. The original contract was renegotiated and it is now less advantageous to the local NHS.
Mr Jeavons: The NHS was committed. There was a financial value in the original contract which committed the NHS to commit NHS staff and that was changed as part of the contract change notice.

Q243 Greg Clark: Why was it changed?
Mr Jeavons: Because experience showed that it would be easier to deliver the contract without that commitment. The main reason for that was that the NHS found the opportunity cost of NHS staff was higher than the value they had placed on them and that is what resulted. It was a very sensible change.

Q244 Greg Clark: When it came to Fujitsu in the southern region, how much did the NHS pay to be released from that obligation?
Mr Jeavons: I cannot remember.
Sir Ian Carruthers: We shall get you a note on that.[16]
Mr Jeavons: We shall give you the exact number.

Q245 Greg Clark: But it bears no relation to £19 million.
Mr Jeavons: We shall give you a note on that.

Q246 Greg Clark: Does it bear any relation to £19 million? Is that a figure that you recognise?
Mr Jeavons: It could be around £19 million.

Q247 Greg Clark: Is it a figure you recognise, yes or no.
Mr Jeavons: If I could remember the figure, I would tell you.
Sir Ian Carruthers: We shall give you a note.

[15] Ev 49–51

[16] *Note by witness:* At the time of the contract of award, Fujitsu reduced its price by £34 million on the grounds that the NHS would make staff available to them to perform work that the supplier would otherwise have performed. £19 million was paid to Fujitsu to remove this obligation.

Q248 Greg Clark: Is £19 million a figure you recognise to be released from this obligation?
Mr Jeavons: I recognise the figure of £19 million from press reports.

Q249 Mr Bacon: What is the figure for CSC in the North West? How much will the NHS have to pay to CSC? There is a contractual obligation to pay £6.9 million per year for 10 years, which is £69 million, is it not, if the NHS does not supply the requisite number of staff? Are you negotiating your way out of that one and what is it going to cost? Is it correct that it is £37 million?
Mr Jeavons: I cannot recall the number. We can give you that.
Chairman: Send us a note.[17]

Q250 Mr Khan: How soon before 100% of bookings are made by Choose and Book? It is 12% now.
Mr Granger: It is more than 12%.

Q251 Mr Khan: Good. How soon then?
Dr Mark Davies: I wish I had a graph so I could show you the trajectory.

Q252 Mr Khan: I just need a time line.
Dr Mark Davies: It is going up. The intention is for 90% of referrals from GPs to first consultant outpatient appointment to be reached by March next year and we anticipate being on plan for that.

Q253 Mr Bacon: Going back to this question of paying to be released from obligations, were the NHS trusts locally, the local acute hospitals, aware that there were these contractual obligations which had been agreed centrally with the main LSPs such as Fujitsu and CSC and that if they did not supply the number of staff they were supposed to supply, the NHS would have to make financial payments? Were they aware that if they did not supply the required staff the NHS would have to make financial payments?
Mr Jeavons: I believe they were aware and the reason I can say that is because I was personally involved in discussions where these arrangements were described.

Q254 Chairman: There has been a lot of confusion Mr Shapcott about the £6.2 billion and the £12.4 billion. When was the £6.2 billion cost announced?
Mr Shapcott: At the time the contracts were placed, that is the end of 2003–beginning of 2004.

Q255 Chairman: So it is not so much that this is an overspend, it is just that you, as a result of your work, have uncovered that it is now going to cost the public sector £12.4 billion. Is that right? At the time of the publication of the Report there was some reportage that the private sector might be going to take the extra cost. It is going to be the public sector, is it, in the shape of the NHS trusts? Is that right?
Mr Shapcott: The additional costs are falling on the public sector.[18]

Q256 Chairman: The £6 billion extra?
Mr Shapcott: Yes.
Sir Ian Carruthers: May I say that some of the £6 billion extra is not actually real cost it is a mixture of forecasting, extrapolation and other things? We need to be cautious.

Q257 Chairman: If you want to send us a note, here is your chance. May I ask about this famous meeting with the Prime Minister in February 2002? Who was at that meeting?
Mr Granger: Nobody who is here, so I am sorry, but we cannot comment.
Sir Ian Carruthers: Nobody who is here.

Q258 Chairman: Can you let us know?
Sir Ian Carruthers: I am not sure how we do that, but we can try.[19]

Q259 Chairman: Did the Prime Minister give the provisional go-ahead for the NHS National IT Programme which would last two years and nine months? This has been reported. Can you get us a note on it?
Mr Granger: *Delivering 21st Century IT Support to the NHS* is the document which was the starting point for the programme.

Q260 Mr Bacon: Is it not correct that Sir John Pattison said in a speech the following March, a month later, that the programme would last two years and nine months?
Mr Granger: In March 2002?

Q261 Mr Bacon: Starting from April 2003 it would last two years and nine months. That was the maximum he was able to get, so it should have been finished by December 2005, should it not?
Mr Granger: I am sorry but I was obsessed with congestion charging in March 2002.

Q262 Chairman: So nobody can tell us about the two years and nine months yet, but you are going to send us a note.

[17] *Note by witness:* The contractual obligation with CSC was for the NHS to make staff available to them to perform work that the supplier would otherwise have performed. The default position in the contract was a payment of £6.9 million per year which could have amounted to £62.1 million over the nine years of the contract if the NHS could not provide the necessary staff. In March 2006, NHS Connecting for Health reached an agreement with CSC under which this obligation on the NHS was cancelled for payment of £5 million.

[18] Ev 51

[19] *Note by witness:* The principal attendees at the meeting with the Prime Minister in February 2002 were: Rt Hon Tony Blair MP, Prime Minister, Rt Hon Alan Milburn MP, Secretary of State for Health, Rt Hon Andrew Smith, Chief Secretary to the Treasury, Lord Macdonald of Tradeston, Chancellor of the Duchy of Lancaster, Lord Hunt of Kings Heath, Parliamentary Under-Secretary, Department of Health, Sir Richard Wilson, Cabinet Secretary, Sir Nigel Crisp, Permanent Secretary, Department of Health & Chief Executive of the NHS and Professor Sir John Pattinson, Director of Research, Analysis and Information, Department of Health.

Sir Ian Carruthers: We shall try to clarify that.[20]
Chairman: Let me try to sum up. The NHS chose a very ambitious system, a top-down system, a system with some positive elements: professional control, clear leadership, paying companies only for what they can deliver. However, as we know, the NHS is a micro system with hundreds of trusts and thousands of clinicians, nurses and GPs. Here the Report and the evidence of your own GPs and what Sir John has said to us in evidence and the experience of Members in their constituencies show that it is not yet working fully on the ground. So the recommendations in this report and the recommendations we shall make are vitally important. We expect you Sir Ian to implement them and we shall ask the NAO to report on your progress in another PAC meeting. Thank you very much.

[20] *Note by witness:* The timescales for delivering the National Programme for IT were set out in June 2002 in *Delivering 21st Century IT Support for the NHS.* There has never been a plan to deliver the Programme within two years and nine months. In line with standard government practice, some of the parliamentary statements referred to the financial allocations made under SR 2002 due the first three years of the Programme. This was always in the context of a longer and larger Programme.

Comments from Dr Anthony Nowlan on the evidence session

Question 1

As regards the two reasons for the delays:

(i) Supplier difficulty—if there are now difficulties, what was tested in the technical proofs conducted in 2003?

(ii) Clinicians want to pilot—this was obvious in early 2003 but would have been an obstacle to contracting.

Question 5

In early 2003 senior representatives from the Royal College of Radiologists (contact Peter Dawson) were clear that if the money was available PACS could be deployed and this would improve radiology services. PACS is a well-understood product. They were also clear however that the care record was vital for all, because they want to share care, not just images.

Question 6

The NHS has had demographic databases for many years prior to CfH. The NHAIS/Exeter system and the National Strategic Tracing Service. The NHAIS system remains the bedrock of most of the business processes that maintain the database.

The NHS has had a secure network for many years prior to CfH. The new network may well be an improvement, but it is not a transformation.

Question 7

"What we want is a system that works rather than a system which is put in quickly for its own sake". Then why was the procurement rushed through without adequate consideration of what is required or how it would be implemented?

Question 8

(i) How can something be value for money if it does not yet exist let alone work? The answer confuses value and reducing prices.

(ii) The answer equates central procurement with the delivery of a common approach to the management of healthcare information across the NHS.

Question 11

This was happening prior to CfH. There have been technology upgrades but no major developments in healthcare/business services such as a core health record.

Question 14

These are only financial obligations, and say nothing about the likelihood of delivering any healthcare benefit.

Question 15

Because PACS has a well-established commercial model based on the impact on radiology departments alone. This is not the case for the bulk of what is proposed under the care record work.

Question 22

I met informally with the NAO at its request and the question of reviewing the report was discussed. I have provided further information at [inset ref to note 4].

Question 26

What was the "structured requirements-evaluation process" and what is the evidence that it was fit for purpose and would produce a meaningful result against which it was safe to proceed?

On the point of patient involvement. I appointed a head of Patient and Citizen Relations at the NHSIA in 2000 (Marlene Winfield). In the context of NPfIT, a Patient Advisory Group was established by myself and Marlene Winfield in early 2003. I think two meetings were held before I left. They considered the same proposals as the Clinical Care Advisory Group.

As regards people having significant amounts of time: I ran a recruitment in early 2003 to build a clinical team intended to support the clinical development.

Question 30

This completely supports my contention that the procurement was run without credible consideration to what was being proposed. These are exactly the sorts of complex issues that it was known would arise. It is extraordinary that it has take so long to admit this.

Question 31

GPs were being paid before NPfIT. The bedrock of this was the Exeter system. QMAS was implemented by the Exeter team that was at the time part of the NHS Information Authority. All of this would have happened with or without NPfIT.

Question 61

Neither of whom were there at the time.

Question 64

They should be asked to produce the evidence that what was done (consultation or whatever) was an appropriate basis on which to commit the future of the NHS.

It was obvious to anyone with any knowledge at all of primary care that the idea of LSPs replacing all the GP systems with brand new systems was madness. It was neither needed nor possible. Yet, at the time, there were boasts of putting EMIS out of business.

Question 65

Unfortunately the contracts have been let and the NHS committed to a course of action.

Question 114

The project in the NHS is an end-to-end project. It is not acceptable to make these artificial distinctions between CfH and the local NHS. That helps no one.

Question 115

This is a major fallacy. The only risk pushed on to the suppliers is financial. All the healthcare risks of the NHS not working remain with the NHS and the public.

Question 117

The main risks are over can "it" work at all regardless of time and money. The programme has to all practical purposes had unlimited money (it has given money back) and has had all the time (it is 2.5 years late) but it has not produced a care record.

Question 118

Users of what? The care record does not exist.

Question 126

The commercial suppliers and the NHS in many areas are competing for the same skills.

Question 195

I did not state that "no clinicians were involved in the OBS". I state that the process that created the OBS, including involvement of clinicians, what not appropriate for the scale and nature of the resultant commitment. I have addressed the specific accusations in Mr Granger's answer in Ev .

Question 217 (Mr Granger) (also see Ev)

This is a most serious representation of the state of the programme. Firstly I was removed from the programme and not 'lost' as explained in Ev . Secondly, I don't know who can recall events because none of the clinical witnesses, or any of the others apart from Mr Granger was there at the time. The reference to Sir Muir Gray's work is a complete distraction: it has nothing to do with the events we are addressing.

Question 217 (Dr Braunold)

This is the real tragedy. There was a consensus document in March 2003. Subsequent events wrecked that consensus and associated trust, before Dr Braunold joined the programme. Dr Braunold and others are now trying to rebuild that consensus and trusts. Unfortunately, the document to which she refers states in it's opening paragraph:

"Now that the architecture for England has been commissioned, designed and being built, there is a need for clarity concerning how it will be used by people using the NHS and those working in the NHS".[1]

ie It is all back to front because the contracts have been let.

Letter from Professor Peter Hutton to Chairman, Committee of Public Accounts

I was previously the clinical lead with the National Programme for IT in the NHS (NPfIT) and am writing to you following the publication of the National Audit Office (NAO) Report on *The NPfIT in the NHS*. I remain concerned of the possibility that decisions taken in the early part of the programme had, and continue to have an adverse effect on system development and clinical engagement. I gave evidence to the NAO during their enquiries in November 2004.

When the Director General for the NPfIT (Mr Richard Granger) was appointed in 2002, although several previous attempts had been made, there was no clinically accepted agreement on what should comprise the core of a nationally available electronic health care record (eHCR). It was the production of this eHCR (sometimes called the Spine) which had the potential to transform how health care was practised and managed. The Spine was the vital component that would deliver benefits realisation for the public. I was appointed by the Department of Health as the clinical lead to obtain a professionally agreed consensus around what was the most valuable information to store and what was achievable in practice. I did so through the creation and Chairmanship of two committees:

— The Clinical Care Advisory Group [CCAG] (December 2002–Spring 2003).

— The National Clinical Advisory Board [NCAB] (Summer 2003–April 2004).

Because of the difficulties described below I offered my resignation to the Department of Health (to which I was seconded) on 19 April 2004. Since then I have remained silent about the NPfIT but now I feel it proper to comment on the NAO Report.

Prior to my resignation I wrote a report for internal use within the Department of Health on the work of the CCAG and NCAB. Neither of these bodies is referred to in the NAO Report. I think that you would find this internal report a useful information source and could supply a copy if requested. It consisted of a 13 page review and over 80 pages of appendices including minutes of meetings, letters and references to other bodies and details of working groups. A copy of this was given to the NAO. The report described the functional development of the eHCR and raised a number of questions.

I am anxious that the NAO Report does not sufficiently examine the impact of decisions taken in the early part of the programme which formed the basis for long-term contracts in relationship to the eHCR. The

[1] Connecting for Health, *The clinical development of the NHS care records service* (2005).

quality of information available at that time was critical and has shaped all subsequent developments. The NAO Report describes the mechanics of contracting well but does not really ask the question: "what was it that was trying to be achieved and was it achievable?" Points you may wish to consider are:

- Although the way forward was agreed in principle by the CCAG in March 2003, NCAB's recommendations to the National Programme Board concerning "*Consent and the Content of the Electronic NHS Care Record*" were not agreed until November 2003, well after contracting was well advanced with implementation planned for early 2004. The Secretary of State announced the adoption of an electronic NHS Care Record on 8 December 2993. As the lead clinician in the programme responsible for the development of the functionality of the Spine and the content of the eHCR, I was not allowed to be involved in the contracting or to see the contracts.
- There was repeated concern from NCAB over aspects of the detail in the contract. Particular concerns were how the work was to be divided between the national and local service providers, the time scheduling of activities and the sustainable pace of change in the clinical environment. NCAB was never given an explanation or diagram that indicated how all the elements would work together: it was therefore not possible for its clinical representative to offer a view on the feasibility of the programme.
- Both the CCAG and NCAB were seriously concerned about the lack of engagement with clinicians and other NHS staff and the instructions from the management of the programme not to undertake such activities. Example of this are that:
  - In May 2003 documentation was prepared (together with FAQs) to inform the service of what was happening and what it meant for them: this initiative was stopped.
  - Plans for NCAB to make "10 road shows" across the country to inform the NHS of progress before Easter 2004 were stopped.

Without requesting permission, I gave an interview to a professional magazine called Hospital Doctor (published 18 March 2004) describing the work of the national programme and what it meant for clinicians and patients. On 31 March 2004 I wrote to (the then) Sir Nigel Crisp with a copy of the NCAB internal report expressing my concerns. A sentence from that letter reads:

> *"I remain concerned that the current arrangements within the programme are 'unsafe' from a variety of angles and, in particular, that the constraints of the contracting process, with its absence of clinical input in the last stages, may have resulted in the purchase of a product that will potentially not fulfil our goals."*

Soon afterward I was asked to consider my position and tendered my resignation. The Department of Health subsequently dissolved NCAB. I remain convinced that an electronic care record is vital to the development of quality, cost effective health care and regret that I am no longer involved. The NAO Report correctly praises the high-speed contracting process that obtained the best price for the NHS and the strict penalty clauses for failure of delivery. However, fundamental questions remain that the Report does not address:

- How could detailed contracts be placed for the eHCR before its content had been approved by the National Programme Board?
- Was there appropriate detail given, and was the programme confident, that suppliers had understood what was required in a particular contract so they could make a valid assessment of its feasibility?
- Is the content of the contracts fit for purpose and will they deliver what the NHS needs?
- Why was communication and engagement with clinical and other staff, and the public, consistently inhibited rather than encouraged?

For a complete account of events, reported in the public domain, it is, in my view, essential that the NAO Report addresses these issues. I note that there is no intention at present to call any clinicians but would attend your Committee if request. If you do wish to see me, some notice of attendance and the likely questions would be helpful so that I can assemble any documentation I have into a sensible order for submission to you. If you think my worries have no basis, I would be grateful to know the reasons why, so I can feel comfortable that the public's interests have been satisfied.

Professor Peter Hutton

19 June 2006

Memorandum submitted by Dr Anthony Nowlan

I am writing regarding the National Audit Office Report on *The National Programme for IT in the NHS* (NPfIT), published 16 June 2006, which you are due to consider on 26 June 2006.

From December 1999 to December 2003 I was an Executive Director of the NHS Information Authority (NHSIA). From early 2002 I was closely involved in the start of what became the National Programme for

IT. At the request of the then Director of Research and Information at the Department of Health I took forward national work on privacy and confidentiality and began to establish health professional leadership for the upcoming developments. From early 2003 I was seconded to work with the Director General for IT in the NHS. That secondment was terminated in the middle of 2003 and I was made redundant at the end of the year.

Since then I have reserved public comment on the National Programme for IT. Now that the NAO Report has been published I wish to raise with you what I believe are important aspects of the early part of the Programme. I encourage you to look further into matters that are central to whether or not the Programme as formulated can deliver benefits for people's health and care commensurate with eh scale of the effort and public expenditure.

The NAO Report focuses on the commercial procurement of 2003, the resulting commercial contracts, and the subsequent management of those contracts. It says much less however about how the health care content of those contracts and the National Programme as a whole were determined. The quality of that work is crucial to current and future success.

Quality of the Specification Work

The section, *NHS Connecting for Health has sought to ensure the systems meet users' needs* (paras 2.10 to 2.13) gives an account of some events but it does not make an assessment of the adequacy of the specification work that has shaped all subsequent developments.

For clarification, the NHS Information Authority did not produce the first Output-Based Specification (OBS) for an Integrated Care Record Service in July 2002. That was published by the Department of Health. I was a Director of the NHSIA at the time and on the eve of its publication I strongly recommended in telephone calls to senior staff at the DH that it not be released as it was unfit for purpose.

Section 2.12 goes on to then state that this OBS was revised and finally released in May 2003. It should be clarified that this occurred after the Director General for IT had taken up the post and was therefore under his control. The Director General had initiated the procurement and the OBS had to be produced to a timetable determined by that procurement process.

Section 2.12 states that the final specification was produced with further input from 400 clinicians and others. In my opinion, the involvement of clinicians was by any credible measure inadequate for such an enormous scope with such far reaching consequences. Irrespective of numbers, it was implausible that any valid, sustainable conclusions could be drawn by asking some clinicians to comment on hundred of pages of text in systems-speak in the space of a few weeks. This was particularly the case for what became Part II of the Output Based Specification covering the huge array of hospital, general practice, and other systems to be delivered by a Local Service Providers. These systems account for the majority of the work and expenditure.

There was an awareness of the risks involved in producing a specification under such circumstances. I was personally told to provide a list of "hundreds" of names of clinicians who had been involved in the specification work in order to provide evidence to reviewers that the work was valid. This was in my view not proper and would not give a fair reflection of the validity of the work. I refused. Section 2.13 states an explanation for the lack of documented validation which to me is not credible.

Engagement of Health Professional Leadership

In the spring and summer of 2002 I embarked upon work to marshal clinician leadership as a pre-requisite to meaningful health professional involvement and the translation of health care requirements into information systems requirements. In this I was greatly assisted by the President of the Royal College of Physicians and other senior figures. During the summer Professor Peter Hutton, then President of the Royal College of Anaesthetist and Chairman of the Academy of Medical Royal Colleges increasingly gave his support. In the autumn a meeting a meeting of senior leadership agreed to work together to help set priorities and address wider clinical issues. This agreement finally resulted in the formation of a Clinical Care Advisory Group (CCAG) under the chairmanship of Professor Peter Hutton, and linked to the Ministerial Taskforce that had been formed to oversee the National Programme.

At a meeting of the Ministerial Taskforce in December 2002 several members of the CCAG were asked to develop proposals for what they considered the most important health care needs to address. This resulted in the proposal for a common integrated basic record for each person. In some regards the objectives were modest but to the clinicians it represented high health care value and was achievable if designed and implemented with the full involvement of health professionals and patients. Similar work was done with several groups representing patients. The principles of the proposal were accepted in March 2003 by a meeting of the CCAG, on the understanding of continuing close involvement in the development of the proposals. Copies are available if required.

This work was fed in to the start f the specification of the contracts. Subsequent incorporation of this work into contracts was however to the best of my knowledge done without further involvement of the CCAG. Furthermore it ended up forming only a relatively small part of the overall specification, The large majority

of the Output Based Specification, and in particular Part II which included for example the major hospital systems, was developed without even this level of involvement and scrutiny by the leadership of the health professionals It was at this time that it became increasingly clear to me that efforts to communicate with health professionals and bring them more into the leadership of the programme were effectively obstructed.

Wider Implementation Programme

The design of information services should follow from the design of health care. The commercial procurement of technology, if required, is only part of what must be done and should come at the appropriate stage of a wider programme. In this context the engagement of clinicians and managers is not just about telling them what is going to happen. The NAO Report recognises this at the start of section 4. And yet the Report goes on to describe that this is not what was done for reasons of timing. In fact it could never have been achieved given the determination to complete commercial contracting. As a consequence all the issues of complexity had to be faced after the letting of contracts. The most serious consequence is that the majority of the development of electronic records has stalled. Connecting for Health claims much of this is due to unforeseen complexities. This is not the case. Those with experience and in particular clinicians were well aware of the complexities at the outset but their contributions went unheeded. Furthermore it is not acceptable to claim that the transfer of "completion risk" to the suppliers manages the intrinsic risks of failure to implement. Financial penalties may be in place, but the real risk of non-completion always remain with health services that both need the solutions to care for people and will have invested far more in direct and indirect costs than any commercial penalty. Tax payers also get sick.

Issues to Consider

There are several basic issues affecting the success of the Programme that you may wish to consider:

- What was the quality of the decisions that determined the basic structure and clinical content of the procurement?
- What effort was made to engage the wider NHS and understand the feasibility and costs of implementation prior to contracting?
- Who was and is responsible for the wider implementation programme and, if as the Report suggests, it is not Connecting for Health then how does that fit with the obvious far-reaching control over all health information matters exercised at the time by the Director General for IT in the NHS?
- Who is responsible for the consequences of the procurement for health care in England?

Final Comments

I remain fully committed to the use of information science and technology in health care. Redesigning the ways care is organised and conducted and supporting those new ways with information science is more important to people's health overall than any new drug we could develop in the next decade. It is therefore personally saddening to be in this position.

I must make clear I am not raising a personal issue, but you need to understand the circumstances in order to make a judgement on my comments.

Dr Anthony Nowlan BA MBBS MRCP MFPH PhD

Letter from Managing Director, Fujitsu Services to the Chairman of the Committee

It has come to our attention that you have summoned Andrew Rollerson to appear before you next Wednesday for him to be questioned regarding recent reports of a presentation he made concerning the NHS National Programme for IT.

Some of the facts reported about Mr Rollerson have not been accurate and we would like you to be clear on the facts of Mr Rollerson's employment with Fujitsu Services.

1. Mr Rollerson is employed by Fujitsu Services as a Business Consultant specialising in Value Management and Change Management.

2. Mr Rollerson was involved in the Fujitsu bid for the NHS and played a role in the early stages of the project post-contract.

3. In May 2006 he was appointed to a position outside the Programme entitled, Practice Lead, New Healthcare Consulting Business. In this role Andrew was looking for Consulting Assignments outside the Fujitsu LSP Contract. He has not been, as reported, responsible for Fujitsu's delivery of the Programme, not is he a senior executive of the company.

4. He was not part of the operational management team of the NHS Account, and therefore had only limited knowledge of the conduct of the Programme, its commercial aspects and the company's view on it.

5. Mr Rollerson was expressing his personal views during his recent presentation and these views do not represent the views of Fujitsu Services.

6. Fujitsu Services is proud to be part of the industry team chosen to deliver the NHS National Programme for IT. We are fully committed to delivering our contract for the NPfIT Programme. We have already delivered a huge amount of patient and clinician benefit through our successful deployment of Picture Archiving and Radiology systems across the whole of the South of England. Over 140,000,000 clinical images are already stored on our database. We are now successfully deploying the first release of the Cerner Millennium Care Records System and already have the System live in 26 sites across 5 deployment families and used by approximately 7,000 users.

We believe it is important that these facts are brought to the attention of the Committee.

Peter Hutchinson
Managing Director
UK Public Sector
Fujitsu Services

5 March 2007

Supplementary memorandum submitted by Professor Peter Hutton

Professor Hutton has provided the Committee with the following comments in relation to the evidence session held on 26 June.

Question 20 (Chairman to Mr Richard Granger)

At the time of the e-mails mentioned, the National Clinical Advisory Board (NCAB) had been set up to represent the interests of all clinicians as the proper route for the entry of clinical information and advice into the programme. There was no need for any other plan. NCAB was never allowed to have input into the contracting process and continually worried about the fitness for purpose of what was being planned and negotiated. Mr Granger has access to e-mails that I do no have so I cannot comment on their content when taken out of context.

Question 24 (Sarah McCarthy-Fry to Sir Ian Carruthers and Mr Richard Granger)

Sir Ian Carruthers and Mr Granger were asked if the National Audit Office Report reflected their "reading of the situation". I also gave evidence to the NAO but this is not mentioned anywhere in the NAO Report. On 16 November 2004 I met with Mr Chris Shapcott, Mr Doug Neal and Mr Tom McDonald. The NAO Report does not reflect the evidence I submitted.

Question 26 (Sarah McCarthy-Fry to Mr Richard Granger)

Mr Granger emphasises patient engagement in the latter part of his response as if it was a new initiative. In fact, a Public Advisory Board chaired by Ms Marlene Winfield was established in September 2003 to work in parallel with the National Clinical Advisory Board. These two Boards worked together to produce a specification for an NHS Care Record which was approved by the NPfIT National Programme Board in November 2003. This was not referred to in the NAO Report. Both these Boards were subsequently disestablished by the NPfIT and replaced with the Care Record Development Board.

Question 189 (Mr Richard Bacon to Dr Anthony Nowlan)

When compared with the contribution from Mr Granger in question 26, he and Dr Nowlan are in agreement that the Output Based Specification (OBS) was produced by the Design Authority from extracting selected content from documents previously produced by others. Although these documents were the work of many people, they had not been produced for the purposes of the NPfIT and there is no way in which they formed a "clinical consultation" on the programme as a whole. There was never any clinically based explanation or diagram produced for the National Clinical Advisory Board or for the clinical community to see how everything fitted together before the contracts were signed. Afterwards it became clear from discussions with suppliers in early 2004 that what they had been contracted for would not deliver the NHS Care Record as specified by the National Clinical Advisory Board. Over two years after that date, the NHS Care Record is still not in evidence.

Supplementary memorandum submitted by Dr Anthony Nowlan

Dr Nowlan has provided the Committee with the following comments in relation to the evidence session held on 26 June.

Questions 195, 217 and elsewhere: Circumstances of my departure from the Programme

In the light of Mr Granger's answers to questions 195 and 217 in particular, I wish to make the circumstances of my departure clear.

As described in both my oral and written evidence, I believe the haste to procure was overriding due diligence over the healthcare value and achievability of what was being done. In the first half of 2003 I had made my views known on several occasions to senior people in the programme, including the Senior Responsible Owner, Professor Sir John Pattison, and the head of the Design Authority, Mr Duncan McNeill. It was clear to me that "dissent" was felt to be ill-advised given Mr Granger's determination.

Finally, in mid-June 2003, I received a telephone call from the then Chief Executive of the NHS Information Authority, Dr Gwyn Thomas. He had received a telephone call from Mr Granger in which Mr Granger had said I had to go. The reason Mr Granger gave Dr Thomas was that I was undermining his [Mr Granger's] authority by going around talking to all those doctors. This was the reason the secondment was terminated.

I resumed my post at the NHS Information Authority but all my work was now within the NPfIT. My job had thus ceased to exist and after due process I was made redundant at the end of the year.

Question 29: Confidentiality and related issues

At the request of Professor Sir John Pattison I led a programme of work on confidentiality and related issues from mid-2002 until my removal from the programme in June 2003 when work was given to Mr A Truscott, a technical consultant from the firm ASE. I agreed with my former colleagues to oversee for a few more days the pulling together of the final report and actions from the major public consultation that I'd led from October 2002 to January 2003. The agreement to publish the report had been the basis on which many groups had contributed to the consultation. I sent the report and related documents to Sir John Pattison and copied to Mr Granger on 28 July 2003. To the best of my knowledge it has not been properly published to this day.

My one substantive discussion with Mr Granger on this subject was in late 2002, as the consultation was starting. He advised me to hire the top barristers in the field to run the consultation and to deny them to the opposition. I still struggle to understand who was and is 'the opposition'. In Mr Granger's view they were those who would stop or delay things through Judicial Review. His model was the opposition of some London Boroughs to the introduction of the Congestion Charge.

Question 197: Clinicians involvement in OBS

Mr Granger named three clinicians that he claims I slurred. I have known all of them for several years and I would be surprised if they see my claims as a slur on their characters. In the first part of 2003, Dr Bainbridge worked as a consultant to the Design Authority and had involvement in GP-related work. Mr Arrowsmith was an employee of the NHS Information Authority and worked on imaging-related information standards. Dr Bentley was not working for NPfIT at the time.

I early 2003, I ran an open recruitment to hire people with clinical and informatics skills to support the clinical leadership. Mr Arrowsmith and Dr Bentley were two of the successful candidates. Marlene Winfield was already leading the work with patient and citizen groups. I had recruited her in 2000. I never had the chance to direct the team because my secondment was terminated before we could get going.

Questions 22 and 218: Information provided to the NAO and the matter of the report being reviewed

I am aware that my name was given to the NAO in 2004 by Professor Peter Hutton and by William Buckland, both of whom had been interviewed by the NAO. Mr Buckland was a consultant who worked for a short time for the then Senior Responsible Owner, Professor Halligan. Mr Buckland had visited me at my home to ask about the background and state of the programme. I told him of my experiences and concerns. I was not contacted at that time by the NAO.

In mid-2005 I had a conversation with an old friend who then had occasion to speak with Sir John Bourn in June 2005. At that time the NAO raised the possibility of using me as a reviewer.

At the request of the NAO I met Mr Shapcott for lunch in August 2005 and told him of my concerns. He again asked me if I would act as a reviewer if required, and I agreed. I was not asked.

Supplementary memorandum submitted by the Department of Health

Questions 21 (Chairman) & 217 (Mr Alan Williams):
Consultation on the Output-Based Specification for the NHS Care Record Service

INTRODUCTION

This paper summarises the consultation process undertaken during the development of the Output-Based Specification (OBS) for the NHS Care Record Service.

There were three main stages to the development process:

(1) in the summer of 2002, an initial draft of the specification was put out to public consultation;

(2) over the winter of 2002–03 a revised draft was developed;

(3) during the spring of 2003 a comprehensive review process was undertaken.

Each stage is described in more detail below.

1. *Initial draft specification*

The original *National Specification for Integrated Care Records Service (Consultation Draft)* was issued in July 2002. The specification drew on documents from other procurements, building on work on the Electronic Health Records and Electronic Patient Records following the 1998 Information for Health strategy. However, the concept of the ICRS was to build a service around the needs of the patient, different from the traditional organisation-based approach. In view of the importance of this document, the first specification was then published for formal consultation.

Over 190 responses to this document were received from suppliers, clinicians, Information Management and Technology (IM&T) departments and others, commenting on such aspects as architecture, functional omissions and the realisation of benefits that such a system would produce. A number of the comments were provided on behalf of representative bodies, including the NHS Confederation, the Royal College of Physicians, the Royal College of Surgeons, the Royal Pharmaceutical Society, the British Medical Association (BMA), Junior Hospital Doctors' Committee, Diabetes UK, the Association of British Pharmaceutical Industries (ABPI), the Association for Informatics Professionals in Health and Social Care (ASSIST) and the British Computer Society Health Informatics Committee.

Annex A is the summary, produced at the time, of the main points arising from the consultation exercise. These comments were included and formed the base document for the early draft of the OBS.

2. *Revised draft output-based specification*

In early 2003. invitations were sent to a number of key stakeholder groups (the Chief Information Officer, the IT Directors' Forum, the Electronic Record Demonstrator (ERDIP) sites and the clinical information groups such as the Academy of Colleges Information Group and the Medical Information Group) and other known individuals and sites, seeking assistance in three areas: provision of source material for the OBS; hands-on help with OBS development; and quality assurance and review input.

The intention was to make best use of the best experience from across the NHS. Source material was provided by many sites, including:

— South West Shires' schedules;
— Preston Electronic Patient Record (EPR);
— Kings' EPR;
— Brighton EPR;
— Wirral Screening;
— Thames Valley Mental Health;
— South West London Picture Archiving and Communications System (PACS);
— Academy of Royal Colleges Information Group (ACIG) Clinical Specification; and
— South Staffordshire Community.

In addition some specific work had been commissioned, following the initial consultation exercise, from:

— Birmingham and the Black Country (Blackberd) Consortium Acute EPR OBS;
— North West Ambulance; and
— Solihull Children's Services.

The clinical input was provided by almost 300 individuals and the IM&T community numbered a further 100.

3. *Review of the output-based specification*

A broad spectrum of NHS stakeholders was then engaged to review the revised draft of the OBS. The review group encompassed leading clinicians, practitioners, policy advisors, health informaticians and managers and included representatives from the Department of Health, NHS Information Authority, Strategic Health Authorities, NHS Trusts, Primary Care Trusts, GPs, academic groups and other government departments.

It is known that many of these people also sought input from colleagues and we estimate that this cascade has resulted in many thousands having had a material effect on the content and quality of the product.

A final list of 239 people was invited to review the OBS, from which a total of 105 formal review documents were received. These are listed in Annex B.

From the 900 pages reviewed there were 1,175 comments of substance. These comments resulted in a further refined version of the OBS which was then distributed for any final comment. A response to every individual comment was returned to the reviewer in question.

After formal sign-off the OBS was issued to potential suppliers on 1 May 2003. It was published in July 2003.

Consultation and Information Dissemination

In addition to the many hundreds of internal meetings there were forty-four meetings held by the clinicians from the Design Authority with important stakeholders and stakeholder groups. These included several chairs of the Royal Colleges, the majority of the Tsars and presentations to many hundred clinicians at various locations around the country.

The feedback from those meetings held during the first quarter of the year helped in the production of the OBS and those during the second quarter were used to inform these senior stakeholders.

The current version of the OBS has been extremely well received by all parties. There have been very few changes.

Summary of 2002 Consultation on ICRS Specification (as Produced at the Time)

Introduction

The formal consultation period for Integrated Care Record Service (ICRS) and the Procurement Strategy closed at the end of August. A few responses continue to be sent in, but as at 27 September, 186 comments had been received. In addition other comments have been received by the NHS Purchasing and Supplies Authority on the overview of the procurement strategy and these are summarised in a separate document.

The breakdown of respondents is as follows: 74 from the NHS, 62 from suppliers and 50 from others (including the Department of Health, NHS Information Authority and other bodies such as universities, etc).

From the point of view of wishing to generate comments, this has been a successful exercise. In particular, a number of respondents clearly took a lot of time and trouble to provide some very thoughtful submissions and we are grateful for their comments and co-operation.

We were fully aware that we needed to flesh out our own understanding of the scoping, procurement, phasing and implementation of ICRS, and this has been a very helpful means of doing so. However, there is a strong sense that we have given insufficient time for consultation, and the proposed next steps are designed to address this.

Issues Raised

Although it is difficult to summarise so many responses, there are four broad categories of comment which have been made:

Vision and description

A number of respondents felt that the document was not yet capturing or describing the vision of integrated records. This relates partly to the overview (which may need to be less technical) and partly to the content, where it was felt that the integrated vision was not consistently reflected in the detailed sub-sections.

We have been discussing with some of the Electronic Record Development and Implementation Project sites (eg South West Devon and Durham) how to illustrate the benefits and outcomes from integrated records. This will relate also to the communication and dissemination of the principles and objectives of ICRS to a wider audience.

Clarification of procurement and implementation

A large number of the comments were seeking clarification over the procurement process. Because we only published the synopsis there was little for people to look at in this area. Those who understood the specification were worried that the scope was too big—but there were few practical suggestions in response to the questions about phasing.

It is necessary to develop the detailed plans for procurement and implementation of ICRS. This would help bring together the two consultation documents, and explain the next steps in a more pragmatic context.

Functional Requirements

There were a number of comments around specific functional areas (and a number of detailed source documents were also submitted). Some of the comments highlighted known gap areas (eg other National Service Framework areas, ambulance, public health) where work is already in hand. A significant number were asking for more work to be done for social services, with support for this to be taken forward more quickly.

One specific suggestion from the Royal Pharmaceutical Society was that we should create "focus groups" of clinical experts to review relevant sections of the specification—in their case prescribing. This constructive idea will be considered, as it would help in informing specification and building ownership; it would be necessary to ensure that such work remained consistent to the overall vision of ICRS and the structure of the specification.

Design and architecture

There were a number of comments suggesting that more work was needed on the underlying design and architecture for ICRS. A lot of comments highlighted the importance of standards, and the need to provide more specific detail. Many felt that the specification as it currently stands is not yet detailed enough to form the basis for ICRS contracts with suppliers.

This last point is accepted, and through exemplar sites we will be seeking to find out the appropriate level of detail needed for initial long and shortlisting, and for detailed contract schedules. It is also agreed that for standards and national services it is critical that a national design authority is established. A consultancy exercise now underway, will make recommendations for the objectives, outputs and management of such a service.

Next Steps

We are working towards the Office of Government Commerce's Gateway 1 and 2 review and will be firming up on ICRS architecture, the phasing of implementation and implications for future Prime Service (and product) Providers. The overall objective is to ensure that we have a procurement process for ICRS that provides a coherent national and strategic approach that is also sensitive to local requirements in terms of both business priorities and legacy systems.

By November 2002 we will have completed the review and will then provide further detail on procuring and implementing ICRS.

Participants in OBS Review Process

Prof Aidan Halligan	Department of Health
Prof Underwood	President, Royal College of Pathologists
Nigel Edwards Gareth Fereday	NHS Confederation
Prof Tom Treasure	IT Lead, Council of Royal College of Surgeons
Prof G Alberti	Emergency Care Tzar
Louise Silverton	Deputy Chair, Royal College of Midwives
Sue Williams	President, National Patient Safety Agency
Prof Peter Dawson	President, Royal College of Radiologists
Prof William Dunlop	President, Royal College of Gynaecologists
Ian Shepherd	IT Lead, Royal Pharmaceutical Society
About 120 Clinicians	Attendees at Clinician Engagement Workshop
Prof Philp	Chair, Regional Older Peoples' Leeds Meeting
Dr David Colin Thome	Primary Care Tzar
Prof Ian Philp	Care of the Elderly Tzar

Roger Staton	Department of Health
Mike Custance	
Simon Lowles	
Jim Smith	
Felicity Harvey	
Dr Philip Leech	
Ian Dodge	
Rob Webster	
Karin Sowerby	
Jeff Pearson	
Ruth Holland	BMA General Practitioner Committee (GPC) IT Group
Dr Beverley Castleton	Consultant Geriatrician and IT Coordinator for NSF for the Elderly
Ian Barnes	Chair, Federation of Health Care Scientists
Prof David Haslam	President, Royal College of General Practitioners
Peter Hutton (and various members)	Chair, Clinical Care Advisory Group (CCAG) and members
Dr Mike Richards	Cancer Tzar
Dr Louis Appleby	Mental Health Tzar
Dr Sue Roberts	Diabetes Tzar
Pharmacy Advisory Group including:	
David Pink	Long term Medical Condition Alliance
Jonathan Ellis	Help the Aged
Eve Knight	British Cardiac Patients Association
Thuvia Jones	Islington Health and Race Forum
Myra Davidson	Carers UK
Alistair Kent	Genetic Interest Group
Simon Williams	Patient Association
Gerard Murray	NHS Direct, MyHealthspace
Kaye McIntosh	Health Which
Patricia Wilkie	Academy of Medical Royal Colleges, Patient Observer
Betty Kershaw	Director, Royal College of Nursing
Anne Casey	IT Lead, Royal College of Nursing
Prof Roger Boyle	Heart Disease Tzar
Noel Skivington	Allied Health Professionals Forum
Kamini Gadhok	
Mark Jones	Community Practitioners and Health Visitors' Association
Prof Peter Hutton	Chair, Academy Royal Colleges
Prof Carol Black	President, Royal College of Physicians (RCP)
David Pencheon	Public Health
Prof Sir Muir Grey	Director, National Electronic Library of Health
Prof Sian Griffiths	President Faculty of Public Health

Other corporate contributors:

BMA GPC

Royal College of General Practitioners

Prescribing Support Unit

Primary Healthcare Specialist Group Committee

National Patient Safety Association

PRIMIS Board and 300 facilitators

Public Health Special Interest Clinical Computing Group

Question 80 (Mr Sadiq Khan): Public Service Agreements (PSA) targets

Public Service Agreement (PSA) targets set out the key improvements that the public can expect from Government expenditure, with each PSA target setting out a Department's high-level aim, priority objectives and key outcome-based performance targets.

Like all government departments, the Department is working on PSA targets that are outcome focused, that are designed to capture the outcomes that matter most to people and that demonstrate the key improvements the public can expect. All our PSA targets are about the results to be delivered—shorter waiting times for treatment, fewer preventable deaths, better experience—not about inputs like IT systems.

As an agency of the Department of Health, NHS Connecting for Health's strategic targets contribute to the achievement of the Department's strategic objectives, as shown in the following table:

	*Department of Health Objectives**				
	Improve and protect the health of the population	*Enhance the quality and safety of services for patients & users*	*Deliver a better experience for patients and users*	*Improve capacity, capability and efficiency of health and social care systems*	*Ensure system reform, service modernisation, IT investment and new staff contracts deliver improved value for money and higher quality*
NHS CFH Strategic Target					
To deliver Spine programme releases to introduce Secondary User Services and the Clinical Spine Application by March 2007, allowing secure direct access to patient demographic records.		√		√	√
To continue to deliver the national Choose and Book IT system and provide new functionality in Release 3.0 so that patients can be offered more choice when referred to a specialist, in line with the Government's Extended Choice policy.		√	√	√	√
To ensure that the 2nd stage of the Electronic Prescription Service is available for development and testing by GP and pharmacy system suppliers by the end of September 2006.		√	√	√	√
To connect 18,000 NHS sites to the National Network (N3), providing IT infrastructure, network services and broadband connectivity to meet current and future NHS needs.		√	√	√	√
To fulfil our commitment to the Department of Health programme to complete the bulk of Picture Archiving and Communications Systems deployments by March 2007, in order to finish deployment throughout the NHS in England by the end of 2007.	√	√	√	√	√
To ensure that software remains available throughout the rollout of the National Bowel Screening Service.	√	√	√	√	√
To develop, with the Department of Health, an approach to maximising benefits from the use of NHS CFH systems by March 2007.		√	√	√	√

	*Department of Health Objectives**				
	Improve and protect the health of the population	*Enhance the quality and safety of services for patients & users*	*Deliver a better experience for patients and users*	*Improve capacity, capability and efficiency of health and social care systems*	*Ensure system reform, service modernisation, IT investment and new staff contracts deliver improved value for money and higher quality*
To ensure that declared service availability targets for our national critical systems are met, as agreed with the NHS.	√	√	√		√

* Department of Health Objectives taken from the Department of Health: Departmental Report 2006.

Question 90 (Mr Sadiq Khan): Article in The Observer newspaper

The Observer article on 25 June raised issues of patient safety and risks of patients not receiving treatment.

The National Programme for IT in the NHS is not just an IT delivery programme but a transformational patient safety and clinical governance programme. Its mission is to contribute to wider Transformational Government objectives by modernising the NHS and to deliver a 21st century health service through the efficient use of IT. Key aims are to maximise the benefits of patient safety from new technology and, at the same time, minimise any risks that the new technology itself could introduce so that NHS IT systems can support clinicians in providing better, safer patient care.

Governance for patient safety within NHS Connecting for Health is provided by the Clinical Risk and Safety Board. This Board is comprised of clinical directors of NHS Trusts and clinical professionals working in the NHS. The Board provides a decision making forum and an escalation mechanism for resolution of safety problems and also advises on clinical safety issues and policies. The accountable officer for patient safety issues within NHS Connecting for Health is the Chief Clinical Officer (CCO). In line management terms, the CCO reports to the Chief Executive of the Agency and in professional terms, reports to the Deputy Chief Medical Officer of the Department of Health.

Central to NHS Connecting for Health's safety management approach is a robust patient safety assessment process. The process applies to all new and upgraded IT products and services being introduced under the National Programme. The patient safety assessment process, developed in partnership with the National Patient Safety Agency (NPSA), involves three key steps:

— products are risk-assessed in the context in which they will be used;

— a safety case sets out how identified hazards would be mitigated;

— a safety closure report provides evidence that hazards have been addressed satisfactorily.

The patient safety assessment process includes:

— a fortnightly Clinical Safety Group meeting, chaired by the National Clinical Safety Officer, where suppliers can raise clinical safety issues and seek guidance;

— a monthly Clinical Risk and Safety meeting chaired by the Director of Knowledge, Process and Safety;

— a quarterly Clinical Risk and Safety Board, chaired by the National Clinical Lead for NHS Connecting for Health/Medical Director of a NHS Trust. Information about the work of the Clinical Risk and Safety Board is published on the NHS Connecting for Health web site: (http://www.connectingforhealth.nhs.uk/delivery/serviceimplementation/engagement/clinical_connections_part2.pdf);

— safety incident reporting procedures to ensure visibility of any clinical safety issues;

— before they can be connected to the Spine, systems contracted under the Programme must receive a "Clinical Authority to Release" from the NHS Connecting for Health National Clinical Safety Officer.

NPSA is also a stakeholder on the GP2GP Project, recognising that this will improve patient safety by making the health record available to the new GP within 24 hours. There is a good working relationship between the GP2GP project team, Joint GP IT Committee and the NPSA.

The National Programme for IT also provides an opportunity to address patient safety problems that can be solved by using technology. Safer management of blood products, systems to ensure "right patient, right care", safer prescribing and safer handover between clinical teams within and across health and social care organisations are all examples of issues being investigated as part of the drive to minimise risks to patients.

The Observer article also mentioned the particular implementation problems experienced by the Nuffield Orthopaedic Centre, which have been acknowledged. The Trust's then Chief Executive confirmed that the issues were resolved and that it had been essential to install the new system as the old one was on the point of collapse. The Trust's medical staff confirmed that, while there was some inconvenience, no individual patient's care was affected adversely.

The article also suggested that Trusts are dispensing with the new systems because of fears of the impact on patients. That is not the case. A small number of Trusts which had no pressing need for new systems have indicated that they wish to continue with their existing systems until those provided under the Programme have more capability than those they use currently. NHS Connecting for Health has facilitated these Trusts continuing with their existing systems and is content for them to install the new systems at a later date. The Trusts have confirmed that they are committed to the Programme.

The article claimed that there is a daily stream of problems accessing the system. In practice, service availability levels for systems implemented by NHS Connecting for Health are invariably better than 99%. Details are published on the NHS Connecting for Health website. A further note to the Committee provides more information.

There is a large body of international research into the impact of Information Technology on clinical safety, conducted by the RAND Corporation for example. RAND is a non-profit research organisation providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. Some examples of this research are:

— information technology supporting computerised physician order entry;

— the benefits of widespread adoption of Health Information Technology;

— electronic prescribing making it safer to take medicine; and

— health Information technology can lower costs and improve quality.

Other experience also points to the benefits of IT systems to support the clinical process. In the UK, the Wirral Hospital NHS Trust implemented electronic prescribing and demonstrated improvements to patient care and cost savings. In the US, the Brigham and Women's Hospital, Boston and the Montefiore Medical Center, New York City, showed a decrease in medical errors with the introduction of computerised physician order entry.

Question 91 (Mr Sadiq Khan): Security and confidentiality of patient records

Patient records are a mixture of data, facts, opinion and observations from and for a wide range of clinical professionals and purposes. Handling and assessing this wide variety of information safely in its proper context is possible only with modern information technology. Electronic records are more complete, more legible, contain more diagnostic data, and lead to the delivery of better patient care. The NAO Report recorded that "*NHS Connecting for Health has adopted the highest security standards for access to patient information and the NHS is the only public sector organisation to implement the Electronic Government Interoperability Framework (e-GIF) standard level 3 to verify the identity of users*".

All NHS organisations are required to establish a Registration Authority as part of the Information Governance structures to operate their registration activities, for which they hold total responsibility. As well as the probity of processes, those governance arrangements are concerned with the management of user behaviour and the implementation of changes to business processes. The organisations are required to produce annual information governance compliance reports.

Confirmation of identity at e-GIF standard level 3 requires evidence of two types: existing identity with a photograph, such as a passport or driving licence; and two evidences of place in the community, such as a utility bill. These evidences must be presented at a face to face meeting.

Role Based Access Controls allows NHS organisations to restrict the type of access to the Personal Demographics System (PDS) and what may be done within it, for example to read records but not to change them. Control of the consent flag is restricted to a limited section of the users who have access to the PDS.

Access privileges must be approved by a sponsor, a trusted person authorised by the registering organisation to perform that role, typically a senior clinician or manager responsible for the area in which the user will work.

The user must acknowledge their acceptance of the terms and conditions under which they may operate eg no card sharing, no leaving Smartcards or logged-on PCs unattended and conformation to the NHS Code of Confidentiality.

DH policies and NHS Connecting for Health guidance to all organisations is specific and explicit in describing how staff, as users of the systems, must behave. The conditions are described in the registration forms that all users must complete and, as a record of their acceptance of those conditions, must sign. This applies to all non-NHS users as well.

There are ongoing discussions with the professional bodies and regulators around the reinforcement of these behaviours via codes of conduct etc including the position of students.

This contrasts sharply with the position of paper records. The BMA has said "*A great deal of evidence points to a widespread concern among patients that relevant data are just not available when needed.*"

Paper records:

— are inherently unreliable, insecure and cannot easily be shared;

— can be lost, difficult to read, or inaccessible when they are needed;

— cannot have different confidentiality ratings for different parts to meet patients' wishes;

— if poorly kept, can contribute to missed appointments.

It has been estimated that 5% of patient safety incidents in acute hospitals are due to documentation errors. Medical record staff cost the NHS £120 million in 2002.

Question 93 (Mr Sadiq Khan): Sale of the benefits of the Programme

We do not accept that we have been poor at selling the benefits of the programme. The majority of staff have positive views about both the aims of the Programme and the potential impact on their daily working lives. This position has been achieved through concerted communication and engagement effort. However, this position cannot be taken for granted and we agree with the NAO that there will always be more to do as the Programme moves through its different phases and expectations change. But, as our medical witnesses explained at the hearing, there are two distinct views on the new technology, emanating from those who use it and those who do not. As the rollout progresses more people will move into the former category.

The following comments have been made by users of the Programme's products:

Gytha McBirney, radiology manager Hillingdon Hospitals NHS Trust:

> *"We were delighted to be chosen to go first with the new system. We'd had problems with old and unreliable wet processors, which are like giant photograph developers, for a while, so there was already a drive for us to go digital.*
>
> *"Doctors I've never met before are coming up to me and saying how great the system is, and how good it is to have quick access to images. The system has proved very reliable and the quality of the images is superb."*

Oxleas NHS Foundation Trust—Mental health system:

> Oxleas NHS Foundation Trust have used their new mental health system for just 10 working days. Dr Hashim Reza, consultant psychiatrist, said: "*We've experienced no major hiccups and colleagues across all disciplines are using the system very enthusiastically. In fact, requests to use the system are rising impressively on a daily basis.*
>
> *"We've implemented the new systems in one directorate and look forward to rolling it out over the next few months across the remainder of a large mental health trust. "As you'd expect, staff are asking how to best use the system as they become familiar with it. This is normal and proves that it's being used to improve the service we provide for clients. The biggest advantage noted by all clinicians is the ready availability of clearly written notes to all members of the clinical teams."*

Barnet PCT—Community system:

> Barnet PCT recently became the first in London to use the new community health computer system, part of the NHS Care Records Service (NHS CRS). The community system is an integral part of much larger change for the podiatry team, supporting the team to reduce waiting lists and improve processes.
>
> In the first few weeks of operating the new system, consultation times were extended to give staff time to get used to the new systems.

While the waiting list initially grew, due to the extended consultation times, they have now fallen. Fiona Jackson, head of allied health professionals, said: *"The new community system has definitely supported this, and helped it happen much faster."*

> The podiatry team work across Barnet and the new system has given her a good overall view of progress. With a paper based system this was impossible. Fran Gertler, head of podiatry, said: *"In the new world of commissioning, being able to demonstrate what we're doing will be invaluable. The team deliver real value for money but before we had no evidence of that, so the new system puts us in a much stronger position."*

Dr William Saywell, Consultant Radiologist, Yeovil, Somerset:

> *"PACS has transformed the way we work in the radiology department. As well as almost eliminating the problems of film filing and retrieval, it has dramatically improved reporting efficiency and throughput. This means that not only are the images instantly viewable from anywhere in the hospital, but also that examination reports are available much earlier than previously. Patients benefit from an earlier diagnosis to facilitate prompter treatment and an earlier return home.*

"We are eagerly awaiting the next step in the programme, which will enable the sharing of images between hospitals, making it unnecessary to send films or CD-ROMs with patients who are transferred to specialist centres, and giving access to previous examinations wherever the patient may attend for treatment."

Andrew Fearn, Director, ICT Services, Nottingham University Hospitals NHS Trust:

"Although some products have only been deployed recently, the simple fact is, we now have better NHS IT systems in our city than we've ever had before and have an opportunity, over time, to exploit the technology to deliver real patient care benefits—something that without these products we wouldn't even have been able to have considered."

Question 122 (Dr John Pugh): Termination of EDS contract

The total payments made to EDS from May 2003 until the termination of the contract were £11,535,737.

The replacement service, the NHSmail service provided by Cable and Wireless, now has 203,420 users at an average monthly cost of £2.56 each. Over 750,000 messages are sent each day and 7.5 terabytes of data are stored, growing by 0.5 terabytes a month. A survey of users revealed that some 30% were using the system to transmit clinical information.

The value of both contracts was variable depending on the level of take up. However, as an example to illustrate the relative the value for money, the EDS price for 100,000 users was £57 million whereas the Cable and Wireless price for the same number of users is £29 million. This provided an immediate saving to the NHS.

Question 130 (Dr John Pugh): Expenditure by Trusts on additional infrastructure

Expenditure by individual Trusts for additional desktop and infrastructure where full-scale upgrades have taken place vary considerably depending on both the size of the Trust and the state of its local IT infrastructure. To date, this expenditure has ranged from £120k to £900k.

However, it is misleading to equate gross expenditure with overall costs, as the deployments generate savings for local NHS organisations, as follows:

— Some IT products no longer have to be purchased locally.

— Switching off redundant IT removes their running costs.

— Efficiency gains arise from the move from paper to electronic records.

— Further efficiencies arise from improved business processes.

— Ultimately, gains are made through the transformation programme that the IT has enabled.

The assumption made in the investment appraisals two years ago was that gross local expenditure of £3.4 billion would reduce to £1.2 billion net. Some of these savings are for the future but, as was expected in the investment appraisals, substantial savings are being identified already.

We now have information from the early deployments. Experience so far has been that, if anything, expenditure by the local NHS has been less, and the benefits more, than estimated in the investment appraisals. The following case studies illustrate this.

Case study 1: Primary Care Trust—North Sheffield	Two GP Practices in the North Sheffield PCT elected to change from their Existing System Programme (ESP) GP supplier to the Programme solution. The ESP solution was costing £13,000 a year across the two practices, equating to £130,000 over a 10 year term.
	The local implementation costs of the new systems across the two practices were £36,000.
	The overall financial impact on the PCT of transferring to the Programme solution in these two GP practices was a saving of £94,000 over the 10 year term. Moreover, the functionality of the new system will increase over time at no additional cost.
Case study 2: Acute Trust—University Trust Hospitals Birmingham (UHB)	The UHB Trust sought prices from suppliers for the purchase of an EPR Level 3 Patient Administration System. The lowest cost bid was in the region of £25 million over a 10 year term.
	The wide functionality of the Programme solution, with its impact on a broad range of staff, will result in implementation costs of £1.7 million.
	By taking the Programme solution providing the same level of functionality, the Trust would incur only the implementation cost ie £1.7 million, saving £23.3 million over the 10 year term, excluding the savings from avoiding the need for the procurement exercise. Moreover, the functionality of the new system will increase over time at no additional cost.

Question 147–149 (Mr Richard Bacon): Total costs of the programme

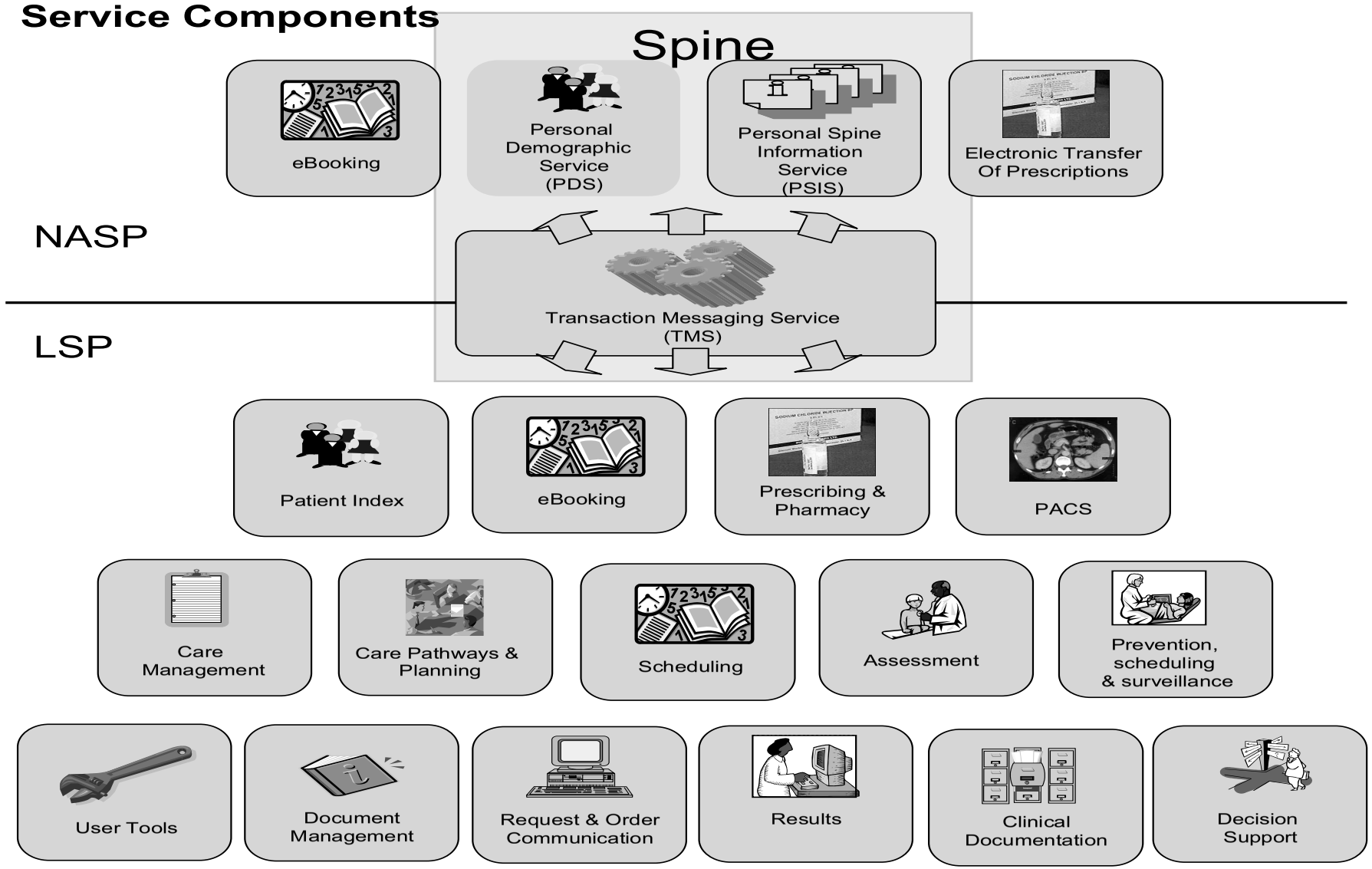
The NAO Report estimated the total gross costs of the Programme over 10 years as £12.4 billion. At the hearing, Richard Granger was asked how much of this total had been spent to March 2006. He estimated £1.5 billion and agreed to send a note. The note was to include both a breakdown and an explanation of the difference between this £1.5 billion and the £654 million mentioned in paragraph 1.22 of the NAO Report.

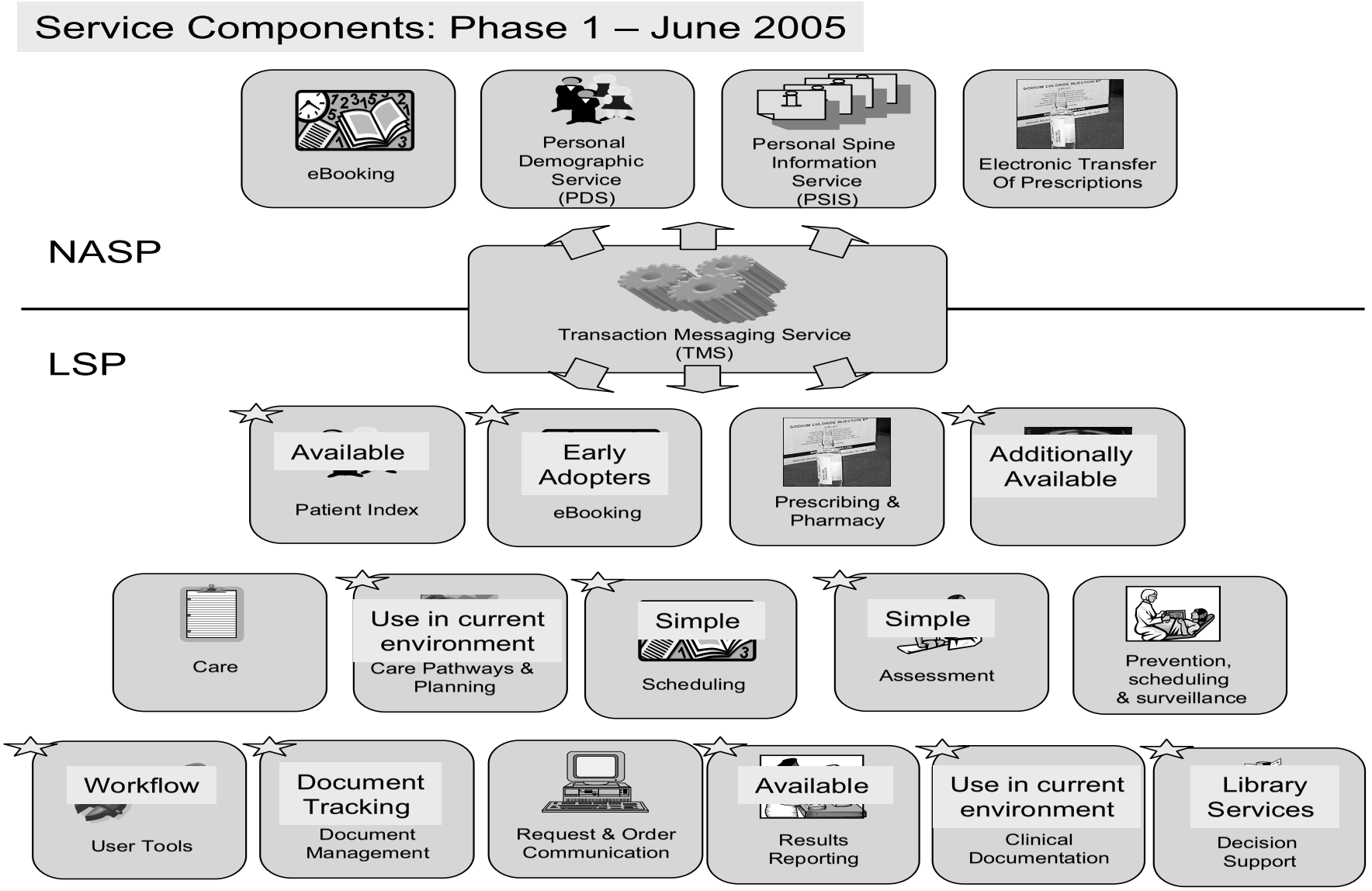
The £654 million relates to payments to suppliers under the core contracts.

Richard Granger's estimate related to total expenditure, including the £654 million. The total spend to March 2006 was £1,542 million, comprising: the core contracts (£654 million); new projects added to the original scope of the Programme (£70 million); additional services beyond the scope of the original core contracts (£48 million); non-core projects and contracts added to the Programme (£75 million); Programme support for local NHS implementation (£43 million); central administrative expenditure (£193 million); and expenditure by local NHS organisations, including NHS Connecting for Health's contribution to local costs (£459 million). These costs are shown at 2004–05 base prices.

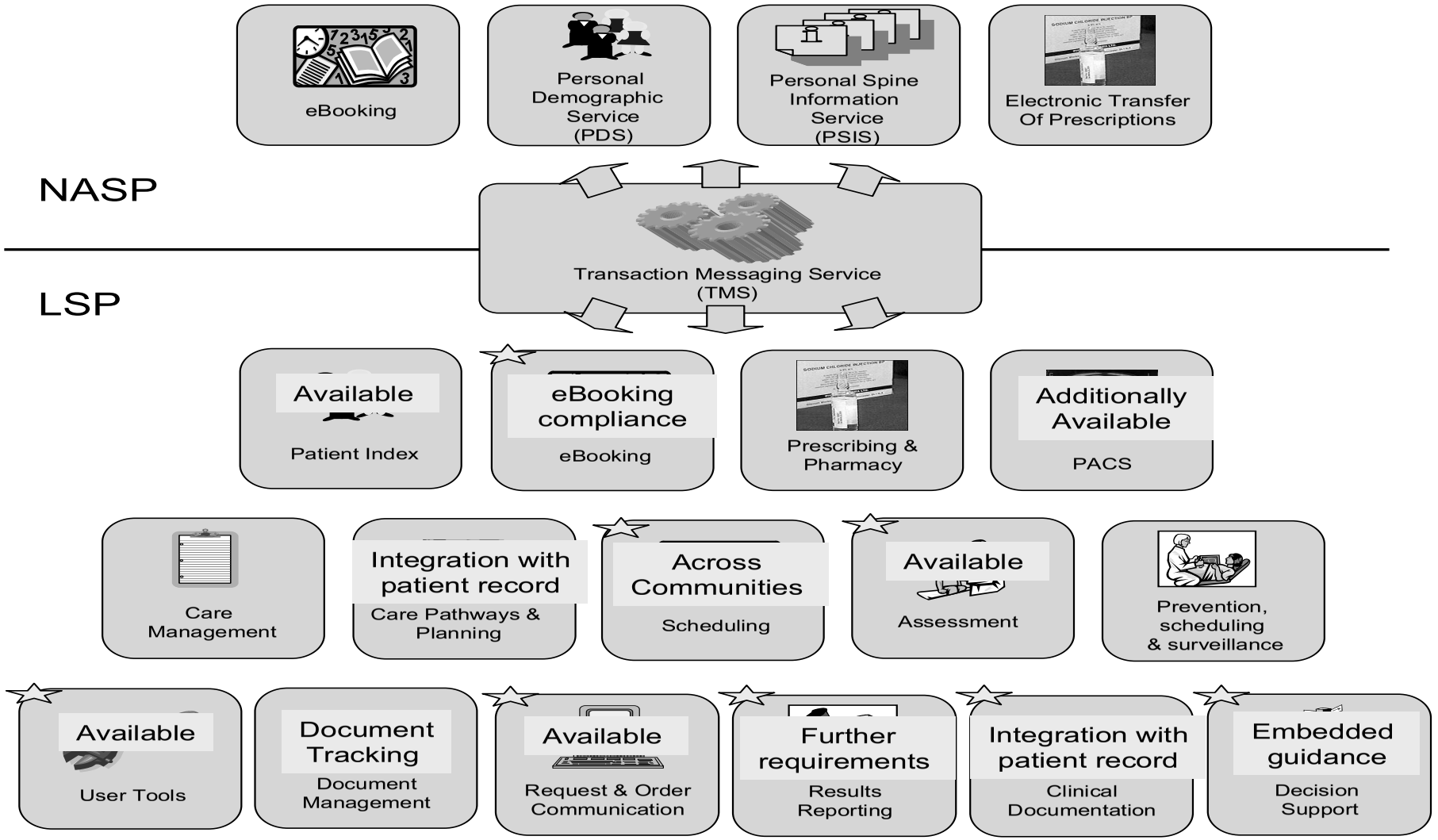
Question 198 (Mr Richard Bacon): Target dates contained in LSP contracts

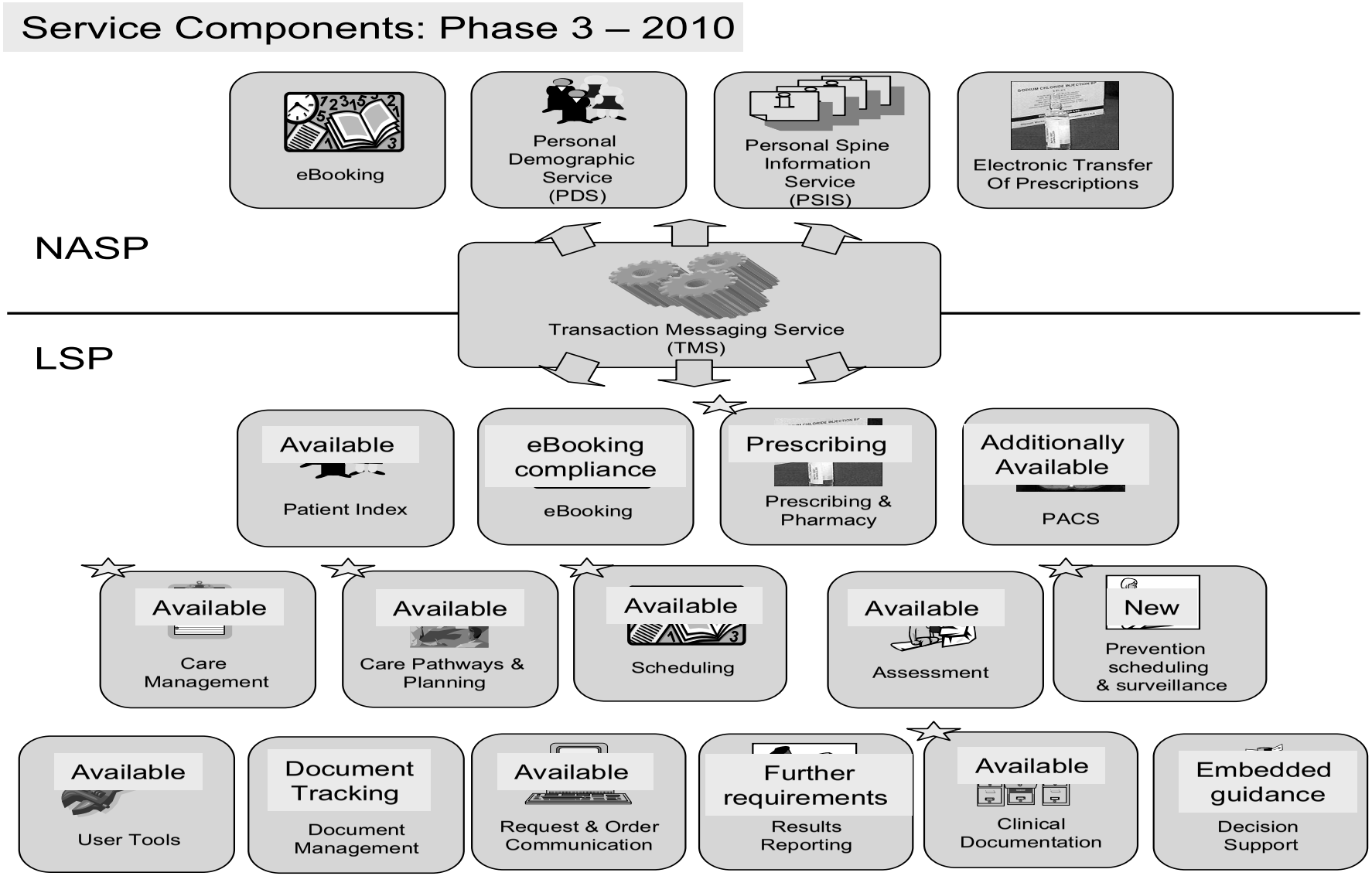
A summary of the original target dates contained in the LSP contracts is attached as Enclosure 2. This comprises a series of diagrams. The first diagram shows the full functionality of the Programme. The following three diagrams show the same information but also indicate, through yellow highlighting, what was planned to be available at phases 1, 2 and 3 respectively. The dates refer to the initial planned availability of the functionality, not to its full implementation.


Service Components
Spine
eBooking
Personal Demographic Service (PDS)
Personal Spine Information Service (PSIS)
Electronic Transfer Of Prescriptions
NASP
Transaction Messaging Service (TMS)
LSP
Patient Index
eBooking
Prescribing & Pharmacy
PACS
Care Management
Care Pathways & Planning
Scheduling
Assessment
Prevention, scheduling & surveillance
User Tools
Document Management
Request & Order Communication
Results
Clinical Documentation
Decision Support


Service Components: Phase 1 – June 2005
NASP
LSP
eBooking
Personal Demographic Service (PDS)
Personal Spine Information Service (PSIS)
Electronic Transfer Of Prescriptions
Transaction Messaging Service (TMS)
Available
Patient Index
Early Adopters
eBooking
Prescribing & Pharmacy
Additionally Available
Care
Use in current environment
Care Pathways & Planning
Simple
Scheduling
Simple
Assessment
Prevention, scheduling & surveillance
Workflow
User Tools
Document Tracking
Document Management
Request & Order Communication
Available
Results Reporting
Use in current environment
Clinical Documentation
Library Services
Decision Support

Service Components: Phase 2 – June 2008




Service Components: Phase 3 – 2010
NASP
LSP
eBooking
Personal Demographic Service (PDS)
Personal Spine Information Service (PSIS)
Electronic Transfer Of Prescriptions
Transaction Messaging Service (TMS)
Available
Patient Index
eBooking compliance
eBooking
Prescribing
Prescribing & Pharmacy
Additionally Available
PACS
Available
Care Management
Available
Care Pathways & Planning
Available
Scheduling
Available
Assessment
New
Prevention scheduling & surveillance
Available
User Tools
Document Tracking
Document Management
Available
Request & Order Communication
Further requirements
Results Reporting
Available
Clinical Documentation
Embedded guidance
Decision Support

Progress with demographics in the NHSCRS since Dr Nowlan's departure

THE PERSONAL DEMOGRAPHICS SERVICE

The Personal Demographics Service (PDS) is an essential element of the NHS Care Records Service, underpinning the creation of an electronic care record for every registered NHS patient in England. It will serve as a gateway to the clinical record, enabling authorised healthcare professionals to locate quickly the clinical record that is uniquely associated with each demographic record.

Unlike the previous services, this single authoritative source of demographics is accessible throughout the NHS and is integrated fully with the other applications and services delivered as part of the National Programme for IT. These include Choose and Book, Electronic Prescription Service (EPS), GP to GP and HealthSpace. It provides more convenience for patients as they need only notify one authorised healthcare organisation of a change of address and this change will be available to all healthcare organisations as and when the patient records are accessed.

Since Dr Nowlan left the organisation significant progress has been made, resulting in the following incremental benefits.

The Personal Demographics Service improves the working lives of healthcare professionals. By using the PDS healthcare professionals can:

— be confident they have access to accurate and complete patient demographic information;

— access the most up to date contact details to ensure that mailings are more likely to reach the intended recipient;

— find more easily the right record for the right patient meaning less time chasing records and more time delivering care;

— where necessary, gain urgent access to patient's previous clinical history via direct GP to GP contact as PDS holds patient's previous GP, address and telephone contact details; and

— access the patient's registered GP on encounters where a third party patient's (paper) notes had been incorrectly filed into the notes of a newly registered patient's notes.

The PDS will replace the following existing NHS demographics services:

— the NHS Central Register (CHRIS);

— demographic functions of the National Health Applications and Infrastructure Services (NHAIS);

— the NHS Strategic Tracing Service (NSTS); and

— NHS Number for Babies (NN4B).

Moving to the PDS becoming the single authoritative source of demographics will enable the existing national demographic systems to be shutdown, resulting in reduced operational costs.

Progress on the migration of the above services has also realised the following benefits to date:

1. *Immediate Birth Notifications to PDS*

The NHS Numbers for Babies System (NN4B) issues NHS Numbers on new births. From 1 June 2006, a link between NN4B and the PDS made information on new births available immediately in the NHS Care Record Service. Prior to this, it could take up to eight weeks for a baby's demographics information to be available to the NHS outside the unit in which the baby was born.

2. *Birth Notifications to Office for National Statistics*

In March 2006 an interface was introduced between the NN4B system and the Office for National Statistics (ONS). ONS now receives notifications of new births directly, which supports their statistical analysis and registration of births, deaths and marriages.

3. *NHAIS access to the PDS*

The National Health Applications and Infrastructure Services (NHAIS) comprise a range of legacy IT systems and services on which the NHS relies. When a patient registers with a GP, NHAIS now traces the patient through the PDS. This ensures that the NHS number for the patient is found immediately, reducing the time necessary for their medical records to be transferred between GP practices.

The second stage of the NHAIS migration will commence shortly, enabling new patients to have a NHS number immediately, rather than being issued with a temporary number.

The PDS also underpins the following services:

1. *Electronic Prescription Service*

The EPS reduces the need for patients to visit their GP surgery just to collect a prescription—saving time for both patients and GP surgery staff, and improving accuracy and safety because prescription information will not need to be recorded first by the GP and again by the pharmacist.

2. *General Practice to General Practice Service*

The benefits to patients include:

— the patient health record being available to the new GP within 24 hours;

— the new GP will have knowledge of the patient's current medication, drug interactions, current problems and key past medical history;

— an improvement in patient safety;

— increased patient confidence that they will get good continuing care; and

— preventing patients being asked for information that they have previously reported.

The benefits to practice administrative support teams include:

— reduced administrative time at the previous GP practice to find and forward patient records to the new GP practice;

— reduced administrative and clerical time at the new GP practice to review and summarise or re-key the patient record received from the previous GP practice;

— reduced time taken for the practice to receive the patient record; and

— reduced administrative time to chase up patient records from health authorities.

3. *HealthSpace*

HealthSpace will provide the following benefits:

— Information quality will be improved because patients will be able to check the accuracy of their data through HealthSpace. They may be able to update some elements themselves or flag it for the attention of a healthcare professional

— It will provide systematic access to data held by numerous organisations and will reduce the administrative burden of those organisations in responding to requests under the Data Protection Act.

— It will enable patients to update personal preferences (in PDS)—communicating their wants and needs to NHS organisations with which they interact. Potentially, a hospital will already know your dietary requirements, whether you need an interpreter, whether you need disabled access etc before you even arrive.

— Patients will be able to enter data into their own care records. This is especially important for people with long-terms conditions (often expert patients) who routinely monitor key metrics themselves. This will open up a new channel of communication between patients and clinicians.

— Bringing together data and information to support patient choice in a single, personalised web interface. It will integrate existing systems (like the Choose and Book on-line application) with the data on which choice is based (waiting times, quality assessments, travel times), augmenting this with value-added services like personalised appointment reminders.

— Providing highly visible proof that the NHS is modernising and offering on-line services comparable with other industries.

4. *Choose and Book*

The PDS underpins the Choose and Book national service that, for the first time, combines electronic booking and a choice of place, date and time for first outpatient appointments. It revolutionises the current booking system, with patients able to choose their initial hospital appointment, and book it on the spot in the surgery or later on the phone or via the internet at a time that is more convenient to them.

Choose and Book provides the following benefits:

— A more flexible and responsive health service that fits around people's individual lives.

— From 1 January 2006, patients in England referred by their GP to a specialist will be able to choose from at least four hospitals (or other healthcare providers) commissioned by their PCT or practice.

— Enabling patients to choose a convenient place, date and time for their initial hospital appointment.

— There is less chance that information will get lost in the post because more correspondence takes place through computers.

5. *Secondary Uses Service—the NHS and Planning Future Services*

The PDS is a comprehensive national system with a single set of data fields and standards. In conjunction with the Secondary Uses Service, this allows pseudonymised information (ie information with all patient-identifying details removed) to be collated and compared easily across the whole of the NHS in England, allowing trends to be tracked and analysed more successfully. In particular the PDS and SUS will enable

the provision of improved migration and patient movement/relocation data, which are seen as key statistics to aid and identify the continued service development and improvements to be made to the NHS, both nationally and locally.

The introduction of the PDS has increased the information governance controls protecting patient information:

— Registration and authentication processes, allowing systems to identify what actions have been taken by which healthcare professional;

— Role based access controls, linked to the identity of each authorised healthcare professional, control precisely what they are able to see and do when logged on to the system;

— Search controls constrain how healthcare professionals are able to view the details of individual patients; and

— Tools for auditing who has looked at or amended PDS records and local access to these by "privacy officers" so as to identify appropriate use.

Demographic Statistics

The PDS is available to 276,899 registered users at over 7,000 locations (at 3 October 2006). The following table illustrates the current activity on PDS:

Transaction type	*Daily average*	*Annual average (million)*
Patient traces	77,500	28
Retrieving patient demographic information	1,121,500	409
Number of data updates	146,500	53

It is estimated that these transaction volumes will increase eight-fold by around the end of 200.

Question 255 (Chairman): Additional costs

The NAO Report estimated the total gross costs of the Programme over 10 years as £12.4 billion. At the hearing, NAO was asked whether the extra costs within this figure (ie above the £6.2 billion costs of the core contracts) would fall on the public sector. NAO replied that they would.

Sir Ian Carruthers wished to put some clarification around this and was asked for a note.

The key points are that the £12.4 billion is not a budget. It is an estimate by the NAO of the gross costs of the Programme (national and local). Its derivation includes a number of calculations made for convenience, for example extrapolation of costs beyond the terms of the existing contracts and assumptions of the level of central expenditure. The NAO Report points out that NHS Connecting for Health believes that some of these costs will prove to be lower.

The NAO's estimate also takes no account of anticipated savings to the NHS, which are already providing substantial offsets to the gross costs. These include direct savings from improved administrative systems, direct savings from enterprise wide agreements and indirect savings such as those arising from improved patient safety.

Some of the benefits are already being realised, for example savings through the Enterprise Wide Agreements, NHSmail and PACS total some £1.7 billion over the terms of their contacts.

Also, in response to Question 130, we have provided examples of savings achieved in an Acute Trust and a Primary Care Trust following the deployment of the new systems. Extrapolation of these results across the NHS would produce a net saving for local organisations, which would be enhanced further by the considerable savings expected from improvements to patient safety.

For these reasons, the £12.4 billion does not represent the overall costs of the Programme, but is an estimate of gross expenditure. We agree with the NAO that, as the IT systems are implemented, the actual benefits should be assessed. We also accept the NAO's recommendation that we should provide an annual statement quantifying the benefits delivered by the Programme. The aim is to produce the first statement next year.

Correspondence between Richard Bacon MP and Richard Granger, Director General of NHS IT

Your e-mail dated 21 June 2006 asked for details of PAS developments for acute NHS hospitals scheduled for the next four months up to the end of October 2006, together with details of clinical systems being supplied.

To ensure that you received the latest available information, I have arranged for your request to be passed to each of our Local Service Providers (LSPs).

Their responses are given below. You will note that, in some cases, they have gone beyond the specific question but the information they have provided is as accurate and up to date as possible.

26 June 2006

Letter from Fujitsu Services

In support of your preparation for the Committee of Public Accounts on Monday, Fujitsu Services is happy to put forward the latest plans for PAS implementation in acute NHS Trusts in the Southern Cluster is to the end of October 2006.
We are working jointly with colleagues from the Cluster, the SHAs and the local trusts and we reviewed progress at the Southern Cluster Programme Board on Tuesday of this week. The dates shown below are our best estimate of go-live dates as of today with the provisio that recent NHS organisational changes have generated some additional rework and we are currently confirming the exact impact these changes will have on go-lives.

The current plans pay due attention to the state of readiness at the trust and a simple programmatic sequence which avoids, for example, concurrent go-lives in the same domain.

The joint teams actively manage progress at each trust on a daily basis in order to endure that everything will be in place for a smooth cut-over. Given the complexity of the tasks and the main interdependencies some dates may change slightly as the work progresses.

The RO software release being implemented provides an integrated PAS systems with Choose and Book functionality (connecting to the NHS data Spine), Maternity, Accident and Emergency, Theatre Scheduling, Order Communictions and Results Reporting and a subset of clinical documentation support including ability to record problems and diagnoses, specific assessments, free-text clinical notes and produce discharge summaries. Some trusts will continue to use existing legacy systems for certain of the clinical functions until the R1 or R2 software releases for their own convenience.

Trust	*Estimated Date*
Weston	28 July
Milton Keynes	14 August
West Somerset	21 August
East Surrey	21 August
Mid and South Bucks	3-phase—28 August to 29 September
Bath	10 September
Mid Hants	25 September
NE Kent	27 September
South Devon	15 October
WASH	15 October
East Somerset	22 October
North Devon	29 October

We have not included the PACS and RIS implementations, which might be included in the scope of the question regarding clinicals. I can confirm that this programme continues on plan and a further nine trusts will go live on PACS and 11 trusts will go live on RIS systems between now and the end of October 2006.

23 June 2006

Letter from Accenture NHS LSP

In your email dated 22 June, you asked for a list of all planned PAS deployments and associated clinicals between now and the end of October.

Accenture intends to meet the schedule PAS go-lives dates specified in the agreed hospital project initiation plans (PIDs) for the North East and Eastern Clusters. The clinical systems being supplied with iSoft PAs between now and the end of October are:

— Northampton General are planning to take a PAS on 31 July.

— Airedale are planning to take a PAS; they don't have a firm go-live date yet, but are aiming for August.

— Weston Park (part of the Sheffield Teaching Hospitals) are planning to take a PAS; they don't have a firm go-live date but are aiming for October.

— Ipswich are planning to take a PAs and Clinicals (principally Order Comms) in October.

The following Standalone Core Deployments and Additional Service Requests have signed PIDs that are scheduled to go-live before the end of October.

— Kettering are planning to take Theatres by 30 June.

— County Durham and Darlington are planning to take a Clinical upgrade (iCM—principally Orders and Results) in August.

— North Tees and Hartlepool are planning to take A&E in September.

— Northampton are planning to take Pathology Blood Transfusion in September.

— North Lincolnshire and Goole are planning to take Theatres in September.

In addition, the following RIS and PACS deployments are scheduled to go-live between the end of June and the end of October.

RIS

— Princess Alexandra Hospitals, Harlow in July 2006.

— Harrogate Healthcare in August 2006.

— Northampton General in August 2006.

— Sheffield Teaching Hospitals in October 2006.

PACS

— North Tees and Hartlepool in July 2006.

— Nottingham City Hospitals in July 2006.

— Mid Yorkshire Hospitals in August 2006.

— Southend Hospitals in August 2006.

— West Hertfordshire Hospitals in September 2006.

— Luton and Dunstable Hospitals in September 2006.

— Hull and East Yorkshire Hospitals in October 2006.

— Rotherham General Hospitals in October 2006.

— Sheffield Teaching Hospitals in October 2006.

23 June 2006

Letter from BT Health

We welcome the opportunity to provide the Committee of Public Accounts with a full view of BT's upcoming scheduled activities in London.

To date, BT has deployed functionality to 26 Trusts at over 250 unique sites across all settings. This includes, of course, our work at the Spine-connected Queen Mary's Sidcup (QMS) Trust and BT is placed to enhance PAS and A&E functionality at QMS in September 2006.

This year, BT is currently forecast to provide substantial functionality in London, including 21 PASs, three of which are in Acute Trusts. A summary list follows:

— Nine Theatre deployments (with five from July–October).

— Five Mental Health deployments, each with full PAS (with three from July–October).

— 13 Community Health deployments, each with full PAS (with four from July–October).

— 22 Picture Archicing and Communications Systems (electronic transmission of X-Rays) deployments (with seven from July–October).

— Six Radiology Information Systems (with 4 from July–October).

— 10 Child Health deployments (all currently deployed).

— One Pharmacy Stock Control deployments (currently deployed).

— Two Single Assessment Programme deployments (with one from July–October).

— One Pathology System (planned for November).

— One Electronic Data Management solution (planned for August).

— 72 General Practice deployments.

As you know, many of the London Trusts made a significant investment in IT capability in the years running up to the roll out of the NHS CfH programme resulting in relatively high levels of existing clinical functionality. This has led to a need to prioritise implementations differently in London and to provide early help to those areas of the Service in London that have not benefitted from such investment (hence the above list).

In other parts of the country, many hospitals are receiving interim systems, to provide at least some level of improvement, to be followed in the course of the programme by the full system. In London, many of the systems are in place are already at a relatively high level of funtionality, and we need to be in a position to provide a significantly enhanced level of system of functionality for them to achieve a real benefit for PAS systems in Acute Trusts. Consequently, BT brought forward the strategic product to effect three deployments in November to December, rather than using interim products to make earlier deliveries. For this reason, BT will not deploy any further PAS systems for Acute Trusts prior to the end of October this year. The associated schedule is subject to NHS/Trust planning assumptions, and as always, BT continues to evaluate alternatives to improve delivery performance and lower programme risks.

In addition to the PAS systems, BT has, and will, continue to deploy significant clinical functionality this year—some of which is associated with each PAS system deployment go live (eg Request and Results Reporting, Maternity and A&E).

We would like to take this opportunity to put on record BT's continuing firm commitment to the National Programme overall, and the London LSP programme in particular. We look forward to continuing the partnership approach and developing the supporting institutions that we have in place with NHS CFH, with the London Trusts and with the clinical community. Partnership working and a close, mutual understanding of each stake-holder's thinking are essential to the success of this programme.

23 June 2006

Letter from CSC Computer Sciences Ltd

Further to your request earlier today, I am pleased to provide the following information regarding the planned PAS go-live dates for Acute NHS hospitals scheduled for the next four months up to the end of October 2006.

Trust	*Care Setting*	*Go-live Date*	*Functionality*
Robert Jones and Agnes Hunt	Acute	17 July 2006	PAS Theatres on 12 March 2007
North Cheshire	Acute	28 August 2006	PAS Theatres on 20 November Maternity on 27 November
South Warwickshire	Acute	25 September 2006	PAS, A&E
East Lancashire	Acute	9 October 2006	PAS
South Manchester University Hospital	Acute	9 October 2006	PAS Theatres on 1 January 2007
Southport and Ormskirk	Acute	23 October 2006	PAS Theatres

These projects have either already started, or the Project Initiation Documents have been signed off. In all cases, the CSC and CfH project teams are working towards achieving these dates.

To date CSC has completed 46 Deployments across 50 PCTs, nine Acutes and four Mental Health Trusts. A total of 28,176 End User Accounts have been enabled across 764 locations.

23 June 2006

Further supplementary memorandum submitted by the Department of Health

After the hearing, Mr Richard Bacon submitted a series of supplementary questions to the Department of Health, what follows is their response.

1. *What is the total potential financial liability to suppliers if the NHS fails to meet its contractual commitments under the National Programme for IT in the NHS*

The total aggregate liability if the NHS fails to meet its contractual commitments under each of the LSP contracts is capped at £50 million in any contract year or 50% of the charges payable in the preceding year, whichever is the greater.

This compares with the total aggregate liability of each LSP who, if they fail to meet their contractual obligations, are capped at £250 million or 100% of the charges in the preceding year, whichever is the greater.

2. *Please supply a breakdown of the £654 million of expenditure referred to in paragraph 1.22 of the NAO Report on the National Programme for IT*

Programme	*Cluster*	*Expenditure to 31 March 2006 (£ million)*
LSP	London	1.3
LSP	North East	51.6
LSP	South	26.5
LSP	North West and West Midlands	119.3
LSP	East	57.9
N3	All	130.5
NHS Care Record	All	239.8
Service Choose and Book	All	27.1
Total	654.0	

3. *Please supply a breakdown of any money spent by CfH outside of the LSP and National Application Service Provider (NASP) Contracts*

Item	*£ million to 31 March 2006*
New projects added to the original scope of the Programme	70
Additional services beyond the scope of the original core contracts	48
Non-core projects and contracts added to National Programme for IT	75
National Programme for IT support for local NHS implementation	43
Central administrative expenditure	193
Total	429

Note: All costs at 2004–05 price base.

4. *Please supply a breakdown of the "approximately £1.5 billion" referred to in Question 147 of the transcript of the PAC evidence session on 26 June 2006 including:*

(i) *a breakdown of central administration costs by category; and*

(ii) *a breakdown of all forward payments to contractors specifying in the case of every payment:*

(a) *the contractor;*

(b) *the date; and*

(c) *the amount.*

Total expenditure to 31 March 2006

Item	*£ million to 31 March 2006*
Core Contracts	654
New projects added to the original scope of the Programme	70
Additional services beyond the scope of the original core contracts	48
Non-core projects and contracts added to National Programme for IT	75
National Programme support for local NHS implementation	43
Central administrative expenditure (see next table)	193
Expenditure by local NHS organisations (including NHS Connecting for Health's contribution to local costs)	459
Total	1,542

Components of the Central Administration Expenditure

Item	*£ million to 31 March 2006*
Technology Office: Provision of technical architecture leadership and guidance to suppliers, programmes and the NHS as a whole, and assurance of the solutions produced by suppliers. Technology Office also produces and maintains the NHS classifications and terminologies which are used when entering data into systems such as the Quality Management and Analysis System. These services underpin the Programme's key objective of delivering better patient care by giving patients more choice and health professionals more efficient access to information.	28
Programmes: Co-ordination of work to define Programme requirements including management of clinical input. Ensure stakeholder engagement is maximised. Manage the scope of software releases and monitor the design, build and test stages of development. Manage the relationship with suppliers including the commercial management. Ensure programmes have sound governance structures including quality assurance processes.	50
Systems Implementation: Ensure that the requirements and priorities of the NHS are reflected accurately within the Programme's plans and provides the required level of support to enable the NHS to implement solutions successfully and achieve the expected benefits. Monitor and assure the delivery and implementation of LSP solutions and associated functionality in line with agreed plans and contractual commitments underpinned by the Detailed Implementation Plans.	38
Service Management: Ensure overall quality of services provided to the NHS by the Programme's suppliers. Products and services are constantly monitored to ensure they meet service level standards and to enable faults to be resolved swiftly. This minimises disruption to the NHS and the potential impact on patient services.	12
Support for the delivery of the National Programme comprising legal services; contract and commercial services; financial services; corporate services; programme communications; and Information, Communications and Technology (ICT) services.	65
Total	193

Forward Payments on Core Contracts

Date	*£ million*	*Supplier*	*Cluster*
27 April 2005	18.0	Accenture UK	East of England/East Midlands
27 April 2005	15.0	Accenture UK	North East
13 August 2004	53.0	BT Syntegra	London
8 April 2004	26.7	CSC	North West/West Midlands
28 June 2004	26.7	CSC	North West/West Midlands
1 October 2004	26.6	CSC	North West/West Midlands
1 April 2005	25.0	CSC	North West/West Midlands
1 July 2005	25.0	CSC	North West/West Midlands
23 December 2005	25.0	CSC	North West/West Midlands
23 December 2005	5.0	Fujitsu	Southern
27 July 2005	10.5	Fujitsu	Southern
30 September 2005	58.0	Fujitsu	Southern
Total	314.5		

Forward Payments on PACS

Cluster	*Payment Date*	*Payments to 31 March 2006 £ million*	*Cluster Totals to 31 March 2006 £ million*	*Supplier*
East/East Midlands	October 2005	9.84	9.84	Accenture
North East	October 2005	4.98	4.98	Accenture
London	December 2004 April 2005	11.88 17.80	29.68	BT
North West/West Midlands	October 2004 April 2005 March 2006	12.66 14.60 23.00	50.26	CSC
Southern	December 2004 May 2005 July 2005 October 2005 January 2006	10.00 12.48 0.37 1.81 9.62	34.28	Fujitsu
Totals	–	129.04	129.04	–

With the exception of Accenture, the forward payments are protected by Letters of Credit issued by the suppliers' banks, which have to be AAA rated financial institutions. In the event of difficulties, the forward payments are repayable by the financial institutions on demand. The value of the Bonds is adjusted as products are delivered by the suppliers.

Because of Accenture's unique accounting arrangements, the Letter of Credit was replaced by a charge on their assets of at least an equal value. This provided a similar guarantee. Following the recent announcement of a transfer of responsibilities, the unearned elements of the forward payments made to Accenture have been repaid.

These arrangements for making forward payments are in line with principles established by Partnerships UK, a public/private sector partnership established by the Treasury. They enable the suppliers to reduce the costs of their working capital which in turn benefits the taxpayer through lower prices. The principle of payment on delivery is maintained.

5. *How much money has been spent on legal fees by or on behalf of the National Programme for IT/Connecting for Health in each year since 2002–03*

Given the size, innovation and complexity of the Programme the costs of the legal fees were estimated initially to be of the order of £40 million. This would equate to around half of one percent of the value of the contracts of nearly £7 billion.

Actual expenditure on legal fees in respect of the National Programme for IT is set out in the following table:

Year	*Legal fees £ million*
2002–03 and 2003–04	14.9
2004–05	6.8
2005–06	6.5
Total	28.2

If the Programme had not been undertaken as a single, central and focused activity, any procurement activity would have been subject to the various processes of multiple NHS organisations. This would have increased the costs, including the costs of external advisors and lawyers, and taken much longer to complete. We estimate that there could have been in excess of 600 procurements, with legal fees of around £200k in each case, which would have totalled £120 million.

All the law firms providing services to the Programme have leading commercial practices and, as such, they provide a broader service than simply legal advice.

6. *Please list all payments made to iSOFT showing the payer, the date of the payment, and the amount*

7. *Please list all advanced payments made by CfH directly to iSOFT*

8. *Please list any repayments made by iSOFT against these advanced payments*

Under contracts let by the National Programme for IT, iSOFT is a sub-contractor to two Local Service Providers, CSC (in the North West and West Midlands Cluster) and Accenture (in the North East and East of England Cluster and the East Midlands Cluster).

NHS Connecting for Health does not make payments directly to iSOFT in respect of contracts relating to the National Programme for IT. Accenture has advised NHS Connecting for Health that they have paid iSOFT £19.6 million. CSC has advised NHS Connecting for Health that they have paid iSOFT £41.8 million. These payments have been made according to the contracts that exist between these prime contractors and iSOFT.

The Department of Health has an Enterprise Wide Arrangement with iSOFT, negotiated by NHS Connecting for Health, in respect of the contracts with individual NHS Trusts. This arrangement is not part of the National Programme for IT but relates to the existing contracts with iSOFT held by individual NHS Trusts. Under this arrangement, the Department agreed to make advance payments in April 2005 and April 2006 against the charges payable by NHS Trusts to iSOFT.

In consideration of these advance payments, iSOFT agreed price reductions (approximately £20 million over three years) and, in addition, removed some obligations on certain Trusts; waived certain termination provisions on existing NHS Trust contracts; and provided greater flexibility for contract extensions. This benefited a number of NHS Trusts which would otherwise have incurred costs for contractual obligations; for termination of existing contracts; or for extensions. The advance payments are protected by Letters of Credit that entitle the Department to recover the amounts at any time.

Payments of £58 million and £23.8 million excluding VAT were made by the Department of Health to iSOFT in April 2005 and April 2006 respectively. Each month iSOFT collects the revenues due from existing contracts held by Trusts/GPs and passes these in full to the Department of Health. Following the end of each quarter the Department of Health adjusts the value of the Bond in line with the monthly payments received from iSOFT. Up to the end of July 2006, iSOFT had collected and passed back to the Department of Health £37.9 million.

There has been no indication from iSOFT that the advance payments made by the Department of Health are the subject of the suspected accounting irregularities that the iSOFT Board is investigating.

9. *What is the highest amount that has been paid per day to any consultant working on the NPfIT*

10. *How many consultants are employed on the NPfIT*

11. *What is the range of earnings per day for consultants employed on the NPfIT*

NHS Connecting for Health contracts with a number of suppliers for the provision of consultancy services. The contracts are with the supplying companies and we do not hold information on the salaries received by the individuals.

Procurement of consultancy services is undertaken within a Framework negotiated by the Office of Government Commerce to ensure provision at the best possible price. The charges levied by the companies supplying consultants to NHS Connecting for Health are within the OGC negotiated parameters and range currently from £158 to £2,493.

At the end of July 2006 there were 471 consultants/contractors engaged with NHS Connecting for Health. There are a number of reasons for employing consultants, including the provision of expertise, the short term nature of the task or to mobilise an activity quickly while permanent recruitment is undertaken. The mobilisation of the National Programme, given its size and complexity, inevitably required the rapid provision of a highly skilled and experienced workforce. Our policy is to replace consultants with permanent staff as soon as it is practicable to do so, though the nature of our task is such that we will always require a mixed-economy of staff, including consultants.

12. *How many Trusts have asked CfH for a contribution to costs incurred due to late deployment of CfH systems. Please state how much has been claimed by each Trust*

13. *How many Trusts have been paid a contribution to costs incurred due to late deployment of CfH systems*

Fourteen Trusts have asked for a contribution. Information on how much has been claimed by each Trust is not available as the requests include a mixture of one-off costs, ongoing costs, alternative interim solutions and unspecified amounts. No payments have been made.

It should also be noted that no claims have been made in respect of delays generated by NHS Trusts.

14. *Please list any payments made to Trusts by or on behalf of CfH in order to encourage them to deploy CfH solutions*

15. *Please list any payments offered to Trusts by or on behalf of CfH in order to encourage them to deploy CfH solutions*

No payments have been either offered or made to Trusts to encourage them to deploy NHS Connecting for Health solutions though, during 2003–04 and 2005–06, NHS Trusts were provided, through normal funding channels, with resources to support the implementation effort.

16. *Please list any financial benefits realised by Trusts as a result of deploying NCRS systems between January 2004 and June 2006*

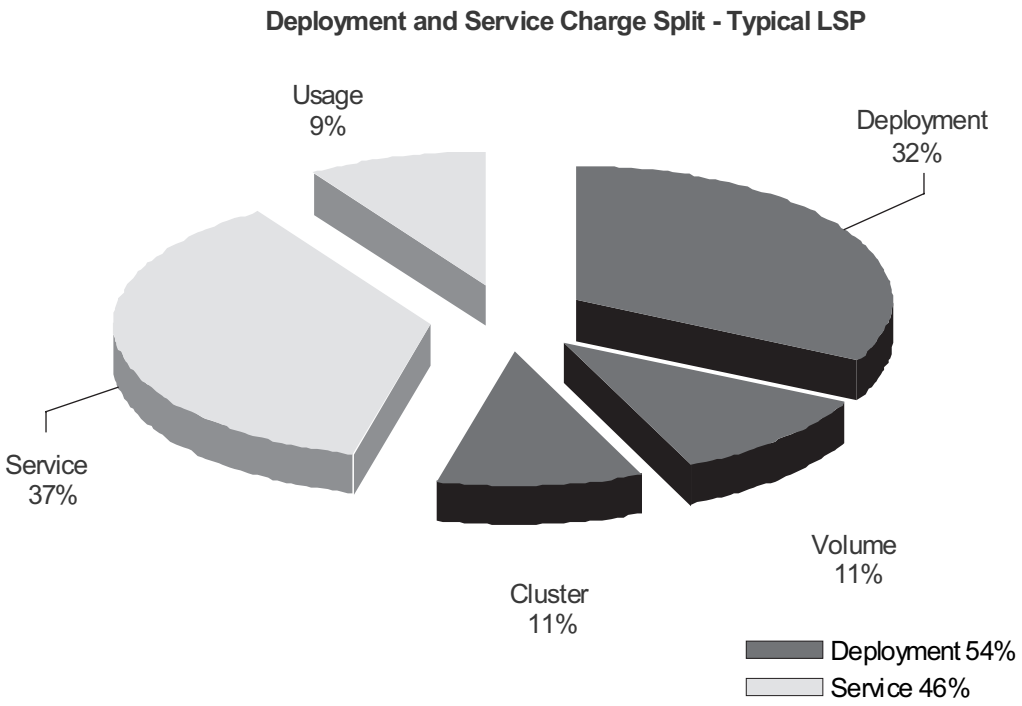
The notes provided in response to Questions 130 and 255 at the PAC hearing demonstrate the substantial financial benefits being realised by local NHS organisations. They also explain that we accept the NAO's recommendation to provide an annual statement quantifying the benefits delivered by the Programme. The aim is to produce the first statement next year.

17. *Paragraph 4.5 of NAO Report suggests that only 15% of the supplier's charges are based on usage. Does this mean that supplier can be paid 85% even if the systems are not used*

In order to receive payment a supplier must receive a Milestone Achievement Certificate (MAC), which confirms that the system is fit for purpose and in use by an agreed number of NHS staff. This event triggers a payment of 60% of a deployment charge (Location Deployment Charge). A further 20% is payable on achievement of volumetric targets (Volume Charge). The final 20% is payable when full functionality is available to all users (Cluster Deployment Charge).

In addition there is also a monthly service charge, 80% of which is payable on receipt of the MAC provided that required service levels are achieved. The remaining 20% is paid proportionately to the number of specified staff using the system in any month, provided that service levels are also achieved (Usage Service Charge).

The following chart provides an example of the composition of the charges over the life of a contract:



18. *The National Audit Office Report outlines savings from a deal with Microsoft (Figure 7, page 36) based on committed volume. What is:*

(i) *the committed volume to which the NHS has agreed?*

(ii) *the total cost of this commitment?*

(iii) *the maximum potential financial penalty for non-compliance?*

The contract with Microsoft includes a confidentiality agreement prohibiting NHS Connecting for Health from revealing the price of an individual licence or information that enables its identification. We can state that the prices of individual licences are significantly cheaper than those in the OGC arrangement with Microsoft.

As the contract with Microsoft is outside the scope of the National Programme for IT and therefore the scope of the NAO Review and the PAC Hearing, we are reluctant to renegotiate the confidentiality provision with Microsoft. The Committee may wish to consider whether to approach Microsoft themselves.

19. *Please supply a schedule of all delivery dates given in each LSP cluster for Phase 1 Release 2 since January 2004*

20. *What are the current delivery dates for Phase 1 Release 2*

Cluster	*Original scheduled date*	*Current delivery dates*
Southern	Between March 2005 and December 2005.	Deployment began on 20 December 2005. The last scheduled date for this release is currently 27 November 2007.
London	During 2005 and 2006.	Delivery began on 28 November 2005. The LSP is in the process of changing its sub-contractor from GE to Cerner so planned deployment dates for this release are currently being considered.
East of England and East Midlands	Between 31 January 2005 and 5 December 2005	Deployment began on 15 March 2006 but remaining deployments for this release are currently on hold.
North West	By 30 June 2005.	Currently scheduled to complete delivery in the last quarter of 2008.
North East	In 2005.	The dates will be confirmed on the conclusion of the commercial re-planning discussions with the LSP.

Note: The dates provided are those from the first deployment of Phase 1 Release 2 to the last completed deployment for that cluster.

21. *When did CfH take the decision to deploy the "Plymouth" solution*

22. *What estimate did CfH make for the demand for the "Plymouth" solution for 2006*

The proposal was developed with the NHS and the National Programme's suppliers during Autumn 2005. The Clusters consulted with staff, including clinicians, across the NHS. The CEO of Plymouth Hospitals NHS Trust facilitated visits from all SHAs and a number of PCTs from the three Clusters (North East; East of England and East Midlands; and North West and West Midlands). The deployment proposal was approved by the three Cluster Programme Boards, the membership of which comprises Chief Executives and Executive Directors from the NHS Trusts and SHAs. Demand for this solution is expected to exceed 30 deployments during the 2006–07 and 2007–08 financial years.

23. *On what date did CfH realise that there were problems with BT's Child Health Interim Application in London*

24. On what date was the decision made to replace the Child Health Interim Application in London

25. *Why was the decision made to replace the Child Health Interim Application in London*

26. *The BT child health deployment is counted as 10 systems in CfH's published deployment statistics. How many of the deployments in the statistics are either "technical deployments" (ie not widely used by NHS staff for the care of patients); or like the BT child health system, deployed but not fit for purpose*

Issues relating to the delay in deployment of CHIA were known during 2005.

The then service provider, McKesson, gave notice of termination of their contract for the provision of a Child Health System. NHS Connecting for Health was asked by the ten NHS Trusts to deliver a solution through the LSP contract. Given the short timescales, this was agreed to be on a "best endeavours" basis. It was then agreed with the Trusts that the best approach was to deploy the Child Health Interim Application (CHIA) as an interim solution until the reference solution was available from IDX.

There were no standard business processes in place across the 10 PCTs for the collection, collation and reporting of Child Health activity. Indeed, the conflicting and incompatible business processes that had been developed by each Trust over a number of years made it difficult for a standard solution to be developed and deployed.

Against these difficulties, NHS Connecting for Health and BT built and deployed the CHIA. Everybody, including BT, did their best and, however regrettable, it was not surprising that some things went wrong. We have supported this deployment; including augmenting the staffing provision in the NHS Trusts to ensure that appropriate information can be collected and reported.

As the name implies, CHIA was always intended to be an interim solution. The aim was to support the NHS after the existing supplier of the Child Health solutions to these PCTs in London withdrew from the marketplace. Lessons learned from the CHIA experience are being taken seriously in the options' appraisal being completed—the response to Question 27 refers.

The number of deployments was counted as 10, reflecting the number of Trusts in which CHIA was deployed. Although deployments may have different phases, such as technical deployment of the software followed by business go-live, this would be recorded as one deployment in our statistics. The problems associated with CHIA were exceptional. As a result of rectification work, the CHIA application has been steadily improved.

27. *Please submit a copy of the lessons learned documentation after the BT child health deployment and explain how this was used to avoid similar problems with other projects*

Reports required by the Health Protection Agency (HPA) to monitor childhood immunisation levels can now be produced for all Primary Care Trusts (PCTs) using the data from the Child Health Interim Application (CHIA). However, the decision to submit reports lies with the PCTs since their accuracy is reliant on the correct information being entered into the system.

It has been acknowledged that the system had problems. However, we do not believe the new system was a danger to child health: As Dr Martin Baggaley, Clinical Director for NHS CFH, London, explained in a statement:

> "We really have to stress that the first place a child's vaccinations are recorded is in the 'Red Book' that parents hold. Secondly, a record exists at their GP surgery and then only third, this data is held in CHIA. Soon, CHIA will be able to provide the wider public health reports but it is misleading to say individual babies or children are at any greater risk by using this new computer system."

A discrete document on the lessons learned was not prepared but there has been immense activity underway. The problems were resolved through diligent work within the PCTs and by BT and NHS Connecting for Health, including:

- A three month extension of the support contract for the former system was agreed. PCTs were requested to operate temporarily on a "paper" basis whilst a new phased deployment was agreed.
- In May 2005 the specification was reviewed and improved and a new project plan was agreed.
- During July 2005 the first release of the re-baselined system went live.
- During the period from August 2005 to October 2005 remedial action was undertaken to address the performance issues.
- From October 2005 to April 2006 there was more upgrade work on the system.
- From April to August 2006 performance and reliability improved. The focus switched from the IT system to analysis and correction of existing historic data.
- By August 2006, all PCTs were able to produce their quarterly statistics. Those who chose not to produce reports did so because they needed to do more review work on their data.

As explained earlier, CHIA is an interim solution and the development of the strategic solution is underway. All of the lessons learned from the deployment of CHIA are being applied in full to the development of the strategic solution. Our Technology Office also ensures they are applied to other Programme solutions. In addition, a new group has been set up bringing together senior child health/ immunisation expertise, NHS Connecting for Health senior management and senior representatives from users in the NHS. This group is currently completing an options' appraisal for implementation of the best solution to the CHIA failures.

Today there are more than 850 users of the CHIA system in 135 sites across North London. The database contains approximately 2.5 million records and there are nearly 450,000 children in the area covered by the ten PCTs.

28. *What evaluation was made of the Cerner system installed at the Homerton before the decision was made to switch from IDX to Cerner in the South. Please submit a copy of this evaluation*

The review was built upon the original technical and functional reviews that had been undertaken at the time of the original procurement, during which a large number of clinicians reviewed and scored the Cerner millennium solution highly.

In addition, at the time of the change, the following additional work was undertaken:

— NHS Clinicians and senior management reviewed the product both in a "production" and a "live" NHS environment. The clinicians from the Southern Cluster included the following:

Steve Jones	Cardiovascular Consultant Surgeon	Dorset and Somerset SHA
Chris Barham	Consultant Anaesthetist	Kent and Medway SHA
David Bone	Registered General Nurse/ Informatics Manager	South West Peninsula SHA
Rina Merwaha	Consultant Paediatrician	Kent and Medway SHA
Beverley Castleton	Consultant in Care of the Elderly	Surrey and Sussex SHA
Nick Vaughan	Consultant Physician	Surrey and Sussex SHA
Paul Altmann	Consultant Physician-Nephrologist	Thames Valley SHA
Irene Sanson	Registered Nurse (NHS Care Record Project)	Thames Valley SHA
Chris Canning	Consultant Surgeon-Opthalmologist	Hampshire and Isle of Wight SHA
Mike Richards	Consultant Anaesthetist	Avon, Gloucester Wiltshire SHA
Richard Dunnill	Consultant Anaesthetist	Dorset and Somerset SHA
Glyn Brace	Midwife (NHS Care Record Service-Clinical Lead)	South West Peninsula SHA
Roger Tackley	Consultant Anaesthetist	South West Peninsula SHA
Sue Leake	Head of Therapy Services	Thames Valley SHA

— NHS Connecting for Health reviewed the Production Environment and Build Centre in the USA.

— NHS staff undertook a detailed review and mapping of functionality and build against the Programme's Output Based Specification (OBS).

— A maintenance release and some process improvements were introduced to avoid earlier problems.

— The LSP (Fujitsu) provided a mapping of the proposed solution that met the Programme's requirements.

The lessons learned from each deployment are studied carefully and steps are taken to ensure that problems are not repeated. The Chief Executive of Weston Area Health NHS Trust wrote to us expressing his thanks for our support during the recent deployment there. In particular he thanked us for the support "that was provided in a number of ways, including production testing, contract assurance and infrastructure assurance."

29. *Were any of the problems encountered by the Nuffield Orthopaedic Hospital previously encountered at Homerton*

No. The problems encountered by the Nuffield Orthopaedic Hospital arose from poor quality data and the NOC's different working practices, combined with difficulties created by the short implementation timescale. The problems that had arisen during the earlier implementations at the Newham Hospital NHS Trust and Homerton Hospitals Foundation Trust had already been resolved through a system enhancement.

30. *Are any of the problems encountered at the Nuffield Orthopaedic Hospital expected to occur at future Cerner deployments*

No. We will support the local NHS and ensure the problems are not repeated. Indeed, the Chief Executive of Weston Area Health NHS Trust wrote to us expressing his thanks for our support during the recent deployment there. In particular he thanked us for the support "that was provided in a number of ways, including production testing, contract assurance and infrastructure assurance".

31. *Will Cerner deployments be allowed in other clusters such as London before the system has been proven in the South*

A significant number of deployments will have been completed in the South before installation commences in London, which will therefore take account of any lessons learned.

32. What plans does CfH have to fund locally-selected spine-compliant solutions

NHS Connecting for Health has a National Integration Centre (NIC) whose role is to technically assure spine-compliant systems before deployment into the live environment. Suppliers are required to follow a rigorous accreditation process with pre-defined entry and exit criteria. Our Technical Assurance Team witnesses the supplier testing, which is followed by formal technical integration testing using live-like test environments in the NIC. Following successful completion of the integration test phase, a formal certificate, Technical Authority to Deploy (TATD) is issued for the current version of the system.

Alongside the TATD process and in support of any decision to allow a system to go-live, the NHS Connecting for Health Clinical Safety Officer, working with the Trust, uses the NHS Connecting for Health Clinical Safety Management System to ensure that the system is clinically safe to deploy.

To date, 73 Technical Authority to Deploy certificates have been awarded to 65 suppliers.

Additionally, 76 Clinical Authority to Release certificates have been granted. The CATRs are reviewed for system upgrades and changes. Where the care setting for deployment is different or there are business-affecting changes then it necessary to revise the scope of the CATR in line with the changed risk profile.

NHS Connecting for Health funds only the core solutions provided by the LSPs. Other compliant solutions continue to be funded by the NHS.

33. *Please submit a copy of the lessons learned documentation from the Homerton deployment*

This document is available from the Trust directly: Homerton University Hospital NHS Trust Homerton Row London E9 6SR.

34. *How many customer satisfaction studies have been carried out to measure the organisational satisfaction by NHS trusts with CfH solutions. Please supply a copy of each survey with the results*

35. *What customer satisfaction studies have been carried out to measure satisfaction by individual end users with CfH solutions. Please supply a copy of each survey with the results*

The following surveys have been carried out on behalf of NHS Connecting for Health.

Two customer awareness surveys have been conducted by MORI. The results of both surveys have been published and are available on the NHS Connecting for Health website. The results of the first survey were used by the NAO to inform their Report.

An independent survey of users' opinions was conducted by YouGov in May 2006. This surveyed users of services already deployed. The results are available.

A rolling cycle of satisfaction surveys of customers of the N3 network is carried out by an independent third party (GFK-NOP), in accordance with BT's contractual responsibilities. The latest summary report is enclosed as Enclosure 3.

The note provided in response to Question 93 at the PAC Hearing includes examples of the many favourable comments received from users of our systems.

36. *Please list the deployments that were due to be delivered in 2004, 2005 and 2006 according to the deployment schedules first provided by each LSP for:*

(i) *acute trusts;*

(ii) *mental health trusts; and*

(iii) *community trusts.*

The following tables provide by Cluster:

(1) the number of deployments that were due to be delivered during 2004, 2005 and 2006 according to the original LSP deployment schedules;

(2) the number of actual deployments to 25 September 2006.

Table 1

Original Planned Deployments by Cluster

Cluster	*Deployment Type*	*Care Setting*	*Trust Size*	*Year*	*Number of Deployments*
North East Cluster	PAS	Acute	Small	2004	4
	PAS	Acute	Medium	2004	6
	PAS	Acute	Large	2004	13
	Mental Health PAS	Mental Heath	Medium	2004	6
	Mental Health PAS	Mental Heath	Large	2004	6
	Primary Care	GP	n/a	2004	1,265 GP Practices
	Ambulance		n/a	2004	2
	PAS	Acute	Small	2005	4
	PAS	Acute	Medium	2005	6
	PAS	Acute	Large	2005	13
	Mental Health PAS	Mental Heath	Medium	2005	6
	Mental Health PAS	Mental Heath	Large	2005	6
	Primary Care	GP	n/a	2005	1,265 GP Practices
	Ambulance		n/a	2005	4
	PAS	Acute	Small	2006	4
	PAS	Acute	Medium	2006	6
	PAS	Acute	Large	2006	13
	Mental Health PAS	Mental Heath	Medium	2006	6
	Mental Health PAS	Mental Heath	Large	2006	6
	Primary Care	GP	n/a	2006	1,265 GP Practices
	Ambulance		n/a	2006	4
North West & West Midlands Cluster	PAS	Acute	n/a	2005	16
	Mental Health PAS	Mental Health	n/a	2005	3
	Community PAS	PCT	n/a	2005	29
	Theatres	Acute	n/a	2005	21
	Maternity	Acute	n/a	2005	7
	Ambulance		n/a	2005	2
	PAS	Acute	n/a	2006	73
	Mental Health PAS	Mental Health	n/a	2006	9
	Community PAS	PCT	n/a	2006	25
	Theatres	Acute	n/a	2006	13
	Maternity	Acute	n/a	2006	13
	Ambulance		n/a	2006	2
East of England and East Midlands Cluster	PAS (P1R1)	Mental Health	Small	2004	2 Trusts
		Community	Small	2004	19 PCTs
	PAS (P1R1)	Acute	Medium	2004	3 Trusts
		Mental Health	Medium	2004	1 Trust
		Community	Medium	2004	16 PCTs
	PAS (P1R1)	Acute	Large	2004	3 Trusts
		Mental Health	Large	2004	2 Trusts
	GP (P1R1)	Primary Care	Medium	2004	131 + 30% of GPs across 4 PCTs
	SAP (P1R1)	Primary Care	Small	2004	1 LHC (=4 PCTs)
	PAS (P1R1)	Acute	Medium	2005	1 Trust
		Acute	Large	2005	1 Trust
		Mental Health	Large	2005	1 Trust
	PAS (P1R2)	Acute	Small	2005	3 Trusts
		Community (inc Child Health)	Small	2005	4 PCTs
	PAS (P1R2)	Acute	Medium	2005	8 Trusts
		Mental Health	Medium	2005	5 Trusts
		Community (inc Child Health)	Medium	2005	2 LHC (=3 PCTs)
		Community	Medium	2005	23 PCTs
	PAS (P1R2)	Acute	Large	2005	5 Trusts
		Mental Health	Large	2005	1 Trust
		Community (inc Child Health)	Large	2005	5 PCTs

Cluster	*Deployment Type*	*Care Setting*	*Trust Size*	*Year*	*Number of Deployments*
	GP (P1R2)	Primary Care	Medium	2005	275 + 35% of GPs across 4 PCTs + 72 % of GPs across 3 PCTs + 35 % of GPs across 3 PCTs
	SAP (P1R2)	Primary Care	Medium	2005	2 LHC (=3 PCTs)
	Ambulance (P1R2)	Ambulance	Medium	2005	2
	GP Community Nurses (P1R2)	Primary Care	Medium	2005	Across 6 PCTs
	PAS (P2R1)	Mental Health	Small	2005	1 Trust
		Community	Small	2005	1 PCT
	PAS (P2R1)	Mental Health	Large	2005	1 Trust
	Ambulance (P2R1)	Ambulance	Medium	2005	3 Trusts
	GP (P2R1)	Primary Care	Medium	2005	20 GPs
	PAS (P2R1)	Acute	Large	2006	1 Trust
	GP (P2R1)	Primary Care	Medium	2006	18 GPs
	PAS (P2R1)	Acute	Small	2007	1 Trust
London Cluster	PAS	Acute	Small	2004	1
			Medium		2
			Large		3
			Small	2005	1
			Medium		3
			Large		2
			Small	2006	1
			Medium		3
			Large		3
	Integrated Care Record System (ICRS)	Acute	Small	2004	5
			Medium		10
			Large		15
			Small	2005	1
			Medium		1
	Clinicals	Acute	Large	2004	1
			Small	2005	2
			Medium		4
			Large		4
			Small	2006	2
			Medium		4
			Large		3
	Maternity	Acute	Large	2005	1
			Small	2006	2
			Medium		5
			Large		7
	Theatres	Acute	Large	2005	1
			Small	2006	2
			Medium		5
			Large		7
	Ambulance	Acute	Large	2006	1
	Enterprise Architecture 1 (Integration with local systems including firewall, existing systems, data centre setup)	Acute	Small	2005	1
			Medium		2
			Large		4
			Small	2006	2
			Medium		4
			Large		4
	Enterprise Architecture 2 (integration with local systems including firewall, existing systems data centre setup)	Acute	Small	2004	1
			Medium		2
			Large		3
			Small	2005	2
			Medium		3
			Large		2
			Small	2006	1
			Medium		3
			Large		3

Cluster	*Deployment Type*	*Care Setting*	*Trust Size*	*Year*	*Number of Deployments*
	Enterprise Architecture 3 (Integration with local systems including firewall, existing systems, data centre setup)	Acute	Large	2006	1
	Prescribing	Acute	Large	2006	1
	Advanced Scheduling	Acute	Large	2006	1
	Complex Clinicals	Acute	Large	2006	1
	Prevention Surveillance & Screening (PSS)	Acute	Large	2006	1
	Orders	Acute	Large	2006	1
			Small	2006	2
			Medium		5
			Large		7
	Portals	Mental Health	Small	2004	1
			Large		5
			Large	2005	4
	Basic NSF (National Services Framework–Mental Health, Diabetes, Cancer, Old Persons, Child Health, Renal Services)	Mental Health	Small	2004	1
			Large		5
			Large	2005	4
	Care Programme Approach (CPA) & Single Assessment Process (SAP)				
	PAS	Mental Health	Large	2004	3
			Large	2005	3
			Small	2006	1
			Large		3
	Clinicals	Mental Health	Large	2004	3
			Large	2005	3
			Small	2006	1
			Large		3
	Orders	Mental Health	Large	2006	5
	Adv Clinical	Mental Health	Large	2006	5
	Portal	PCT	n/a	2004	26
	Portal	PCT	n/a	2005	5
	Basic National Services Framework (NSF), Care Programme Approach (CPA) & Single Assessment Process (SAP)	PCT	n/a	2004	26
	Basic National Services Framework (NSF), Care Programme Approach (CPA) & Single Assessment Process (SAP)	PCT	n/a	2005	5
	PAS	PCT	n/a	2004	5
	PAS	PCT	n/a	2005	13
	PAS	PCT	n/a	2006	12
	Clinicals	PCT	n/a	2004	5
	Clinicals	PCT	n/a	2005	13
	Clinicals	PCT	n/a	2006	12

Cluster	*Deployment Type*	*Care Setting*	*Trust Size*	*Year*	*Number of Deployments*
	Orders	PCT	n/a	2006	18
	Advanced Clinicals	PCT	n/a	2006	18
Southern	PAS	Acute	Small	2005	1
Cluster	PAS	Acute	Large	2006	2
	PAS	Acute	Medium	2006	10
	PAS	Acute	Small	2006	4
	PAS	Mental Heath	Large	2006	1
	PAS	Mental Heath	Medium	2006	2
	PAS	PCT	n/a	2006	32

Notes:

Deployments are at trust level unless otherwise indicated.

The NE cluster shows the same deployment numbers across 2004, 2005, 2006. This reflects the original deployment plan, which was to deploy Programme solutions across all Trusts in 2004 followed by subsequent upgrades to all Trusts in 2005 and 2006.

Upgrades were not included in the original plans for clusters other than North East.

Table 2

Actual Deployments to Date by Cluster

Cluster	*Deployment Type*	*Care Setting*	*Year*	*Number of Deployments*	*Number of Deployment Upgrades*
North East	C&B Enabled PAS	Acute	2004	2	0
Cluster	SAP	Acute	2004	2	0
	SAP	Mental Health	2004	2	0
	SAP	Primary	2004	4	0
	Accident & Emergency	Acute	2005	1	0
	C&B Enabled PAS	Acute	2005	8	0
	SAP	Acute	2005	4	6
	Theatres	Acute	2005	1	0
	Emergency Care System	Ambulance	2005	1	1
	Mental Health PAS	Mental Health	2005	2	0
	SAP	Mental Health	2005	0	2
	Child Health	Primary	2005	9	0
	Community	Primary	2005	4	0
	Map of Medicine	Primary	2005	11	5
	SAP	Primary	2005	8	10
	Theatres	Primary	2005	1	0
	Alt GP Solution	Primary GP	2005	114	73
	C&B Enabled GP System	Primary GP	2005	210	0
	EPS Enabled Alt GP Solution	Primary GP	2005	114	0
	EPS Enabled GP System	Primary GP	2005	15	0
	GP System	Primary GP	2005	10	0
	GP2GP Enabled GP System	Primary GP	2005	9	0
	Map of Medicine	Primary GP	2005	2	1
	Web Based Referer	Primary GP	2005	484	0
	Pharmacy System	Primary PH	2005	4	0
	Acute PAS	Acute	2006	1	0
	C&B Enabled PAS	Acute	2006	8	0
	Map of Medicine	Acute	2006	3	0
	Order Communications	Acute	2006	1	0
	PACS	Acute	2006	3	0

Cluster	*Deployment Type*	*Care Setting*	*Year*	*Number of Deployments*	*Number of Deployment Upgrades*
	SAP	Acute	2006	0	6
	Theatres	Acute	2006	1	0
	Emergency Care System	Ambulance	2006	1	0
	Mental Health PAS	Mental Health	2006	0	1
	SAP	Mental Health	2006	1	3
	Child Health	Primary	2006	3	1
	Community	Primary	2006	20	1
	Map of Medicine	Primary	2006	12	1
	SAP	Primary	2006	7	17
	Alt GP Solution	Primary GP	2006	94	0
	C&B Enabled Alt GP System	Primary GP	2006	1	0
	C&B Enabled GP Solution	Primary GP	2006	403	0
	EPS Enabled Alt GP Solution	Primary GP	2006	89	0
	EPS Enabled GP System	Primary GP	2006	86	0
	GP2GP Enabled GP System	Primary GP	2006	20	0
	Map of Medicine	Primary GP	2006	67	9
	Web Based Referer	Primary GP	2006	98	4
	Pharmacy System	Primary PH	2006	350	0
	N3 Connection	n/a	2004	113	n/a
	N3 Connection	n/a	2005	1,834	n/a
	N3 Connection	n/a	2006	494	n/a
	QMAS	Primary	2004	1,215	n/a
	Smartcard Readers	n/a	2004	1,000	n/a
	Smartcard Readers	n/a	2005	29,780	n/a
	Smartcard Readers	n/a	2006	200	n/a
North West & West Midlands	Acute PAS	Acute	2005	2	0
	C&B Enabled PAS	Acute	2005	10	1
	Theatres	Acute	2005	5	0
	Mental Health PAS	Mental Health	2005	4	1
	Community PAS	Primary	2005	51	1
	C&B Enabled GP System	Primary GP	2005	553	0
	EPS Enabled GP System	Primary GP	2005	100	0
	Web Based Referer	Primary GP	2005	493	0
	Pharmacy System	Primary PH	2005	2	0
	Acute PAS	Acute	2006	7	1
	C&B Enabled PAS	Acute	2006	8	0
	PACS	Acute	2006	3	0
	Theatres	Acute	2006	4	0
	Mental Health PAS	Mental Health	2006	0	1
	Community PAS	Primary	2006	7	18
	Health Data Miner	Primary	2006	2	0
	C&B Enabled GP System	Primary GP	2006	1,062	0
	EPS Enabled GP System	Primary GP	2006	287	0
	Web Based Referrer	Primary GP	2006	127	0
	Pharmacy	Primary PH	2006	483	0
	N3 Connection	n/a	2004	128	n/a
	N3 Connection	n/a	2005	2,401	n/a
	N3 Connection	n/a	2006	800	n/a
	QMAS	Primary	2004	2,578	n/a
	Smartcard Readers	n/a	2004	0	n/a
	Smartcard Readers	n/a	2005	55,700	n/a
	Smartcard Readers	n/a	2006	2,200	n/a

Cluster	*Deployment Type*	*Care Setting*	*Year*	*Number of Deployments*	*Number of Deployment Upgrades*
East of England and East Midlands Cluster	Accident & Emergency	Acute	2004	1	0
	C&B Enabled PAS	Acute	2004	1	0
	Community	Acute	2005	1	0
	C&B Enabled PAS	Acute	2005	16	2
	Map of Medicine	Acute	2005	14	8
	PACS	Acute	2005	1	0
	Pathology	Acute	2005	1	0
	SAP	Acute	2005	2	0
	Theatres	Acute	2005	1	0
	Emergency Care System	Ambulance	2005	2	1
	Map of Medicine	Ambulance	2005	1	1
	Map of Medicine	Mental Health	2005	5	4
	Mental Health PAS	Mental Health	2005	2	0
	SAP	Mental Health	2005	2	0
	Child Health	Primary		11	0
	Community	Primary		19	0
	Community PAS	Primary		9	0
	Map of Medicine	Primary		46	33
	SAP	Primary		14	11
	Alt GP Solution	Primary	2005	116	88
	C&B Enabled GP System	Primary GP	2005	260	0
	EPS Enabled Alt GP Solution	Primary GP	2005	114	0
	EPS Enabled GP System	Primary GP	2005	48	0
	GP System	Primary GP	2005	7	2
	Map of Medicine	Primary GP	2005	11	0
	Web Based Referrer	Primary GP	2005	332	0
	Acute Community	Acute	2006	2	0
	C&B Enabled PAS	Acute	2006	2	0
	Map of Medicine	Acute	2006	5	0
	PACS	Acute	2006	5	0
	Pathology	Acute	2006	0	2
	SAP	Acute	2006	0	2
	Theatres	Acute	2006	3	0
	Tray Management	Acute	2006	1	0
	Child Health	Mental Health	2006	1	0
	Community	Mental Health	2006	1	0
	Map of Medicine	Mental Health	2006	2	0
	Mental Health PAS	Mental Health	2006	2	0
	SAP	Mental Health	2006	0	3
	Child Health	Primary	2006	24	8
	Community	Primary	2006	30	0
	Community PAS	Primary	2006	8	0
	Map of Medicine	Primary	2006	70	0
	SAP	Primary	2006	12	14
	Alt GP Solution	Primary GP	2006	128	2
	C&B Enabled Alt GP Solution	Primary GP	2006	199	0
	C&B Enabled GP System	Primary GP	2006	535	0
	EPS Enabled Alt GP System	Primary GP	2006	117	0
	EPS Enabled GP System	Primary GP	2006	120	0
	Map of Medicine	Primary GP	2006	140	0
	Web Based Referer	Primary GP	2006	103	0
	Pharmacy System	Primary PH	2006	366	0
	N3 Connection	n/a	2004	109	n/a
	N3 Connection	n/a	2005	2,203	n/a
	N3 Connection	n/a	2006	1,129	n/a
	QMAS	Primary	2004	1,468	n/a

Cluster	*Deployment Type*	*Care Setting*	*Year*	*Number of Deployments*	*Number of Deployment Upgrades*
	Smartcard Readers	n/a	2004	7,365	n/a
	Smartcard Readers	n/a	2005	48,379	n/a
	Smartcard Readers	n/a	2006	4,260	n/a
London Cluster	C&B Enabled PAS	Acute	2004	3	0
	Alt GP Solution	Primary GP	2004	17	0
	C&B Enabled Alt GP Solution	Primary GP	2004	12	0
	Web Based Referer	Primary GP	2004	2	0
	Accident & Emergency	Acute	2005	1	0
	Acute PAS	Acute	2005	1	0
	C&B Enabled PAS	Acute	2005	11	0
	Hospital Pharmacy System	Acute	2005	2	0
	PACS	Acute	2005	3	0
	Pathology	Acute	2005	1	0
	Child Health	Primary	2005	10	0
	Alt GP Solution	Primary GP	2005	24	24
	C&B Enabled Alt GP Solution	Primary GP	2005	18	2
	C&B Enabled GP System	Primary GP	2005	250	0
	EPS Enabled GP System	Primary GP	2005	122	0
	Web Based Referer	Primary GP	2005	778	0
	Pharmacy System	Primary PH	2005	1	0
	C&B Enabled PAS	Acute	2006	4	0
	Hospital Pharmacy System	Acute	2006	1	0
	PACS	Acute	2006	7	0
	Mental Health	Mental Health	2006	2	0
	Child Health	Primary	2006	0	20
	Community PAS	Primary	2006	4	0
	PACS	Primary	2006	1	0
	SAP	Primary	2006	1	0
	Alt GP Solution	Primary GP	2006	15	7
	C&B Enabled Alt GP Solution	Primary GP	2006	9	0
	C&B Enabled GP System	Primary GP	2006	167	0
	EPS Enabled Alt GP System	Primary GP	2006	9	0
	EPS Enabled GP System	Primary GP	2006	168	0
	Web Based Referer	Primary GP	2006	257	0
	Pharmacy System	Primary PH	2006	90	0
	N3 Connection	n/a	2004	130	n/a
	N3 Connection	n/a	2005	2,043	n/a
	N3 Connection	n/a	2006	431	n/a
	QMAS	Primary	2004	1,572	n/a
	Smartcard Readers	n/a	2004	0	n/a
	Smartcard Readers	n/a	2005	21,264	n/a
	Smartcard Readers	n/a	2006	7,376	n/a
Southern Cluster	Acute PAS	Acute	2005	1	0
	C&B Enabled PAS	Acute	2005	14	0
	PACS	Acute	2005	5	0
	PACS	Primary	2005	1	0
	C&B Enabled GP System	Primary GP	2005	441	0
	EPS Enabled GP System	Primary GP	2005	110	0
	Web Based Referer	Primary GP	2005	504	0
	Pharmacy System	Primary PH	2005	4	0
	Acute PAS	Acute	2006	2	0

Cluster	*Deployment Type*	*Care Setting*	*Year*	*Number of Deployments*	*Number of Deployment Upgrades*
	C&B Enabled PAS	Acute	2006	8	0
	PACS	Acute	2006	20	0
	Community PAS	Primary	2006	28	0
	Primary Care PAS	Primary	2006	0	0
	C&B Enabled GP System	Primary GP	2006	882	0
	EPS Enabled GP System	Primary GP	2006	270	0
	GP2GP Enabled GP System	Primary GP	2006	8	0
	Web Based Referer	Primary GP	2006	28	0
	Pharmacy System	Primary PH	2006	616	0
	N3 Connection	n/a	2004	80	n/a
	N3 Connection	n/a	2005	2,424	n/a
	N3 Connection	n/a	2006	827	n/a
	QMAS	Primary	2004	1,889	n/a
	Smartcard Readers	n/a	2004	0	n/a
	Smartcard Readers	n/a	2005	44,000	n/a
	Smartcard Readers	n/a	2006	5,000	n/a

37. *Please list the administrative and clinical functionality that was due to be delivered in 2004, 2005 and 2006 for each LSP. For example, when were prescribing, results and order requesting due to be delivered by each LSP*

The information is shown below in respect of planned Releases. All clusters started out with the same intent on the functionality to be delivered in each release. Clusters now have divergent plans from the original contracts and hence would now show different delivery dates for each type of functionality.

PHASE 1 RELEASE 1

Basic Patient Administration System (PAS):

— Core PAS functionality to replace existing functionality and core User Tools.
— Enable set up and tailoring of basic ICRS functionality and statutory reporting.

PHASE 1 RELEASE 2

P1R1 plus elements of clinical functionality including order communications and results reporting:

— Care Management—simple within organisations.
— Patient Index—all requirements.
— Care Management—across organisations and communities.
— Document Management—document/casenote tracking.
— Primary and Community Care—Caseload management.
— Mental Health Administration.
— Assessment—simple within organisation.
— Clinical documentation—current environment.
— Pathology and Radiology Results Reporting—basic services available to all care settings.
— Decision Support—Library Services available to all care settings.
— Scheduling—simple within organisation.
— View, construct and modify care plans and pathways in current environment.
— Maternity across all care settings.
— Information for secondary purposes—core reporting within each organisation.
— Basic A&E within Acute and Community Hospitals.
— Theatres (including basic scheduling).
— Alternative solution for GP's.
— Identification of patients eligible for screening, Disease registers, School health, call and recall, collection of data relating to prevention and screening activities, recording of outcomes.

PHASE 2 RELEASE 1

— Clinical Documentation—Discharge summaries derived from data collected as part of patient record.
— Order processing available to all care settings.
— Specimens and samples, available to all care settings.
— Order enquiries/management available to all care settings.
— Further requirements available to all care settings.
— Outpatient electronic prescribing.
— Scheduling—across organisations and communities.
— Information for secondary purposes—advanced reporting including cross cluster reporting.
— Out of hours services in Primary Care.
— Critical care—basic within acute care.

PHASE 2 RELEASE 2

— User Tools—data retrieval.
— User Tools—remote access to information.
— Assessment (advanced)—Multi-disciplinary assessment records created.
— Clinical documentation—integration with cluster wide patient record.
— Results reporting—further requirements available to all care settings.
— Embedded guidance available in all care settings.
— Basic alerts supporting order entry, results reporting, ICP's and other appropriate functions in all care settings.
— Complex multi-resource scheduling across organisations.
— Integration with cluster wide patient record.
— Critical care—advanced within acute care.
— Prevention, screening and surveillance.
— Ambulance.

38. *For each acute, community and mental health deployment please state for the month of June 2006:*

(i) *The numbers of registered users;*

(ii) *The number of unique users that logged on to the system at some time during the month; and*

(iii) *The maximum number of concurrent users.*

The information is provided in the tables below. The figures for users of stand-alone systems that are not or not yet Spine connected are not included.

Registered Users (September 2006)

Entity	*No of Registered Users*
Acute	64,934
Community Health	102,410
Mental Health	15,732
NHSMail	186,036
Pharmacies	15,157
Secondary Uses Service	6,752
Service Definers (SHAs)	4,234
GPs	40,221
Registration Authority Personnel	25,653

Unique Logons Totals (September 2006)

Entity	*No of Unique Logons*
Acute	44,753
Community Health	70,580
Mental Health	10,842
NHSMail	128,215
Pharmacies	10,446
Secondary Uses Service	4,653
Service Definers (SHAs)	2,918
GPs	27,720
Registration Authority Personnel	17,680

Maximum Concurrent Users*

Entity	*No of Concurrent Users*
Acute	5,276
Community Health	32,257
Mental Health	1,380
NHSMail	35,019
Pharmacies	2,853
Secondary Uses Service	1,271
Service Definers (SHAs)	797
GPs	7,571
Registration Authority Personnel	4,829

*Note: Acute, Community Health and Mental Health are actual figures. All other figures for the number of concurrent users are estimated.

39. *Please state the total cost of each acute, mental health and community deployment*

The estimated gross costs of the Programme, including local implementation costs, were set out in the NAO Report. The notes provided in response to Questions 130 and 255 at the PAC Hearing provide some examples of the local costs and benefits of Programme deployments and, as the Programme develops, the original forecasts will be reviewed. The notes referred to also explain our intention to develop an annual statement of the benefits delivered by the Programme, in line with the recommendation in the NAO Report. The first statement will be published next year.

40. *Please supply the total number of GP systems that each LSP will be supplying under the terms of its LSP contract*

North East Cluster	1,265—all GP practices
London Cluster	1,661—all GP practices
Southern Cluster	There is an option to require the LSP to provide GP systems to all GP practices but no volumes are currently committed.
East and East Midlands	1,632—all GP practices
North West and West Midlands	CSC is required to make a GP system available but no volumes are currently committed.

41. *Please supply a list of severity one and severity two errors from January to June 2006 stating the Trusts, LSP, date, severity level and nature of the problem for each error*

The summary position is as follows:

Month	*Severity 1*	*Severity 2*
January	13	30
February	15	56
March	6	45
April	12	54
May	16	33
June	9	48

All severity one and two incidents are recorded above, even if the problem proved to be a local one unrelated to the National Programme.

The breakdown of the information in the form requested would have to be provided by our suppliers and considerable work would be involved to review these past events to provide the full descriptions.

A chart showing the percentage availability of the services provided under the Programme, both in respect of the National and Local Service Providers, for each month January to June 2006 is provided below. This shows clearly that service availability has been continuously either at 100% or very close to 100% across the whole range of services, demonstrating the rarity of system unavailability.

Enclosure 4: Question 41 - AVAILABILITY PERCENTAGES BY SERVICE AND MONTH

National Service Providers

Supplier	BT Spine							NT N3	Atos Origin	Cable & Wireless	
Service	Access Control Framework	Patient Demographics Service	Transaction Messaging Service	Spine Directory Service	Electronic Transmission of Prescriptions	Card Management System	Authentication / Portal	N3 Wide Area Network	Choose & Book	NHSMail	Relay
Jun-2006	100.00	100.00	99.95	99.98	100.00	99.79	100.00	100.00	99.03	99.93	100.00
May-2006	100.00	100.00	99.98	100.00	100.00	99.87	100.00	99.93	100.00	99.98	99.97
Apr-2006	100.00	99.74	100.00	100.00	99.52	99.88	99.83	100.00	99.67	100.00	100.00
Mar-2006	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.99	99.32	100.00	100.00
Feb-2006	100.00	99.71	100.00	100.00	99.88	99.87	98.96	99.99	100.00	100.00	100.00
Jan-2006	100.00	99.64	100.00	100.00	100.00	100.00	99.55	100.00	98.98	99.95	100.00

Local Service Providers

Supplier	North East Local Service Provider									
Service	SAP / Liquid Logic	Portal	Biz Talk / Message Broker	Synergy	Map of Medicine	SystmOne	iSOFT iPM Acute	iSOFT iPM Mental Health	ECCP Ambulance Service	Picture Archiving & Communications System
Jun-2006	99.84	100.00	100.00	99.98	100.00	99.91	100.00	99.96	100.00	99.78
May-2006	100.00	100.00	100.00	99.99	100.00	100.00	99.96	99.96	100.00	100.00
Apr-2006	100.00	100.00	99.87	99.98	100.00	100.00	99.76	100.00	100.00	100.00
Mar-2006	100.00	100.00	100.00	99.99	100.00	100.00	100.00	99.97	99.96	100.00
Feb-2006	99.72	99.72	99.96	99.96	100.00	99.96	99.90	100.00	99.19	-
Jan-2006	100.00	100.00	99.96	99.94	100.00	99.99	99.84	99.98	99.96	-

Supplier	East & East Midlands Local Service Provider								Southern Local	
Service	SAP / Liquid Logic	Portal	Biz Talk / Message Broker	Synergy	Map of Medicine	SystmOne	iSOFT IPM Acute / Mental Health	ECCP Ambulance Service	PACS	Cerner Millennium PAS
Jun-2006	100.00	100.00	100.00	99.98	100.00	99.91	100.00	100.00	99.76	100.00
May-2006	100.00	100.00	100.00	99.98	100.00	100.00	99.98	100.00	99.76	100.00
Apr-2006	99.89	100.00	99.87	99.99	100.00	100.00	99.89	100.00	99.93	100.00
Mar-2006	100.00	100.00	100.00	99.96	100.00	100.00	99.97	99.96	99.99	99.25
Feb-2006	99.79	99.72	99.96	99.94	100.00	99.96	99.97	99.19	99.94	99.70
Jan-2006	100.00	100.00	99.96	99.96	100.00	99.99	100.00	99.93	99.99	97.70

Supplier	London Local Service Provider					North West & West Midlands		
Service	CCA (Vision Alt-GP Service)	PACS	CARECAST	Rio Mental Health & Community	eSAP	ORMIS Theatre	Lorenzo PAS	PACS
Jun-2006	100.00	99.94	100.00	100.00	100.00	100.0	99.9	100.0
May-2006	100.00	99.95	99.56	100.00	100.00	100.0	99.8	100.0
Apr-2006	100.00	100.00	100.00	100.00	-	100.0	99.7	100.0
Mar-2006	100.00	99.78	99.80	-	-	99.9	99.8	100.0
Feb-2006	100.00	99.85	99.10	-	-	100.0	99.9	100.0
Jan-2006	100.00	100.00	99.99	-	-	99.7	99.9	100.0

Note: ' - ' is employed where no availability statistics collated or reported on.

The system failures that do occur do not necessarily affect all users, indeed the effects can be quite localised. The following table demonstrates the rarity of system unavailability for individual users. It shows the product of the number of minutes for which the system was planned to be available multiplied by the number of potential users (ie the planned user minutes). It then shows the percentage of this user time that the systems have actually been available. The data covers the period from August 2005 to September 2006.

System	*Total Planned User Minutes (millions)*	*Availability Service Level %*
N3	524,843	99.91
QMAS	4,053	100.00
NHSmail	38,903	99.99
Choose and Book	1,022	99.77
Electronic Prescription Service	4,135	99.99
PACS	1,033	99.78

Given the rarity of system unavailability, we have not asked our suppliers for the detailed information requested. The Committee may wish to consider whether it is necessary.

42. *Please list each occurrence of a Trust losing or being unable to see patient records and for each occurrence please list the number of records believed to have been affected.*

There have been no instances of data being lost or of patient records becoming permanently unavailable. This contrasts with paper records, in reference to which the BMA discussion paper 2005 Confidentiality as part of a bigger picture said "Lost medical notes, missing information about appointments and concerns about lack of information at times of medical emergency are frequently cited."

43. *Please list any occurrences of patients breaching waiting list guidelines as a result of lost or missing computer records*

We do not hold records of patients breaching waiting list guidelines as a result of lost or missing computer records. The products of the National Programme will improve the administrative processes and are key enablers in the planned reduction of patient waiting times.

44. *Please provide the best estimate of (i) the total number and (ii) the proportion of hospital appointments that are missed because the appointment letter is either sent to the wrong address or is undelivered*

Services such as Choose and Book and the Electronic Prescription Service have provided patients with an opportunity to inform the NHS of changes to their address details. For example when booking appointments, either through the national telephone booking service or directly within a GP practice, healthcare professionals are prompted to check patient demographic details and, as a result, the Personal Demographics Service is updated. This helps maintain the quality of data held on the Personal Demographics Service and ensures it is an efficient reliable source of demographic information for use across the NHS.

The Personal Demographic Service is currently used daily at over 7,000 locations and the number of updates to patient demographic details received daily is reducing the risk of NHS correspondence being sent to the wrong address or undelivered.

Initial analysis shows that the use of Choose and Book reduces patient Did Not Attend (DNA) rates. Research from three Primary Care Trusts has shown a 50% reduction in DNA rates based on a very significant sample. A formal DNA research programme is currently ongoing over a larger sample of communities.

It will be seen from the answer to Question 46 that incidences of undelivered mail are quite small.

45. *Please provide (i) the latest figures available for the total number of patients now registered on Connecting for Health's Patient Demographic Service, and (ii) what the best estimate is of the proportion this represents of the total patient population*

The Personal Demographic Service contains a record for every person who has registered for primary care services (registered with a GP) since 1991 in England, Wales and the Isle of Man. The PDS also includes a record for every baby born since 2002. This represents the majority of the total patient population. However, the Personal Demographic Service is not a population database and it is recognised that there will not be an exact correlation.

PDS now contains over 73 million patient records which the Choose and Book and Electronic Prescription Services are using successfully as the single authoritative source of patient demographic information.

The 73 million patient records comprise:

— 50 million people living within England.

— Patients living within Wales.

— Patients from other countries, including Scotland, receiving treatment from an English GP.

— Duplicate records.
— Deceased patient records.
— Patients who have emigrated since 1991.

46. *Has a quality audit on the data held on the Patient Demographic Service been commissioned or conducted, and if there has been such an audit what figures were provided by that audit of:*

(i) *the number of missing or incorrect GPs on the PDS database;*

(ii) *the number of missing or incorrect addresses on the PDS database; and*

(iii) *the number of duplicate entries on the PDS database.*

Various audits and data quality initiatives have been undertaken to measure the quality of the PDS data. A recent audit of a sample number of addresses held on PDS showed the quality and format of the data to be good, with 95.5% of recorded addresses matching the Post Office Address File and the remainder being of good quality.

The Audit Commission undertook a National Duplicate Registration Initiative (NDRI) and published its report in August 2006. Although the initiative did not cover the data held on the Personal Demographic Service, the report recognised that the timing of the initiative had ensured that the full benefits offered by the NDRI data cleanse would be realised as part of the plans for the implementation of the NHS Care Records Service.

Missing or Incorrect GPs on the PDS Database

Approximately 4.5 million records for living persons on the PDS do not include details of a registered GP. This represents approximately 7% of the records held. The majority of these are valid as the PDS contains records where the patient has joined the armed forces or is resident in a prison for longer than two years. Such patients no longer remain with their GP. There are also some cases where a patient is not registered with a GP.

A recent (May 2006) reconciliation of GP data held by PDS source systems showed a 99.7% reconciliation rate. This indicates that the number of GPs recorded incorrectly on the PDS is very small.

Missing or Incorrect Addresses on the PDS Database

Currently, throughout the NHS regions, there are many locally-held databases containing demographic information about patients. These are available only to healthcare professionals from within the same demographic area or organisation. The information is therefore not always accessible to doctors treating patients who, for example, may have fallen ill in a different part of the country. This can result in delays in identifying a patient, accessing their correct clinical information or in providing treatment. It is for this reason that the NHS in England needs a single, national demographics service to provide an efficient reliable source of demographic information.

A recent study with a primary care trust indicated that, of approximately half a million patient correspondence items issued per year, approximately 1% are undelivered as the patient is not known at the address.

Each record on PDS is checked and verified at each patient encounter. The 1% of undelivered patient correspondence implies that the address data is recorded correctly for 99% of the records held.

Duplicate Entries on the PDS Database

An audit to establish the number of duplicate entries on the PDS has not been undertaken to date as the NHS Central Register (CHRIS) continues to be the master source for NHS numbers (the unique identifier for each person using the NHS). The CHRIS system ultimately feeds the PDS and will be replaced by the PDS as part of the deployment of the Spine.

A number of data quality processes are in place to identify, investigate and resolve potential duplicate records on CHRIS.

In addition to the staff at the NHS Central Register, local back offices exist to support the registration of patients with the NHS. There are 82 local, primary care back offices providing support to the registration of patients with the NHS and they are also involved in the identification, investigation and resolution of duplicate entries.

The average number of potentially duplicate cases resolved each month is currently 330. This includes potentially duplicate cases in both the legacy demographic systems and the PDS.

47. *Please provide details of the spine functionality that has been provided under the BT National Application Service Provider (NASP) contract and details of functionality yet to be provided*

Release title	*Functionality and Benefits*	*Live date*
P1R1	(1) The Personal Demographics Service (PDS) The Personal Demographics Service (PDS) is an essential element of the NHS Care Records Service (NHS CRS) which underpins the creation of an electronic care record for every registered NHS patient in England by 2010. The PDS is the national electronic database of NHS patient demographic details. It will enable a patient to be readily identified by healthcare professionals and associated, quickly and accurately, with their correct medical details. The PDS will not hold any clinical or sensitive data items such as ethnicity or religion. Patient Safety The PDS and access to it for every NHS organisation enables the safe movement of patient data between NHS organisations. This reduces the number of errors in the matching of patients with their care and improves patient safety. Patient Convenience With the PDS, patients need only notify one authorised healthcare organisation of a change of address and this change will be available to all organisations as and when patient records are accessed. Eventually, the patient will be able to check and update their own contact details via HealthSpace and these will be made available to healthcare organisations via the PDS. Additionally, the patient's next of kin and carer's details are held on the PDS, two items which are considered by healthcare workers to be key pieces of information when caring for patients. Benefits for Healthcare Professionals There are a number of benefits for healthcare professionals. By using the PDS, they can: — be confident they have access to accurate and complete patient demographic information; — access the most up to date contact details to ensure that mailings are more likely to reach the intended recipient; — find more easily the right record for the right patient meaning less chasing records and more time delivering care; — where necessary, gain urgent access to patients' previous clinical history via direct GP to GP contact as PDS holds a patient's previous GP address and telephone contact details; and — access the patient's registered GP on encounters where a third party patient's (paper) notes had been incorrectly filed into notes of a newly registered patient's notes. (2) Transaction and Messaging Spine (TMS) Implementation of the Transaction and Messaging Spine (TMS) functionality supported by the implementation of User Registration and Authentication Services. The TMS supports the PDS and Choose and Book message interactions. This enables messages to be passed through Choose and Book between GP and the hospital or specialist care provider. Choose and Book enables hospital bookings to be made by or on behalf of the patient during consultation with GP or after leaving the surgery. It also enables referral information to be sent electronically and securely from GP to hospital consultant.	June 2004
P1R2	(1) Implementation of improved business continuity and disaster recovery solution.	Nov 2004
2005–1	(1) Electronic Transfer of Prescriptions (ETP) The ETP Service allows prescriptions (including for repeat dispensing) generated by GPs and other prescribers to be transferred electronically between prescribers, dispensers and the reimbursement agency, currently the Shared Business Services (SBS) formerly Prescription Pricing Authority.	Feb 2005

Release title	*Functionality and Benefits*	*Live date*
	The release includes the SBS interface, and retains the prescription message in ETP until advised by SBS that it has been fulfilled, when it would be discarded as normal. The ETP Service is supported by enhancements to Spine Directory Services (SDS) for accredited systems check, pharmacy and branch surgery information, and support of digital signatures. The main benefit in the first release is that accuracy at the point of dispensing would be improved as the bulk of the prescription details no longer need to be typed manually by dispensing staff. Instead, a bar code on the prescription is scanned to retrieve the details from the Spine. (2) General Practice to General Practice (GP2GP) health record transfer service. The General Practice to General Practice (GP2GP) patient health record transfer solution supports the electronic component of a general practice patient health record being transferred to a new practice when a patient registers with a new practice for primary health care.	
2005–2	(1) Secondary Uses Service The release comprises, in the main, replacement function for the existing NHS Wide Clearing Services (NWCS) with some additional flexible reporting functionality. (2) Secondary Uses Service—Payment By Results The release supports the 2005–06 algorithms for Payment by Results, implementing rigorous validation and hence improving data quality.	June 2005
2005–3	(1) Support for Choose and Book Version 2 This release enables referrals to be made to named clinicians for example, if a patient had been treated previously by a consultant and wished to see the same consultant. This gives patients and GPs the ability to refer to a specialist they know and trust and help reduce patient anxiety at a worrying time. The release also enables better integration between Choose and Book and the Patient Administration System (PAS). One of the ways it benefits consultants is that it tells them which GP made the referral so that he or she could refer back quickly to that GP with any query about the referral.	Aug 2005
2005–4	(1) Service enhancements, including database and operating system patches to enhance Spine resilience. (2) Automated software deployment capability to reduce the risk of service disruption of future releases.	Aug 2005
2005–5	(1) Upgrade to the PDS Upgrades to the PDS that enable recording of pharmacy nominations for the ETP Service The release also enables NHS numbers to be allocated through PDS. This speeds up the process of allocating a NHS number and potentially reduces the number of duplicated/confused patient records. (2) Legitimate Relationship Service Introduction of the Legitimate Relationship Service to enable Local Service Provider (LSP) deployment of solutions to meet principles of the Care Record Guarantee.	Dec 2005
2006–A–1–1	(1) Secondary Uses Service—Payment by Results Implementation of Algorithm for financial year 2006–07. Building on the previous release, this now supports 100% implementation of Payment by Results (PbR) for 2006/07 reporting oñ 22 billion of NHS care.	Mar 2006
2006–A–1–2	(1) Secondary Uses Service The release provides views and reports of data (Provider, Strategic Health Authority, National etc). Enables full "on-line" access for users to report and extract.	May 2006

Release title	*Functionality and Benefits*	*Live date*
2006–A–2	(1) TMS Upgrade The introduction of new TMS architecture to provide support for increased messaging capacity and performance. (2) PDS Upgrade Supports the transfer of the new PDS messages. (3) ETP Upgrade This enables the Spine to handle ETP Release 2 messages. The main changes to the prescribing/dispensing process in ETP Release 2 is the extended functionality to enable prescribers to apply digital signatures to the electronic prescription messages—therefore making them the legal prescription over the paper copy. This release will also enable patients to nominate dispensers. The release also includes the addition of management reports and administrative functions. Business benefits include: — Reduced administrative burden placed on prescribers and their staff as there will be less requirement for paper prescriptions (as the digital signature makes the electronic prescription the legal entity); — Dispensers may be able to enhance workflow and stock control as it may be possible for them to "pull down" and prepare nominated prescriptions from the spine prior to the patient arriving; — It will be possible for reimbursement claims to be sent electronically, reducing the administrative burden for dispensing staff and the SBS; and — The ability for prescribers to cancel electronic prescriptions at any time up until the prescription is dispensed. Patient benefits include: — Increased convenience as they may no longer need to visit the prescribing staff just to collect a paper prescription. Instead they can go straight to their nominated pharmacy; and — Waiting times at pharmacies may be reduced through improved dispensing workflow.	
2006–B–1	(1) Secondary Uses Service This release supports the functionality previously provided through the NWCS as well as enabling a range of reporting and analysis features including support for national assurance of PbR usage across the country. The functionality allows demonstration of SUS fitness for purpose as a replacement for NWCS.	Nov 2006
To be delivered in the future	(1) Summary Record The Summary Care Record will act as a source of information to support first contact care and less complex care across organisations. This could include out-of-hours, accident and emergency care, ambulance services, treatment of temporary residents on first presentation at a new practice and on acute admission. When a care professional is seeing someone for a straightforward problem, the Summary Care Record will often be all they need to supplement their own records in order to deliver safe care. In circumstances where organisations will ultimately need to access information from the Detailed Care Record, the summary record will be used before a person consents to that wider access. The Summary Care Record will contain significant aspects of a person's care, such as major diagnoses, procedures, current and regular prescriptions, allergies, adverse reactions, drug interactions, and recent investigation results. (2) PDS Upgrades Enhanced PDS Back Office functionality to better report and manage the quality of demographic data through the Demographic Spine Application (DSA). Whilst this will deliver huge financial benefits to the business, the patient will gain intangible benefits as the data quality improves. The functionality includes: — The manual processing of Civil Births and Deaths rejected from automated processes (including processing of paper-based death notifications from Scotland, Isle of Man, Overseas deaths);	

Release title	*Functionality and Benefits*	*Live date*
	— Changes of identity (gender re-assignments, adoptions and identity protection); — Birth notifications; — Resolution of NCRS potential duplicates (inc merge) and confusion cases; — Resolution of wrongly posted deaths (formal and informal); — Back office Data Quality reporting; — Back office processing of removals from a GP list; — Allocation of NHS numbers to Service Dependants; — Permanent deletions of NHS CRS records; — Resetting of consent; — *Ad-hoc* general updates to PDS records; — Management of Back Office Work Items (workflow); and — Improved management of NHS Numbers. (3) ETP Upgrades Activation of the following ETP functions: — Reject and Resubmit Reimbursement Claim; and — Shared Business Services Interface Completion. (4) Support for GP2GP Upgrades Enhancements to enable GP2GP national roll-out. (5) Support for Healthspace Enabling public access to their care records is an important principle for the following reasons: — Information quality will be improved because patients will be able to check the accuracy of their data through HealthSpace. They may be able to update some elements themselves or flag it for the attention of a healthcare professional; — Data Protection—HealthSpace will provide systematic access to data held by numerous organisations and will reduce the administrative burden of those organisations in responding to requests under the DPA; — Customer care: HealthSpace will enable patients to update personal preferences (in PDS)—communicating their wants and needs to NHS organisations with which they interact. Potentially, a hospital will already know your dietary requirements, whether you need an interpreter, whether you need disabled access etc before you even arrive; — Public involvement: as well as viewing care record data entered by healthcare professionals, HealthSpace will allow patients to enter data into their own care records. This is especially important for people with long-terms conditions (often expert patients) who routinely monitor key metrics themselves. This will open up a new channel of communication between patients and clinicians; — Personalisation and choice: HealthSpace will bring together data and information to support patient choice in a single, personalised web interface. It will integrate existing systems (like the Choose and Book online application) with the data on which choice is based (waiting times, quality assessments, travel times), augmenting this with value-added services like personalised appointment reminders; — Modernisation: public access through HealthSpace offers highly visible proof that the NHS is modernising and offering online services comparable with other industries; and — Public expectations: in a programme of work costing several billions of pounds, it is not unreasonable to expect a modest proportion of this to be devoted to giving the public access to the data that they own, and that is collected and managed at their expense. There is a growing public awareness that public access to care records is coming, and a high level of expectation that this will be soon.	

48. *Please provide details of the current utilisation of the spine in terms of numbers of requests*

49. *Please provide details of the anticipated utilisation of the spine once the NCRS service is fully deployed*

The current Spine utilisation is approximately 22 million messages per month. This includes supporting:

— over 1.2 million bookings through the Choose and Book service, including approximately 270,000 bookings over the past month;

— over five million prescriptions through the Electronic Prescription Service, including approximately 1.5 million prescriptions over the past month; and

— 580 Medical Record Transfers through GP to GP messaging, including approximately 420 transfers over the past month.

User activity in September

Total Log-ins	1,586,911
Peak Day number of Log-ins	85,066
Total Unique Log-ins	762,682
Peak Day number of Unique Logins	40,636

— Unique Connections take account of one log-in in for the individual user regardless of the number of times this occurs during the day.

— The anticipated/forecast volume of Spine Messaging in 2012 (the end of the current roll-out programme) is just over 11 billion for the full year.

Supplementary memorandum submitted by the Department of Health

The Committee was advised previously that cumulative expenditure on the core contracts for the NHS National Programme for IT totalled £654m by 31 March 2006. The Committee has requested the latest available figures.

The latest available information is shown in the following table:

Programme area	*Cumulative Expenditure to 31 March 2006 (£ million)*	*Cumulative Expenditure to 31 December 2006 (£ million)*
Spine	239.8	310.7
N3 broadband network	130.5	228.2
Choose and book core contract	27.1	33.2
London LSP	1.3	39.1
North East LSP	51.6	82.8
NW/W Midlands LSP	119.3	184.8
Eastern LSP	57.9	94.8
Southern LSP	26.5	27.9
Totals	**654.0**	**1001.5**

Question 2

The £654 million expenditure on the core contracts to 31 March 2006 was part of total cumulative Programme expenditure of £1542 million. The Committee was provided with a breakdown of this expenditure and has now requested the latest available data.

Answer

The following table provides the available information. As the information has been updated during a financial year, the figures to December 2006 are provisional and un-audited.

In the case of expenditure by local NHS organisations, the earlier figure (to March 2006) is the latest available.

We are developing plans to meet the NAO recommendation for the publication of an annual statement quantifying the benefits delivered by the Programme, set against the costs incurred. The aim is for the first statement to include information for 2006–07. It is expected to be available in summer 2007.

Item	*Cumulative Expenditure to 31.03.06 £m*	*Cumulative Expenditure to 31.12.06 £m*
Core Contracts	654	1002
New Projects added to the original scope of the Programme	70	107
Additional services beyond the scope of the original core contracts	48	58
Non-core Projects and Contracts added to NPfIT	75	97
NPfIT support for local NHS implementation	43	57
Central Administrative Expenditure:		
— Technology Office	28	37
— Programmes	50	81
— System Implementation	38	58
— Service Management	12	20
— Estate and Corporate Services	47	72
— Contract and Commercial Management	18	26
Total of above items	**1,083**	**1,615**
Expenditure by Local NHS Organisations (including NHS Connecting for Health's contribution to Local Costs)	459	See note above
Total expenditure	**1,542**	**See note above**

February 2007

Supplementary memorandum submitted by the Department of Health

Following a question asked by the Committee last month, the Department provided a table updating the information relating to the total cumulative expenditure on the NHS National Programme for IT.[2]

The table generally showed cumulative total expenditure to 31 December 2006 though for one item ie expenditure by local NHS organisations, the latest available information related to 31 March 2006.

The Committee has now asked for a note confirming that the total cumulative expenditure exceeds £2 billion. The revised table below makes this clear except that, as stated before, the information has been updated during a financial year and is therefore provisional and un-audited.

Item	*Cumulative Expenditure to 31.03.06 £m*	*Latest available information on Cumulative Expenditure (to 31 December 2006 except where indicated) £m*
Core Contracts	654	1002
New Projects added to the original scope of the Programme	70	107
Additional services beyond the scope of the original core contracts	48	58
Non-core Projects and Contracts added to NPfIT	75	97
NPfIT support for local NHS implementation	43	57
Central Expenditure:		
— Technology Office	28	37
— Programmes	50	81
— System Implementation	38	58
— Service Management	12	20
— Estate and Corporate Services	47	72
— Contract and Commercial Management	18	26
Total of above items	**1,083**	**1,615**
Expenditure by Local NHS Organisations (including NHS Connecting for Health's contribution to Local Costs)	459	459 (31 March 2006 data is latest available)
Total	**1,542**	**(Total known to 31.12.06) 2,074**

[2] Ev 81

Response to second additional question

The Committee has asked for a list of the Senior Responsible Officers (SROs) for the Programme, together with the dates of their accountability. These are shown in the following table:

Senior Responsible Owner for the NHS National Programme for IT	*From*	*To*
Prof. Sir John Pattison	Inception of NPfIT	March 2004
Richard Granger and Prof. Aidan Halligan (joint SROs)	March 2004	November 2004
Richard Granger	November 2004	March 2005
John Bacon	March 2005	April 2006
Sir Ian Carruthers	April 2006	September 2006
David Nicholson	September 2006	Current

Supplementary memorandum submitted by Department of Health

PURPOSE OF THIS NOTE

As part of its investigation of the NHS National Programme for IT, the Committee interviewed Mr. Andrew Rollerson on 7 March 2007. Mr Rollerson is an employee of Fujitsu Services Limited, one of the suppliers engaged by the Department to deliver the National Programme.

Fujitsu Services has advised the Committee, and Mr Rollerson confirmed, that he was not speaking on behalf of Fujitsu. Mr Rollerson also explained to the Committee that the reports in Computer Weekly were selective and taken out of context.

The Department emphasises that Mr Rollerson has not been employed on Programme-related functions for some time and that he was not, and never has been, in a position to make authoritative statements relating to the Programme. We also understand from Fujitsu that Mr Rollerson was not qualified to comment on Programme Management methods.

However, some wider issues concerning the deliverability of the National Programme were raised by Committee members during the questioning of Mr Rollerson. These related to periods subsequent to the NAO's study, which included data to 31 March 2006. This note therefore provides some updated information to help the Committee to set Mr Rollerson's comments in context.

OVERALL AIMS OF THE NHS NATIONAL PROGRAMME FOR IT

Mr Rollerson referred to problems that arise when transformation programmes are focussed on IT products. The National Programme is not focussed in this way. It is focussed on safer and better patient care. It is a large IT-enabled change providing a huge opportunity for a generational leap in the delivery of healthcare, with the potential to provide a measurable improvement to the health of the nation.

Patient safety is being improved significantly by more accurate information being available quickly for diagnosis and prescribing. Drug transcribing errors will be reduced. A 2004 study showed that the root cause of 27% of medication errors was poor information availability. An Audit Commission report shows that 1,200 people die each year in England as a result of medication errors, costing the NHS £500 million a year. That report also showed that 10% of patients on medical wards experience an adverse event; 46% of which were judged to be preventable; one-third led to greater morbidity or death; whilst each event leads to an average of 8.5 additional days in hospital.

Diagnostic waiting times are already being reduced dramatically by the availability of new IT systems; especially Picture Archiving & Communications Systems that replace file-based x-rays with digital imaging that is immediately and remotely available at any time of day or night. Several hospitals have delivered reductions from six days to a few hours for the diagnosis of illness. Efficiency savings will be made from the release of storage space, film and chemicals. For example, at Sherwood Forest Hospitals NHS Trust which went live with PACS on 7 September 2006, the first year's benefits are expected to be £267,000 from eliminating the need to use x-ray films, £21,000 from reductions in chemical expenditure and £8,000 in stationery savings. The NHS Litigation Authority pays out some £500 million per annum on an uncontested basis because records cannot be produced: electronic records will significantly reduce this liability.

The patient experience will be transformed and they will have the ability to view their own clinical record through Healthspace, a web based portal that will help to provide increased patient satisfaction, greater confidence in the NHS, a reduction in anxiety, greater understanding of personal needs, better relationships with professionals and positive health effects. There will be fewer lost records and test results. Decision support software will be available to help clinicians in their diagnosis and treatment and improved screening will enable the early detection of disease clusters and outbreaks.

The programme is a key building block of NHS reform. Only a ubiquitous, effective, national IT system can deliver new policy reform such as patient choice, the 18 week reform and a commissioning model—whilst at the same time retaining flexibility to adopt future policy.

A proven strength of the National Programme is its ability to adapt to the changing business environment in the NHS, which was bound to happen during a ten year programme. The Programme has already incorporated Quality Management & Analysis System to implement Quality Outcomes for GPs to deliver patient benefit, which was delivered on time in 2005. Payment by Results, a system in national use every working day to move money to Trusts based on results, was delivered on time in June 2005. Changes to include 18 weeks, practice-based commissioning and NHS re-structuring are on track to be introduced during 2007. The architecture is designed to be capable of including new policy and new technology.

The NHS and National Programme for IT

In a typical week, over six million people visit their GPs, 800,000 people are treated in hospital clinics, and thousands of operations are performed. This corresponds to around three million critical processes per day that need accurate patient and clinical information to be available immediately.

Since the publication of the NAO report last year, progress has continued and more and more systems are now deployed and in use. For example, on a typical day in February 2007, as a result of the Programme's work, there were:

- 100,000 prescriptions transmitted electronically, reducing errors and inefficiencies,
- 16,000 Choose and Book electronic bookings made, putting patients in charge of their care,
- 1,400,000 queries recorded on the patient demographic system enabling letters to be posted to the correct address and patient information handled more efficiently,
- 460 new users registered for access to the NHS Care Record Service,
- 50,000 unique, authenticated users accessing NHS Care Record Service,
- 325 new NHS secure email users registered,
- 107,000 NHSMail users, each of whom has an email address for life, sending 1 million secure e-mails, one-third of which contain confidential patient information,
- 20 NHS National Network secure broadband connections installed,
- 8,800 GP practices (28,000 GPs) using the Quality Management & Analysis System, to deliver better care to patients under the new GP contract,
- 1 million records added to the Secondary Uses Service.

When supported fully by a single electronic records system, this will result in approximately 30 million transactions per day over a cohesive, robust and resilient infrastructure. The NHS has already become a digital organisation that is dependent on IT for the diagnosis and treatment of patients.

Today the NHS could not function without the systems that have been delivered by the National Programme for Information Technology.

Delays to the Programme

It was acknowledged in the NAO Report that some delays had occurred. However, the record shows that much of the Programme is complete such as the Quality Management & Analysis System, the N3 broadband roll-out and the technical development of Picture Archiving & Communications Systems, Choose and Book and the Electronic Prescription Service; all to time and to budget.

Picture Archiving & Communications Systems is on track for deployment by the end of 2007–08, Choose and Book and the Electronic Prescription Service are both making steady progress in their deployment into the NHS.

Although much of the NHS Care Record Service (or "central database") was delivered on time and to budget, including the Personal Demographics System (PDS), Security and Authentication Systems and Messaging Systems, the national summary care record containing the clinical record has been delayed by around two years against the original plan. This is due partly to its complexity and partly because of the need to secure consensus from the medical profession on its contents.

Significant progress has been made at a local NHS level by the installation of community and child health systems into Trusts that have not had any previous IT support. Managers and clinicians have praised the transformation.

PROGRESS TO DATE

The programme has already made substantial progress. The position across the major elements of the programme is as follows:

NHS Care Record Service

- 322,078 registered users
- contains national patient demographic information for over 48 million patients in England
- patient confidentiality protected by a Care Record Guarantee and system controls
- over 1.4 million patient records retrieved successfully from the Personal Demographics Service every day, helping to identify patients correctly

The NHS Care Record Service is creating an electronic record for each of England's 50 million patients, replacing four existing national systems. There are already 322,078 registered users and over 400 million activity records have been submitted to Secondary Uses Services. The NHS Care Record Service will bring process efficiencies and improvements to patient safety, care and experience, helping to reduce deaths through adverse drug reactions, of which there were 570 in 2001–02, as well as reducing the cost of litigation by reducing the number of avoidable adverse incidents. The summary clinical record is now ready for launch in April 2007.

Choose and Book

- over 2.5 million Choose and Book bookings made to date
- over 16,000 bookings made in a typical day
- now available to 97% of GP practices
- software delivered to time and budget

http://www.chooseandbook.nhs.uk/

GPs and other care staff are booking initial hospital appointments at a convenient date, time and place for patients. Currently, there are over 16,000 bookings made per day and in total over 2.5 million bookings have been made to date. 97% of GP practices are able to make electronic bookings.

Choose and Book has been shown to halve the number of "did not attends" by giving the patient choice and placing them in control of their booking. Choose and Book will save the NHS approximately £50 million a year or 75,000 days a year of nursing and clinical time. "Did not Attend" rates are 5% for Choose and Book compared to 9% for non-Choose and Book bookings. Most bookings are made in 44 seconds.

Electronic Prescription Service

- software delivered to time and budget
- over 12 million prescription messages issued

The Electronic Prescription Service will allow prescriptions generated by GPs to be transferred electronically from their surgeries to their local pharmacies. Over 12 million prescriptions have been transmitted to date and over 550,000 prescriptions are issued each week. 1,628 GP practices have transmitted prescriptions. The Electronic Prescription Service more than halves keying time, by both the pharmacy and the Business Services Authority, equating to £13 million savings or 700 staff equivalents. The Electronic Prescription Service will save an estimated eleven lives per week and will free up 3,920 hospital beds per week by reducing prescribing errors. The Electronic Prescription Service brings more choice in access to medication including home delivery and involves less time for GPs administering repeat prescriptions, reducing this by 70%. Electronic Prescription Service data will be included in the patient summary care record.

National Network for the NHS (N3)

- target achieved two months ahead of schedule with over 18,000 connections delivered

N3 is providing reliable supporting IT infrastructure, world class networking services, sufficient, secure connectivity and broadband capacity potential to meet current and future NHS IT needs. There are 18,362 secure connections of which 10,682 are GP connections. Approximately 1,000,000 NHS employees use N3 services. All GP sites and branch practices get at least 512Kbps N3 service. For every £1 spent on N3 the NHS would have spent £2.25 on the legacy NHS Net. By using N3 to monitor four ambulance trusts, Yorkshire Air Ambulance has reduced scramble time from seven to two minutes. N3 transfers 96.5 terabytes of data per month which is equal to the Encyclopaedia Britannica every four seconds. There are connections to all sites where healthcare is offered.

Picture Archiving & Communications Systems

— two Picture Archiving & Communications Systems going live almost every week (only five a year before the Programme)

— over 157 million digital images now stored

— 5.3 million images are typically added each week

— around 800,000 patient studies per day

Picture Archiving & Communications Systems capture, store, distribute and display static or moving digital images, including x-rays and scans. Over 157 million digital images have already been stored. Currently there are 71 live deployments and we are digitising around two hospitals each week. The Picture Archiving & Communications Systems' Business Case shows £1 billion net benefit, both cash and non-cash, to the NHS over 10 years. Trusts with Picture Archiving & Communications Systems are more efficient—a typical medium hospital can save 100,000 staff hours, equivalent to 50 staff. Picture Archiving & Communications Systems enable earlier diagnosis and more prompt treatment—providing digital transfer of images as required. Before Picture Archiving & Communications Systems, 5,000 patient procedures per annum were cancelled due to lost x-ray films.

NHSmail

— over 230,000 registered users

— around one million emails a day, one-third of which are clinical information

NHSmail is a centrally managed, secure, clinical email and directory service provided free of charge to the NHS organisation in England. Currently there are 230,654 registered users. Over 181 million emails have been transmitted to date, 30% for secure transfer of patient identifiable data. University City Hospital Leicester estimates £1 million saving over four years equivalent to an extra 10 nurses a year. All users have one email account, contact details and diary that can be shared across multiple organisations. NHSmail will save £185 million over the life of the contract. NHSmail is a secure service with the highest level of encryption available.

Overall position

The technology to support most aspects of the National Programme for IT has already been delivered and the remaining challenge is to utilise these systems fully at local level.

Progress in the Southern Cluster

At the recent hearing, Richard Bacon MP referred to some hospitals, like Winchester, who he said have had to take many steps backwards rather than forward. Whilst it is true that in some cases hospitals will have individual functionality in advance of the initial Programme releases, it is worth noting the comments made by Peter Knight, Winchester's managing director for clinical support services and asset management, as a contribution to an article in E-Health Insider. A copy is enclosed. The article shows the enormous benefits of the systems deployed and does not support an overall summary of "many steps backwards." (Enclosure 1)

It may also help the Committee to see the fuller picture of the deployments that have been made in the South, as this again shows that progress is more significant than may have been suggested at the hearing. A summary report is also enclosed. (Enclosure 2)

Clinical Engagement

There has been substantial clinical engagement throughout the life of the programme. Thousands of clinicians were involved in writing and assuring the original Output Based Specification on which the contracts were let. Similarly, teams of clinicians were involved directly in evaluating the proof of solution and bids from suppliers, prior to contracts being let. Teams of clinicians across the country have been, and continue to be, involved on a daily basis to inform the continuing requirement, specification, design, build and test with suppliers. National Clinical Leads for GPs, hospital doctors, nurses and Allied Health Professionals have been in place for two years; and the programme has appointed a full-time Chief Clinical Officer, who is also a member of NHS Connecting for Health's Agency Management Board.

CONCLUSION

An effective national information technology system is a central plank of NHS modernisation. The Programme has real potential to transform and save lives.

The transformation from paper to digital information is taking place gradually, and will take to 2010 and beyond. The NHS will move from being an organisation with fragmented, or incomplete systems, with physical processing and storage of records on paper which are often unavailable when required to a position where national systems are fully integrated, record keeping is digital and patients have unprecedented access to their personal health records.

Our last comment is that we dispute the suggestions from Mr Rollerson that the project control processes are not suited to their purpose. The Programme Governance systems not only meet, but have informed the development of OGC best practice. Additionally, the NAO commissioned an independent appraisal of the project control processes against an internationally recognised systems' engineering standard. The NAO concluded that NHS Connecting for Health had established management systems and structures to match the scale of the challenge. Fujitsu has informed us that Mr Rollerson has no recent experience of project management and it was notable that he was unable to offer any suggestions to the Committee.

Finally, we note the ongoing interest from the Committee with regard to the NHS National Programme for IT and would welcome the opportunity to host a visit, or a number of visits, by Members of the Committee to sites where the systems are running. There have been over 17,000 deployments since the Programme's inception and the Committee's may find it helpful to see for themselves the systems working within the NHS.

Extract from E-Health Insider 15 March 2007

The delays in implementation of the Cerner Millenium patient administration system have helped to make the system "fit for purpose and more robust", according to the IT lead at Winchester and Eastleigh NHS Trust.

The Mid Hampshire Deployment Family, consisting of three trusts: Winchester and Eastleigh Healthcare NHS Trust, part of Hampshire Partnership Trust and a part of Hampshire Primary Care Trust, went live with Millenium Release 0 over the weekend of 10–11 February.

The go-live was not without teething problems with 300 calls a day to the helpdesk in the first week, together with initial reporting and printing issues. The trust says these have now been resolved.

The Cerner Millennium Release 0 system, also know as the "foundation release", included a new Patient Administration System (PAS), a new computer system for A&E, part of the maternity department and parts of the theatre department. Blood and Radiology tests are also now being ordered electronically.

Local Service Provider, Fujitsu told the Commons Public Accounts Committee last summer that the Winchester deployment would occur on 25 September, however the trust told E-Health Insider: "The Deployment Family made the decision to re-plan their go-live date following lessons from previous R0 go-lives in 2006. In particular the issues with the software around reporting."

Winchester's managing director for clinical support services and asset management, Peter Knight told E-Health Insider: "The delays have been very helpful, it helps us get to grips with the systems in depth, especially in terms of planning and training."

Knight added: "There have been minor nuances we have had to deal with, but extensive testing reduced the risk. We expected to find all of these on day one, two and three, and of the issues we have found, we worked with Cerner and the problems that have arisen have been fixed rapidly."

He admitted that the trust was cautious before deploying the system but said that through close working with Fujitsu they ensured that they received the system they wanted, with the functionality they needed.

Knight explained to EHI that the trust chose a Saturday to deploy the system to minimise disruption for staff and patients. He said that staff have since been fully trained onto the system and issues that have arisen, including reporting issues and printer sharing faults, were reported to Fujitsu and Cerner straight away and swiftly dealt with.

Crucially, he says the new PAS will be able to produce the necessary statutory reports required by the DH and are able to audit their data more easily. Knight says that the concerns the trust had raised with Cerner have been fixed and that in his view the system is fit for purpose for deployment in other trusts.

"With Cerner on side, any trust can take up the Millennium system and have a smooth go-live with a fit and robust system. Issues are dealt with quickly and staff are able to get used to the system quickly," Knight told EHI.

To support the go-live, Winchester implemented IT business management software from Touchpaper. It included a ServiceDesk solution that provided integration with Fujitsu's central service desk providing automated communication of service requests, delivery of accurate, real-time information on the status of requests and removing any delays in the LSP receiving requests.

Knight said that the software had helped to ease frustrations amongst staff. In the first week from go-live, the desk received 300 calls a day, but that has since gone down to less than 100 per day—many of which are to do with security such as forgotten passwords.

He acknowledges that without their patience, the deployment would not have worked and called the staff on the ground "amazing" for their tolerance.

Administration staff saw the benefits of the new PAS straight, says Knight. Once the system was live, outpatient staff noticed how they were able to get through the volumes of patients coming in with split queues to register people in faster.

In September, the trust also installed JAC's Electronic Prescribing and Medication Administration system combined with their JAC Pharmacy Management module to provide a fully integrated medication management solution.

Knight told EHI that the JAC system now managed the entire cycle of medication management for the trust, and so work was carried out to ensure it interfaced with the new PAS. Initially, the system had problems making patients visible to staff, but Cerner worked with the trust to ensure this functionality was corrected.

Overall, Knight feels that deployment and use of the medication management system "went as well as we could have hoped" after a year of upfront and support planning.

He said: "What's interesting is comparing the go-live of our old system, which took a year, this go-live has actually only taken a month."

Offering advice to other trust preparing to go-live Knight says: "Make sure you vigorously go through sign-off and training, plan go-lives strategically so that they meet your criteria. You should also get clinical engagement because without it, it is difficult to keep staff enthused. You should also plan a support mechanism as well and work with your LSP as a solid team. Finally, the trust needs ownership, and should put its money where its mouth is."

Winchester has now been named by other trusts as the pilot site for order comms going live with Millenium R0.

Cerner told investors last month that through Fujitsu it had now deployed Millennium to 20% of trusts in the South of England.

Enclosure 2: Southern Cluster Deployment Summary Report

OVERVIEW STATISTICS

3 Strategic Health Authorities (SHAs): South Central SHA, South East Coast SHA, South West SHA.

5 Ambulance Service Trusts.

15 Mental Health Trusts.

31 Primary Care Trusts.

42 Acute Trusts.

96,291 users have registered for access to the NHS Care Record Spine (including 11,702 GPs; 1,820 Registration Authority (RA) Agents; 211 RA Managers; 4,442 Pharmacists)—as at 5 March 2007.

RECENT HIGHLIGHTS

An Acute Patient Administration System (PAS) and a Community Hospital PAS were deployed to Milton Keynes General Hospital NHS Trust and Milton Keynes Primary Care Trust respectively on 24 February. These systems will potentially serve 267,000 inhabitants in the surrounding area. The deployment consists of core PAS functionality along with Accident & Emergency, Scheduling and clinical functionality.

Surrey & Sussex Healthcare NHS Trust deployed a PACS on 9 March 2007 which means that PACS roll-out is now complete over the whole of the south of England.

South Central SHA was the first SHA in the country to go fully live with Picture Archiving and Communications Systems (PACS).

Kent and Medway was the first area in the country to share PACS images across the health community.

SPINE ACTIVITY

SHA Name	*PDS Queries*	*PDS Updates*	*EPS Prescriptions*	*GP2GP Transfers*
South Central SHA	9,144,835	1,182,226	14,297	1,764
South East Coast SHA	14,273,798	1,395,603	4,976	15
South West SHA	14,485,538	1,744,873	8,651	202
Total	37,904,171	4,322,702	27,924	1,981

DEPLOYMENT SUMMARY (AT 16 MARCH 2007)

System Type		*Total Number of Active Deployments*	*% of Total Achieved (Currently)*
Picture Archiving & Communications System (PACS)		35	100
Patient Administration System (PAS)—in an Acute Trust		5	11.9
PAS—in a Community Hospital		4	12.9
PAS—in a Mental Health Trust		1	6.7
Choose & Book	GP System	188	9.7
	Web Based Referrer	1,532	79.0
	PAS	27	64.3
	Indirectly Bookable Services	15	35.7
Electronic Prescription Service	GP Practices	229	11.8
	Pharmacies	487	20.7
GP2GP		161	8.3
N3 Connections			4,207
Modules Installed Within PAS systems deployed			
	Information for Analysis		9
	Patient Administration System		10
	Accident & Emergency		3
	Theatres		4
	Maternity		2
	Clinical Records		9

Southern Cluster: Deployments by Trust

PACS
DEPLOYMENTS TO DATE

Location	*Actual Finish*
WEST DORSET GENERAL HOSPITALS NHS TRUST	18-Apr-05
SALISBURY NHS FOUNDATION TRUST	16-Jul-05
DARTFORD AND GRAVESHAM NHS TRUST	08-Nov-05
POOLE HOSPITAL NHS TRUST	14-Nov-05
GLOUCESTERSHIRE HOSPITALS NHS FOUNDATION TRUST	14-Nov-05
ROYAL SURREY COUNTY HOSPITAL NHS TRUST	06-Jan-06
NUFFIELD ORTHOPAEDIC CENTRE NHS TRUST	23-Jan-06
MILTON KEYNES GENERAL HOSPITAL NHS TRUST	30-Jan-06
EAST KENT HOSPITALS NHS TRUST	06-Feb-06
MAIDSTONE AND TUNBRIDGE WELLS NHS TRUST	06-Feb-06
NORTH HAMPSHIRE HOSPITALS NHS TRUST	13-Feb-06
ROYAL CORNWALL HOSPITALS NHS TRUST	16-Feb-06
YEOVIL DISTRICT HOSPITAL NHS FOUNDATION TRUST	06-Mar-06
MEDWAY NHS TRUST	27-Mar-06
ASHFORD AND ST PETER'S HOSPITALS NHS TRUST	27-Mar-06
NORTH BRISTOL NHS TRUST	29-Mar-06
PLYMOUTH HOSPITALS NHS TRUST	15-May-06
QUEEN VICTORIA HOSPITAL NHS FOUNDATION TRUST	05-Jun-06
BUCKINGHAMSHIRE HOSPITALS NHS TRUST	28-Jun-06
WORTHING AND SOUTHLANDS HOSPITALS NHS TRUST	03-Jul-06
SOUTHAMPTON UNIVERSITY HOSPITALS NHS TRUST	17-Jul-06
OXFORD RADCLIFFE HOSPITALS NHS TRUST	19-Jul-06
BRIGHTON AND SUSSEX UNIVERSITY HOSPITALS NHS TRUST	29-Aug-06
SOUTH DEVON HEALTH CARE NHS TRUST	01-Sep-06
ROYAL DEVON AND EXETER NHS FOUNDATION TRUST	22-Sep-06

Location	*Actual Finish*
WINCHESTER AND EASTLEIGH HEALTHCARE NHS TRUST	09-Oct-06
ISLE OF WIGHT NHS PCT	13-Nov-06
UNITED BRISTOL HEALTHCARE NHS TRUST	18-Nov-06
WESTON AREA HEALTH NHS TRUST	24-Nov-06
HEATHERWOOD AND WEXHAM PARK HOSPITALS NHS TRUST	07-Dec-06
ROYAL WEST SUSSEX NHS TRUST	29-Jan-07
ROYAL UNITED HOSPITAL BATH NHS TRUST	05-Feb-07
TAUNTON AND SOMERSET NHS TRUST	19-Feb-07
NORTHERN DEVON HEALTHCARE NHS TRUST	02-Mar-07
SURREY AND SUSSEX HEALTHCARE NHS TRUST	09-Mar-07

Acute PAS

Deployments to Date — Module

Location	*Actual Finish*	*Information for Analysis*	*Patient Administration System*	*Accident & Emergency*	*Theatres*	*Maternity*	*Clinical Records*
NUFFIELD ORTHOPAEDIC CENTRE NHS TRUST	20-Dec-05	1	1	0	1	0	1
WESTON AREA HEALTH NHS TRUST	29-Jul-06	1	1	1	1	0	1
BUCKINGHAMSHIRE HOSPITALS NHS TRUST	25-Sep-06	0	1	0	0	0	0
WINCHESTER AND EASTLEIGH HEALTHCARE NHS TRUST	09-Feb-07	1	1	1	1	1	1
MILTON KEYNES GENERAL HOSPITAL NHS TRUST	23-Feb-07	1	1	1	1	1	1
	Total	**5**	**4**	**3**	**4**	**2**	**4**

Community Hospital PAS

Deployments to Date

Location	*Actual Finish*	*Information for Analysis*	*Patient Administration System*	*Accident & Emergency*	*Theatres*	*Maternity*	*Clinical Records*
NORTH SOMERSET PCT	29-Jul-06	1	1	0	0	0	1
BUCKINGHAMSHIRE PCT	26-Sep-06	1	1	0	0	0	1
HAMPSHIRE PCT	10-Feb-07	1	1	0	0	0	1
MILTON KEYNES PCT	24-Feb-07	1	1	0	0	0	1
	Total	**4**	**4**	**0**	**0**	**0**	**4**

Mental health PAS

Deployments to Date

Location	*Actual Finish*	*Information for Analysis*	*Patient Administration System*	*Accident & Emergency*	*Theatres*	*Maternity*	*Clinical Records*
HAMPSHIRE PARTNERSHIP NHS TRUST	10-Feb-07	1	1	0	0	0	1
	Total	**1**	**1**	**0**	**0**	**0**	**1**

Letter from Sir John Bourn to Mr Richard Bacon

Thank you for your letter of 13 March 2006, in which you asked me to examine the introduction of the new care records system at the Nuffield Orthopaedic Centre (NOC) in Oxford.

A team of my staff visited the Trust to look into the introduction of this system. The team have interviewed the NOC's Chief Executive, its Director of Nursing and Operations, the Chief Executive of the Thames Valley Strategic Health Authority (who is also the Senior Responsible Owner for the Southern Cluster of the National Programme for IT), and the Chief Operating Officer of NHS Connecting for Health. They have also reviewed documents provided by the NOC and consulted Fujitsu.

I will set out the background to the introduction of the new system at the NOC, the problems which arose when it was introduced, the report of the Serious Untoward Incident (SUI), and the action being taken to learn lessons from what happened during the introduction of the new system.

THE BACKGROUND TO THE INTRODUCTION OF THE NEW SYSTEM AT THE NOC

The Nuffield Orthopaedic Centre is an acute specialist teaching hospital in Oxford with a national and international reputation. It offers services in musculoskeletal medicine and surgery (for example orthopaedics, rheumatology, metabolic bone disease, chronic pain management, pathology) and in enablement (continuing disability management, posture, independence, wheelchairs, prosthetics and orthotics).

The Trust has had an urgent need to replace its bespoke Patient Administration System (known as NOCPAS). This had been built on site in the 1980s and was not used at any other NHS sites. The system was antiquated and reaching the end of its useful life, with only one member of staff trained and experienced in its structure and development available to support the System. In addition, its database was due to reach the limits of its capacity in early 2006 and this capacity could not be further expanded (to continue to use the System the Trust had already been forced to delete data to free up space). Critical data tables would reach capacity in February 2006, and the NOC, therefore, faced this definite "drop dead" date. In addition, development had been frozen for the last two years to protect the NOCPAS at the end of its useful life. This had forced users in some areas to develop their own standalone systems to support their needs.

Given this pressing operational need for a system to replace its NOCPAS, NOC and the Southern Cluster of the National Programme for IT agreed that the NOC should be the first trust to take the National Programme systems supplied by Fujitsu. This was on the basis not only of the "drop dead" date but also because NOC is a relatively small trust, mainly serving elective patients, without, for example, Accident and Emergency or maternity departments, and so would represent a suitable pioneer trust for the new system.

To this end, Fujitsu has had a project team at the NOC since early 2005. The NOC chose to implement the system in late December 2005 because, as it is a primarily an elective site which deals with booked in appointments and does not provide, for instance, accident and emergency services, it generally has less activity during the Christmas period and the plan was that this time could be used for staff to become familiar with the new system and to deal with any implementation issues that arose. Indeed, the NOC decided to plan to further reduce activity through the Christmas—New Year period to give maximum opportunity for staff to support the go-live.

In July 2005, in agreement with NHS Connecting for Health, Fujitsu decided to change software suppliers from IDX to Cerner. Fujitsu's contract with Cerner was signed in September 2005.

Although this left little time for Fujitsu, Cerner and NOC to prepare for the implementation of Cerner's Millennium system at the NOC, the Trust decided to maintain the implementation date of 19 December 2005 for a variety of reasons:

- It had already taken steps to manage the demand on its services by reducing activity at its clinics and reducing the number of patients booked to clinics and requiring attention during the Christmas period.
- 400 staff had undertaken staff training, and a delay could mean a requirement to repeat that training.
- The NOC's PAS was to reach capacity in February 2006.
- The Cerner system was well established in the United States and was in operation in Britain at the Newham and Homerton Trusts, and it was, therefore, regarded to be a "known" product with an established record and fit to deploy.

— Any delay would have a negative impact on the remainder of the Southern Cluster roll out of the National Programme.

— Contingency plans were put in place by the NOC to mitigate against any disruption.

At that time NOC and its partners were confident that implementation issues could be addressed before a normal pattern of activity resumed in the New Year 2006. Maintaining the 19 December date for implementation gave no additional time for the project to take account of the introduction of an alternative system provider (the replacement of IDX with Cerner), but the supplier, the Trust and the Southern Cluster signed off the implementation timetable as the risks were considered to be manageable.

The Project Initiation Document for the introduction of the system at NOC was signed off by the Trust Board in September 2005. Three planning events were held by Fujitsu but these did not enable Trust staff to see a demonstration of the system which was to be implemented at the NOC. Cerner staff were not at that time available onsite to work with the staff to configure the system for the NOC. The Trust understood that the NOC would receive the system in operation at the Homerton, however, staff were not able to visit the Homerton to see the system being used. In this respect, as I cover below, one of the lessons learned for other deployments is the need to ensure adequate attention to data quality and data migration and that realistic on site testing and rehearsal of the new systems takes place prior to their introduction.

The Problems Which Arose When the New System Was Introduced

A Radiology Information System—part of the Cerner system—was introduced on 19 December and has operated without major difficulties since then. A PACS system was later implemented as planned on 23 January and has been a very beneficial addition to the trust's previous capability. This represents the first combined CRS/RIS/PACS go-live achieved.

On 20 December, the care record system went live. From the implementation date, the NOC experienced a number of problems. The main problems were:

— The process for initial user log on was much more complex and took much longer than expected. The impact of this was that the NOC's original plan to log all users on to the system in two days was shelved, and key users only were logged on initially.

— The system did not start being used until 21–23 December and during that time a range of functionality and data migration issues came to light.

— On 22 December, the system went down completely due to a power failure at Fujitsu's primary data centre, following which the in-built resilience for the power supply failed to operate as designed. In normal circumstances, this resilience capability would have been tested prior to go-live, but the compressed timetable for the NOC go-live meant that this testing had not been planned until January 2006. For the NOC the care record system and the radiology information systems were unavailable for a full working day. The NOC contingency arrangements were not designed for this scenario.

— The system reported that it was printing letters inviting patients to clinics, and yet it soon became clear that far fewer people were turning up to clinics than expected as they had not received any notification to do so. Conversely, other patients were turning up for clinics that they were not recorded as having been invited to. The impact of this was inconvenience to patients, wasting of doctor and staff time and a need to reschedule appointments. The missed appointments then resulted in a backlog of outpatient appointments building up. The NOC contingency arrangements could have been used as a preventative measure but this was not anticipated.

— There were differences between NOC's working processes, in which clinicians do not participate in the appointments process, and the way that the system was designed to work in the United States, Newham and Homerton, where they do. This had the impact, for example, of making the booking of appointments to clinics very slow for administration staff operating a different process.

— Reporting—the system at the time of our visit was unable to generate performance reports and reports of activity in the way the Trust needs to be able to manage its activity effectively. As a result the Trust had been unable to report externally for three months (the Trust reports that this is now much improved).

— For the time being, the appointments process remains slow. This initially resulted in an increased backlog of patients awaiting appointments, as NOC had not easily been able to determine which patients should be prioritised, but the Trust reports that the backlogs have now been eliminated. A system change has been requested to cater for the fact that there

are trusts where clinicians do not participate in the appointments process (a key difference to the way that the software is designed to be used).

In summary, the problems arose because:

— Insufficient time was allowed to prepare for the introduction of the new system.

— The Trust and supplier did not have time to ensure that all data was accurately transferred and that the specified number of tests on migrated data had been completed. One week before go live, data migration remained incomplete.

— Testing of the system and of its overall resilience was inadequate.

— Although NOC put in place contingency plans for possible failures in the system covering periods of 24 hours, three days, seven days and one month, these plans were insufficient once problems arose, because they were not extensive enough to match the level and prolonged duration of the difficulties encountered.

— The reporting arrangements in the software were initially inadequate to meet the needs of the Trust.

— The Trust had not been able to benefit from lessons learned from other recent implementations.

The Report of the Serious Untoward Incident (SUI)

It rapidly became apparent across the Trust after the go-live of the system that its introduction was causing the significant operational difficulties outlined above. Many of these issues did not appear to be easily and rapidly resolvable, and so the Trust undertook an operational risk assessment of these difficulties on 9 January. This identified high and extreme levels of risk to the running of the Trust which the Trust considered could potentially impact on patient safety.

Our enquiries confirmed that the NOC then prepared, on 12 January 2006, a Serious Untoward Incident (SUI) report to the Strategic Health Authority in relation to the introduction of the care records system at NOC. The NOC also emphasised to us, however, that it believes that patients have suffered no harm in relation to the incident it reported. The purpose of a SUI is to bring matters to the attention of senior managers so that problems can be managed appropriately and/or lessons learned by other organisations. An SUI can arise from any event which involves a patient, service user, member of the public, contractors, NHS staff or other providers of healthcare involved in the process of treatment, care or consultation on NHS premises and results or could have resulted in one or more of the following:

1. Serious injury.
2. Unexpected death.
3. Permanent harm.
4. Significant public concern.
5. Significant media concern.
6. Significant disruption to health care services.

In this case, the SUI lodged related to items 4, 5, and 6—that is, significant disruption to services and potential risk to patient and public confidence. The NOC foresaw likely disruption to service delivery for several weeks and months. It also reported a likely failure to meet all its national performance targets. It reported potential patient safety risks, but it is confident that, in the event, these have not materialised.

In addition, the Trust's Audit Committee recorded concern that it appeared that patient records might have been "lost" in the system. It turns out that in fact this was not correct, and all records remained in the system following migration. However, prior to some of the system improvements outlined above, it was not possible to access the records using the reporting function, but as reporting has improved the records have become accessible again.

Action Being Taken to Learn Lessons from What Happened During the Introduction of the New System at the NOC

Fujitsu and Cerner have provided both high level and local support to the NOC to rectify the faults arising from this deployment.

In addition, all parties are seeking to learn lessons for the next deployments of the Cerner system within the NOC and within the Southern Cluster of the National Programme for IT. The principal lessons arising are:

- Not to go live with a new system until all data has been migrated correctly and is clean and complete, and that this is assured seven days before the decision to go live.
- Ensure that strong project control is applied to be sure that the introduction of a system does not proceed if critical tasks have not been completed.
- Ensure realistic testing and rehearsal take place for the introduction of new systems, and do not compress the testing time.
- Test and train for the future working processes that staff will be adopting once the new system comes into operation.
- Trusts need 10 to 12 weeks to train their staff on the new system to be implemented, and staff must be released for such training.
- Take sufficient forward information from old systems to allow for a three month contingency period, and that contingency plans are sufficiently extensive and robust to deal with prolonged disruptions.

The Trust, NHS Connecting for Health and the Southern Cluster Senior Responsible Owner explained to us that a full evaluation of lessons learned is being prepared by the Trust and its partners so that deployments elsewhere in the Southern Cluster can build on the experience gained through the implementation at NOC. Some of the planned deployments in the Southern Cluster have been put back to allow this process to take place. The Trust reports that this process is now largely completed.

22 June 2006

Supplementary memorandum submitted by the National Audit Office

After the hearing, Mr Richard Bacon submitted a series of supplementary questions to the National Audit Office, what follows is their response.

Q1. *How many gateway reviews did the National Audit Office see in relation to the National Programme for IT in the NHS?*

A1. The National Audit Office saw just under 30 Gateway reviews in relation to the National Programme for IT in the NHS.

Q3. *Why were the contents and some results of gateway reviews mentioned in some detail in recent National Audit Office reports on the Child Support Agency and on the ASPIRE contract for HM Revenue and Customs, but not for the National Audit Office's report on the National Programme for IT in the NHS?*

A3. The National Audit Office's aim in preparing the report was to provide a reasonably succinct overview of the National Programme overall. As with other reports, we have to consider the competing merits of the information at our disposal. In this instance, we did not consider it appropriate to bring into the report the recommendations made through such a large number of Gateway reviews. As the question indicates, we do sometimes cover detailed results from Gateway reviews in our reports, but this is by no means always the case.

Q4. *Before producing its report on the NPfIT (pursuant to Caroline Flint's parliamentary answer of 24 May 2006):*

(i) *Did the National Audit Office see the results of internal audits on the National Programme for IT in the NHS?;*

A4. (i) Yes.

Q5. *How many independent reviews have been commissioned under contract (pursuant to Caroline Flint's parliamentary answer of 24 May 2006) such as:*

(i) *The study by McKinsey to inform the approach before the start of the programme;*

(ii) *from other suppliers to establish the value for the National Health Service and taxpayer achieved through the contracts; and*

(iii) *any other studies? And*

(iv) *before producing its report on the NPfIT did the National Audit Office see the results of these independent reviews? And if so,*

(v) *Which ones? And*

(vi) what were the key results of each study?

A5. National Audit Office saw a number of independent reviews commissioned by the Department as it conducted the study, including the McKinsey review. Many of these are referred to in the C&AG's report:

— Paragraph 3.2 refers to a report commissioned from IT industry analyst Ovum, which compared the prices achieved by NHS Connecting for Health with estimates of the prices that could have been achieved by individual NHS organisations purchasing the same services separately.

— Paragraph 3.20 refers to a review commissioned in February 2005 jointly by NHS Connecting for Health and BT which confirmed that the overall technical architecture deployed by BT was sound and capable of supporting NHS Connecting for Health's requirements.

— Paragraph 4.10 refers to the research commissioned by NHS Connecting for Health from Ipsos MORI to track awareness and understanding of the Programme across the NHS.

(Transferred to the Department of Health the request for key results from each of these studies)

Q6. *What is the most recent figure for total expenditure on central administration of the NPfIT since 2002, and does the National Audit Office consider this value for money so far?*

A6. (Transfer the request for the most recent figure for total expenditure on central administration of NPfIT to the Department of Health). Paragraph 4 on page 1 of the C&AG's report states that "it will 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". In the same way, the National Audit Office is not in a position to conclude whether or not central administration expenditure is value for money so far. The National Audit Office can only judge the value for money of the National Programme when there is a sufficient body of evidence of benefits being achieved for patients.

Q8. *Please provide a breakdown of the figures referred to in paragraphs 1.20 to 1.25 of the National Audit Office report showing how one arrives at a total of £9.2 billion for forecast national expenditure*

A8. The breakdown of forecast national expenditure is shown in paragraph 1.20-1.25 of the C&AG's report. The sum of the figures in paragraphs 1.20 to 1.25 is actually £9.078 billion, which rounded is £9.1 billion. (There is a typographical error in the heading above paragraph 1.20, which give the figure of £9.2 billion).

Q9. *What was the total cost of the National Audit Office report on the National Programme for IT in the NHS?*

A9. The total cost of the National Audit Office study was £578,000 (including £72,000 consultancy). This is higher than the average cost of a National Audit Office VFM study, but this reflects the scale and complexity of the subject. For example, each of the ten major contracts is comparable in size to a major PFI deal. The investigation also required interviews and visits with more than 30 organisations across England, including the programme regional clusters, suppliers, NHS Trusts, professional, regulatory and academic bodies, and trade unions. The body of knowledge built up on this study also leaves the National Audit Office well placed to monitor further developments on the National Programme.

Q10. *Paragraph 1.26 of the National Audit Office report refers to forecasts of local 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) which total £2.6 billion excluding PACS. Did the National Audit Office subject the figure of £2.6 billion referred to in paragraph 1.26 to independent verification?*

Q11. *Is the National Audit Office satisfied that the figure of £2.6 billion represents a realistic estimate of total forecast local expenditure?*

A10–A11. The National Audit Office did not subject the figure of £2.6 billion to independent verification. As is described in the report, this was the figure used in the Department's investment appraisals carried out at the time of the award of the main LSP contracts in late 2003 and early 2004. That is why the National Audit Office report made the recommendation (recommendation (e) page 7) that: "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."

Q12. *Given the significant changes in the contracts reflected in the increase in forecast national expenditure from £6.2 billion to £9.2 billion, does the National Audit Office believe that the figure of £2.6 billion for forecast local expenditure is still correct?*

A12. Paragraph 1.26 of the National Audit Office notes that in addition to the £2.6 billion a further £775 million in local expenditure was estimated as being needed as a result of the extension of the central contracts to include PACS. This is the basis of the total forecast local expenditure of £3.4 billion referred to in the heading to paragraph 1.26. The National Audit Office recommended that 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 (recommendation (e) on page 7 of the C&AG's report).

Q14. *What are the national costs of PACS?*

A13–A14. The contracted central expenditure on PACS is £245 million for the central data store over 10 years to 2013–14 (paragraph 1.20 page 25 and Figure 3 Page 17). These contracts would involve local IT spending of an estimated £775 million, to be paid for by local NHS Trusts (paragraph 1.26 and Figure 3 page 17).

(Otherwise, transfer to the Department of Health)

Q16. *What assessment has the National Audit Office made of the statement by Connecting for Health that: "It is generally accepted in the IT industry that implementation costs are some 3-5 times the cost of procurements. That is reflected in the business case that was made for the National Programme"*

A16. This is a statement attributed to NHS Connecting for Health in response to media enquiries in October 2004. It was not considered as part of the National Audit Office analysis.

Q17. *What is the source for the statement in paragraph 4.8 of the National Audit Office report that: "The programme is the only major public sector IT project in the UK where the responsible body has a dedicated website to provide information on the progress of the project"?*

A17. We are aware from our research that there are other sites providing information on aspects of public sector IT projects, such as, the Criminal Justice IT Programme. However such websites are not a common feature of UK public sector IT initiatives and so far as we are aware none provides as much information as the NPfIT website.

Q18. *In the National Audit Office report, Patient Choice at the point of GP Referral, the National Audit Office expressed concerns about the costs of interim systems that will have to be replaced by full systems at a later date. Does the National Audit Office have similar concerns about the costs of interim systems being deployed in the NPfIT because of the late delivery of core software?*

A18. National Audit Office recommendation 9a on Page 6 of the National Audit Office NPfIT report highlights the importance of ensuring a robust, engineering-based timetable for delivery which NHS Connecting for Health is confident its suppliers are capable of achieving.

Recommendation 9c on Page 6 recognises that whilst some adjustment of suppliers' delivery milestones may be a necessary response to suppliers' difficulties in delivering, NHS Connecting for Health 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.

Assessing the net impact of deploying interim systems is complicated because both costs and benefits are affected. We would expect the assessment of local costs and benefits we recommend (recommendations 9e) to cover these issues.

Q19. What concerns does the National Audit Office have about the long timeframe for the NPfIT, given that the NHS and its demands for IT could change substantially between now, when systems are being defined, and the time they are deployed?

A19. The NPfIT is a ten year programme. Just as the last ten years have seen large changes in the NHS, for example in organisation, medical techniques and information technology, so further changes should be expected in the future, even if the precise form of these changes cannot now be fully foreseen. Paragraph 3.10 identifies the mechanisms put in place by NHS Connecting for Health to help ensure continuing value for money over the life of the contracts, such as ensuring technology is continuously improved and refreshed so that systems continue to meet the changing needs of the NHS throughout the contract periods. The contracts with suppliers also include mechanisms for incorporating changes in the NHS's requirements. It will be important that NHS Connecting for Health uses such mechanisms to make sure that the Programme adapts to the changing nature and needs of the NHS.

Q20. Given the apparently long timeframes, at what point will the National Audit Office judge whether the programme has been value for money?

A20. Paragraph 4 of the C&AG's report explains that "*the main implementation phase of the Programme and 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.*" The National Audit Office will be in a position to judge whether the Programme has been value for money when there is a sufficient body of evidence on patient benefits from the Programme.

Q21. *In paragraph 3.5 of the National Audit Office report the National Audit Office praises the work done on requiring suppliers to produce a "Proof of Solution". Why does the National Audit Office believe this good work has not led to core systems being delivered on time?*

A21. As reported in paragraph 3.5, "Proof of Solution" tests were carried out in a simulated environment to show whether potential suppliers' systems could meet a number of scenarios devised by NHS Connecting for Health. They are helpful because they provided a degree of confidence that the potential contractors understood NHS Connecting for Health's requirements. They therefore help to reduce risk but of course cannot on their own eliminate it.

The main factors that have contributed to delays in delivery are (i) additions and changes to the scope of the Programme (paragraph 1.7), (ii) difficulties by some suppliers in meeting agreed delivery dates (paragraph 1.11), (iii) a need to pilot more extensively the clinical record before full scale implementation (paragraph 1.11), (iv) system integration being highly complex and taking longer than suppliers initially planned (paragraph 1.9), and (v) a move away from the original structure of phases and releases, with new functionality being delivered in a different order from that originally envisaged (paragraph 1.11 and Figure 2 on page 12).

Q22–23. *Before producing its report on the NPfIT, did the National Audit Office see the document Delivering 21st Century IT Support for the NHS: National Strategic Programme? If so, did the National Audit Office see:*

(i) the version with four appendices including Appendix 3 with the Project Profile Model completed by Sir John Pattison showing a risk score of 53 out of a maximum possible 72 and estimated whole life costs of £5 billion; or

(ii) the version with only three appendices from which the Project Profile Model with its risk scoring and estimated whole life costs had been removed?

Q23. *If the National Audit Office did see the version including the Project Profile Model*

(i) Why was no reference made to the PPM scoring in the National Audit Office report?

(ii) What is the National Audit Office's assessment of the PPM scoring broken down by category; and in total?

A22–23. The National Audit Office saw the published version of *Delivering 21st Century IT Support for the NHS: National Strategic Programme* with three Appendices. Whilst there may have been earlier drafts of this document, this is the only substantive version definitively representing the Department's views.

Q28. *Why are there no detailed references in the report to the numerous technical difficulties encountered by users of systems deployed under the contracts?*

A28. Paragraph 4 of the Summary to the C&AG's report sets out the scope of the National Audit Office examination: "we examined the progress being made in delivering the systems against the original plans and the costs of the Programme; the steps taken by the Department, NHS Connecting for Health and the NHS to deliver the Programme; how the IT systems have been procured; and how the NHS is preparing to use the systems delivered." This National Audit Office study did not, therefore, include within in its scope an examination of the technical difficulties that users of deployed systems may have encountered.

The reason why we drew the scope of the report in this way was that we considered it was too early to examine whether, for each project in the Programme, these were signs of insoluble problems from which the National Audit Office could draw far reaching conclusions.

Q29. *Why did the National Audit Office report the July 2005 Mori poll and not the February 2006 Mori poll?*

A29. At the time of finalising our report, the analysis of the February 2006 Mori poll was not complete.

Memorandum submitted by Larry Benjamin

I am a consultant ophthalmic surgeon working at Stoke Mandeville Hospital, Aylesbury.

I have a long-standing interest in IT and its use in Medicine and although a member of the Worshipful Company of Information Technologists, I am writing as an individual and a consultant in the NHS for the last 16 years.

I would like these comments to be included in the documents to be read by the Public Accounts Committee relating to NpfIT.

My worry regarding the implementation of NpfIT is that it has been introduced "backwards". By this I mean that the national spine and its associated infra-structure has received much attention whilst very little effort has been put into useable local systems for day to day input of clinical data—the very life blood of any clinical system.

For a clinical system to be deemed useable by the staff using it, their involvement in its development is vital. Clinical systems have evolved over many years to allow the recording, storage, retrieval and analysis of data relevant to sometimes complex clinical situations. Although the time taken to input data into a new system does not necessarily have to be faster than the existing systems, if longer is required then there must be some added value. Data retrieval and analysis with plotting of trends would be an immediate benefit which would, I believe, stimulate staff to input meaningful information.

In my speciality, three or four software systems already exist in clinical use, which have been developed by and for ophthalmic units and their staff. All of these are already able to comply with the requirements of the national cataract dataset (which I helped to develop via the Royal College of Ophthalmologists). An interesting project recently took place between the 20 or so of the eye units who have installed one of these systems whereby details of 56,000 cataract operations performed recently were analysed. The data capture was input routinely and the retrieval near instantaneous.

It is highly unlikely that local service providers will achieve this level of detail and use-ability for at least 5 years. My suggestion is that more effort is put into interfacing between the national spine and local systems such as that mentioned above which are already fit for purpose. This will save time and money but most importantly, will gain user confidence very quickly.

6 November 2006

Memorandum submitted by Thomas J Brooks

I am writing to offer evidence to the Committee of Public Accounts on the National Programme for IT in the Health Service (NPfIT).

I am a management consultant who specialises in supporting the effective management of healthcare. I have worked with the NHS in England, Wales & Scotland and with health & social care in Hong Kong, Singapore, Norway and the USA. Between 1995 and 1997, I was seconded to the NHS Executive in Leeds where I led the NHS Number project, the last successful national IT based project to be delivered fully in England and Wales. I have first hand experience of the national programme for IT, through supporting trusts in various parts of England to improve their NHS IT services despite the challenges thrown up by Connecting for Health.

As well as being a member of the Worshipful Company of Information Technologists Medicines and Health Panel, I am a member of the all party Parliamentary IT Committee where I serve on the programme committee assisting MPs and Peers with their liaison with healthcare bodies and organisations. However, I write this letter in an entirely personal capacity.

I have read the paper produced by Richard Bacon MP & John Pugh MP entitled "Information Technology In The NHS: What Next?" I strongly support the approach suggested in their paper in respect of the provision of IT systems and services to local NHS trusts. However, I question whether MPs have fully understood the scale of the national "spine" infrastructure issues. I also make observations in this letter on the poor quality of the negotiation of the NPfIT contracts by Mr Granger and his team and the resultant effect of the inadequacy of the negotiated contracts.

The Replacement Of Local Systems At Hospitals And GP Practices

The view that central procurement would produce systems that met local requirements was indeed a fundamental error. Globally the real value of IT systems to healthcare is realised when IT is available at the point of care to support the care of the patient presenting. The freedom of GPs to select their own systems from 1995 onwards built on this approach. GPs selected systems whose style suited their manner of interfacing with the patient presenting. Clinicians in hospitals also need a system that suits their style of working and the range of services that they provide. Clinical preferences in one hospital are rarely identical to those expressed by their neighbouring hospitals. Choice at the local level is essential.

Three London hospitals "opted out" of the national programme from the beginning. Homerton University Hospital Trust and Newham University Healthcare Trust both deploy Cerner Millennium. Their implementation is at a much more advanced state than any trusts in the National Programme. The same is true of University College Hospital London that selected and installed the IDX system independently of the National Programme.

In each of these cases the NHS Trust contracted directly with the system manufacturer. Local choice and implementation, together with a direct supplier relationship, unencumbered by the having to work through an LSP and a Connecting for Health Cluster Office, has proven to be the more successful route.

There is no evidence to date that LSPs have added any value to the national programme and a cluster wide contract has not delivered any identifiable benefits

None of the local Trust systems delivered to date by the LSPs have any meaningful clinical support software in use. The software modules delivered so far focus largely upon patient administrative tasks. There are no timescales published in either the Connecting for Health Cerner release schedule or in the iSoft Lorenzo system schedule for when each specified clinical support feature will be released. Nor is there a published description of what each clinical support feature will actually contain if it is eventually released.

There are systems available with strong clinical point of care support features. The industry assessor, KLAS Enterprises, lists eleven "fully assessed" vendors of systems that are marketed as strong in clinical support features, including the Cerner and the IDX products of course. The iSoft Lorenzo system is not listed. The list includes Misys, a British owned company and McKesson, which has a well established British customer base. This demonstrates that there is a considerable quantity of choice of system available to local trusts.

The Central Infrastructure

MPs are mis-informed if they view the central infrastructure as "making reasonable progress". The delivery promises for the three application areas that depend on the central spine (choose & book, the care records service and e-prescribing) have all been missed. As a means of creating a pretence that choose & book targets are about to be achieved, a range of semi-automated alternatives has been launched.

The key central infrastructure item was planned to be the patient data repository. In the view of many informatics engineers this has been doomed from the start. Connecting for Health has never been able to define and publish any detailed data architecture for the patient record depository and for local records.

One option considered was to hold only a national record for each patient. This would include all of the patient's healthcare history in electronic format. Every NHS and social care organisation nationwide would be able to share access to the patient's details through this national record.

A calculation of the potential size of such a record structure, made during the procurement process, showed it was beyond that realistically implementable on current technology. Further, a calculation of the volume of messages that would need to be supported if everyone in the NHS depended upon a central patient data depository for their patient records, also provides a performance demand well beyond the capability of current day technology.

Connecting for Health has not published any calculation details that it has made to demonstrate that the scale of the implementation is technically achievable. The NASP contract for the "spine" signed with BT is understood never to have warranted that it could handle a fully detailed central patient data depository

The current proposal for shareable patient records on the "spine" is an ill-defined fudge. The detail of what patient data items would be held on the national spine has changed frequently and only a "first step" "summary" is defined currently. Clinicians are broadly agreed that the current "first step" "summary" detail is of extremely limited value to them.

One challenging question is whether clinicians should rely upon the data in their local records when a patient presents or rely on the nationally held detail. Which is the more likely to be correct and which should take precedent when the details are not identical?

Matching The NPfIT Architecture With The NHS Organisation

The national spine was an ill-conceived venture in that it does not support adequately the legal framework of the national health service in the UK, nor does it have parallels overseas.

There is no corporate body called the NHS. The 1977 Health Act clarified the legal relationship between the patient and the national health service as that between the patient and the (family) health authority. The core of that legal relationship was preserved in the subsequent health legislation. Each patient is registered with one, and only one, primary care trust. The primary care trust is responsible for providing the patient with a GP, and with a dental practitioner. The primary care trust maintains contracts with a range of GPs and with dental practitioners. (It also maintains contracts with community pharmacists and ophthalmologists.)

The primary care trust receives an annual sum per patient registered with it from which to commission and pay for the patient's care. The primary care trust contracts with a range of acute, mental health, children & 'older people' and other care service providers for elective healthcare for the patients registered with it. The primary care trust is at the heart of financial management in the NHS.

The annual capitation contribution is weighted by age, deprivation and many other factors. The primary care trust has the responsibility for ensuring that what it spends on health care for its patients balances the needs related funds that it receives for those patients. The primary care trust, similar to the health maintenance organisation in the USA and provident funds in some commonwealth countries IS the hub of the care delivery process. Yet under the national programme central infrastructure arrangement, the primary care trust plays no significant role.

If the next attempt to modernise patient care and administration in England centred upon the primary care trust and its legal relationship with its patients, the resultant information and IT architecture would so closely model most parts of the world that many 'off the shelf' software solutions become immediately available.

The Inadequacy Of The NPfIT Procurement

Computer Weekly revealed in May 2004, that "only five months after the deal was signed" it had "run into contractual issues". Quoting from a leaked BT document, CW reported the issues as arising from "detailed definition of requirements and practical deployment not envisaged at the Effective Date of the Agreement".

The reason that BT (and other LSPs) faced up to "detailed definition of requirements and practical deployment not envisaged" is that after the contracts were signed, the Contractors had to produce a substantial amount of detail on an "agree to agree" basis. In different contracts, post signature documents were required for "Service Level Specifications", Help Desk Interworking Procedures', Detailed Annual Implementation Plans, Component System Descriptions, Quality Plans, Disaster Recovery Plans, Module testing plans and specifications, etc, etc. The NAO did not appear to uncover the extent of the contractual holes at contract signature nor to examine how much the absence of these documents in early 2004 led to the subsequent rescheduling and delays.

The NAO complimented CfH for delivering the advantages of "swift procurement". But the NAO's own report demonstrates the extent of the inadequacy of the CfH procurement, which was undertaken in haste with the commercial deal still not agreed fully when the contract signatures had dried.

The delivery details for the National Data Spine contract had to be "reorganised and replaced" as early as December 2004. The core care records element of the Accenture contract was revised "into four releases" the last of which was "13 months later that the original target date". CSC customers fared even worse with a "five release" rescheduling, the last element of which will be nearly two years late.

Nor was the quality of analysis work undertaken by the procurement team impressive. During the procurement the Cerner solution, which was included in a shortlisted consortium, was examined and rejected. Apparently it was considered to be less suitable than the other computer software offerings. The once rejected Cerner is now the 'great hope' of Connecting for Health.

The implementations in the southern cluster to date (Nuffield Orthopaedic Centre, Weston and the delayed Milton Keynes implementation) have demonstrated how difficult it is to 'build' and implement Cerner Millennium without very close interaction between Trust clinical staff and Cerner technicians in Kansas. The LSP and Cluster team structure gets in the way of that necessary very close interaction.

The iSoft "Lorenzo" offering was selected from paper descriptions with minimal demonstrations of prototype software elements. Lorenzo is still not available from the development laboratories in India. When it is ready, iSoft have stated that they will evaluate it first in Germany and Singapore. Neither of these two countries requires solutions that mirror England.

A full examination of all the procurement facts would illustrate that the procurement process and the LSP contractual structure was the root cause of many of the problems that exist today.

5 November 2006

Memorandum submitted by Mrs Barbara Greggains

Mrs Barbara Greggains MBE BA(Hons) MMRS Lay Member of Council: The Royal College of Radiologists: 2002–05 Past Chair: RCR Clinical Radiology Patients' Liaison Group 1999–2002.

Summary of Paper

For all those who have fought for implementation of a national PACS roll-out as part of the NHS IT programme, it has been gratifying to see the benefits they foresaw for patients now becoming reality. This is a case of IT bringing such major benefits to patients that their whole experience of radiology is being transformed by the Picture Archiving and Communications System. Major efficiencies are being experienced in the NHS where PACS is up and running. As PACS rolls out, there is progress towards an IT-enabled radiology service fit for the 21st century.

Background to PACS Roll-out

The patient representatives in the Royal College of Radiologists (RCR) have been vociferous over the last eight years in calling for PACS (Picture Archiving and Communications System) to be rolled out across the NHS. They were convinced of the benefits and efficiencies of having imaging put straight onto computer. Indeed, they enlisted the support of the e-Envoy's office in the Cabinet Office and got a business case written for PACS. They warmly welcomed the funding for the NHS roll-out which means PACS should soon be in every Trust in England and they are pleased that the other UK countries are moving forward too.

The benefits for patients are remarkable. All this is happening at the same time as the NHS Care Record Scheme is being developed and Radiology Information systems are increasingly in place, and these developments taken together are revolutionising radiology processes and outcomes for patients.

The Benefits of Computer Storage and Multiple Copies of Images

It is of huge benefit to patients that PACS puts patient images straight onto computer. Sick patients are not left alone while the success of the imaging is checked nor do they have to return to the department if the consultant is dissatisfied with the imaging. With PACS, the storage and quality checking of the image is immediate.

The electronic storage and transfer of imaging frees patients from the problems associated with single copies of images. Under single image systems, the single copies get dispersed around hospital sites in spite of the best efforts of radiology departments. The lost images create serious problems for patients and hospital staff. Images are not to hand when needed and consultations are hindered, with the result that diagnosis is delayed and future treatment cannot be planned. Surgery gets cancelled for the same reasons. With PACS, patients can hope not to suffer the confusion, delays, waste and health risks that this has involved. Even if there is some computer down time (and there are ways of keeping this to a minimum) the basic imaging is not lost.

Reduction in Repeat Imaging and Greater Safety for Patients

Very importantly, patients need not be subjected to unnecessary radiation as a result of repeat imaging when images are lost. It is unforgivable and against IR(ME)R regulations to impose this on a patient, yet lost "one copy" imaging means that sometimes there is no alternative.

Patients can also expect that, as records build up, their recent imaging history will be available to all those caring for them so that again there is a reduction in unnecessary imaging. This could mean, for example, an anaesthetist will know if a chest X-ray has been carried out recently during investigations and will not re-order another prior to surgery. Consultants, hospital staff and in time, even GPs, will also have access to imaging records and not inadvertently request repeat imaging. Knowledge of any adverse reactions to contrast materials can also be registered on the system, an important safety feature.

Better Use of Radiologists' Time, Skills and General NHS Resources

There has in recent years been a severe shortfall in capacity in radiology, both of workforce and equipment and a major benefit of PACS is greater efficiency in working methods. A clinical (or diagnostic) radiologist member of the RCR, with long years of training and experience should be doing the highly skilled work of interpreting images, not being delayed while images are located.

Equally, the other RCR Members and Fellows, the clinical oncologists, should be able to put their long years of training into devising radiotherapy regimes on the basis of readily available images. Cancer patients are benefiting from more focussed and powerful radiotherapy because modern radiotherapy planning increasingly uses sophisticated imaging and image fusion to pinpoint tumours. PACS technology lends itself perfectly to this.

Other doctors outside the radiology department, who also need sight of patients' images, will not need to waste their own time or that of their patients chasing up mislaid imaging if they are able to access PACS. The radiographers who work alongside radiologists and other members of staff should also not be wasting their valuable time in image location.

Finally, it is extremely wasteful for NHS resources to be used in developing traditional film, storing the films (sometimes off-site) and the physical transfer of single images by hand, taxi etc.

Speedier and More Efficient Diagnosis Systems

PACS offers the potential for speedier diagnosis for the patient. Modern technology allows images to be available round hospital sites or across sites immediately they are taken. Multi-disciplinary discussions can take place at once, even if participants are in different places. Many Accident and Emergency patients, in particular, are having reason to be grateful as their imaging is flashed to the relevant site in a hospital for an urgent discussion and decision on the next best move.

The greater efficiency of PACS speeds up reporting. The Hammersmith Hospital, the first filmless hospital in the UK where PACS has been pioneered, offers the stellar performance of same-day dictation of reports within the radiology department. This dream is currently becoming achievable in other hospitals. Patients have every right to ask why they should suffer days and even weeks of agonising delay for a diagnosis, especially in relation to a life-threatening disease.

Gradually, all the PACS installations will link up and, if a patient needs treatment, say on holiday in Yorkshire, existing images from the home hospital miles away should be available on-line. GPs should eventually be able to order imaging from their surgeries. In the meantime, if a patient requires a hard copy of some imaging to take to another site, this can be offered very cheaply with PACS at a fraction of the normal cost.

Potential to Improve Diagnosis Standards

As PACS installations join up across the NHS, the patient can begin to expect an even higher level of service from the profession. Currently, if patients have a cancer history and an apparent secondary symptom appears, they may well undergo a series of different forms of imaging to check all over the body, probably taken over a number of different centres which specialise in CT, MRI , nuclear medicine etc. Without PACS, radiologists at each centre report in isolation. It is now possible to combine different forms of imaging so that better quality information is available and one radiologist can bring together the information from a series of images.

The diagnostic radiologist working with PACS will eventually also have easy access to previous imaging to track changes. This reduces the chance of missed problems. It is of especial benefit for the breast screening programme where tracking change is of key importance.

Manipulation of images is also advancing. Images can be combined to produce, for example, a neck or foot which can be viewed from all angles and rotated and manipulated as necessary. It will be possible to zoom in on aspects of images and flip them over. Furthermore, the integration of PACS with other hospital IT systems means radiologists can access other information such as pathology reports. Thus patients can

begin to look for a more informed and rounded diagnosis from radiologists who increasingly are the front-line diagnosticians, since their colleagues in other specialties rely more and more on their increasing skills and advanced equipment.

Second opinions are more easily obtained with PACS. It offers the potential for difficult interpretation to be passed swiftly to experts in that field—a specialist radiologist in a major teaching hospital might provide an immediate second opinion for a patient anywhere in the UK. Emerging satellite technology is also beginning to offer the potential in time for high-grade image transfer to be the made to the specialist radiologist's home, if necessary, again speeding the diagnostic process. In some parts of the world, images taken during the day are interpreted overnight in other countries where radiologists are awake.

This international transfer of imaging hugely expands the expert diagnosis field, and the issue of ensuring parity of standards is being successfully addressed. The potential is there one day for patients with obscure or difficult health problems to have the benefit of diagnosis from the world's finest experts in that field.

Furthermore, any number of people can simultaneously look at the same image but be situated in different places. This makes it easy for a team of people to discuss an image and its implications.

New Teaching Methods for Radiologists

The innovative radiology Academies which have been set up in three English teaching hospitals will benefit hugely from PACS, The development of a centralised electronic database of training material will mean these trainees can receive a wider exposure to imaging during their training than was hitherto possible. Their trainers can also cope with more trainees at a time, even though these trainees will still spend important time in the hospitals. The reason for this is that video links can be used together with PACS, so trainees can track cases using PACS, study real-life reports, observe multi-disciplinary meetings while they look at the relevant imaging and watch patient consultations.

Radiologists trained in this way should be skilled in the habit of drawing on multiple sources for their diagnosis, of using modern methods for combining and manipulating images even from different forms of imaging and of taking a full view before drawing conclusions. Refresher courses for qualified radiologists will also in time be easier using the database.

The Brighter Future for Radiology Patients

For all those who have fought for implementation of a national PACS programme, it has been gratifying to see the benefits they foresaw for patients now becoming reality. This is a case of IT bringing such major benefits to patients that their whole experience of radiology is being transformed. As PACS rolls out, there is progress towards an IT-enabled radiology service fit for the 21st century.

Business cases were being drawn up initially which showed PACS implementation to be cost neutral over a few years, but, now PACS is rolling out, the anecdotal evidence of greater efficiencies suggests that it is likely that the benefits of operating an efficient service will offer even better financial outcomes than anticipated. Fewer members of staff are walking about searching for, or carrying, single copies of imaging or putting imaging in taxis to go to other sites. Fewer operations are being cancelled because of lost imaging. Fewer consultations are being wasted for the same reason. It is possible for A and E patients to undergo instant imaging and for their cases to be discussed immediately by doctors in different sites so that expensive precautionary referrals to trauma units can often safely be avoided.. Cases can be discussed by people in different sites without the need to gather in one place. All this not only saves money, it frees up resource.

The national 18-week wait target can only be achieved with PACS.

In summary, PACS implementation is one of the shining stars of the NHS IT programme.

Memorandum submitted by Ian Griffiths and Simon Bowers, *The Guardian*

Introduction

We thought it might be of assistance to the Committee to set out below a summary of our investigation into the affairs of iSoft over the last two years. We make no point other than to point out that iSoft is the main software supplier in three of the five regions covered by the National Programme.

Background

The Guardian began examining iSoft's accounting practices in early summer 2004. It saw confidential reports and papers which suggested the company's conduct had the effect of misleading the stock market. The investigation uncovered evidence that questionable accounting could be traced back to 2002 and that the company's non-executive directors past and present were called on to deflect questions about the company's accounting.

In July 2004 *The Guardian* discovered that an iSoft director had been re-elected to the board—despite the fact that he has been suspended from duty without the stock market being informed. This prompted Paul Farrelly, MP for Newcastle-under-Lyme, to ask the Department of Health a number of Parliamentary Questions. One Question asked: "if the Department will ask Accenture to report on the (a) financial standing and (b) accounting treatment of revenues and profits at iSoft." John Hutton, then health minister, replied that there were no plans to seek any such report on issues which were a matter between iSoft and its auditors.

In autumn 2004 iSoft secured a court order preventing *The Guardian* or Ian Griffiths from publishing the findings of the investigation into the company's accounting.

In January 2006 iSoft issued a profits warning. In June 2006 iSoft changed its accounting policy on income recognition and issued another profits warning. A week later its chief executive left. In August 2006 the company said it had uncovered accounting irregularities. Later that month iSoft announced a £344 million loss for the year to April 2006. In September Accenture said it was quitting the National Programme. In October iSoft put itself up for sale. iSoft is now being investigated by the Financial Services Authority and the accountancy profession's disciplinary body. In late October the order gagging *The Guardian* and Ian Griffiths was lifted.

Investigation Findings

iSoft added £30 million to its revenues in 2004 in a move that had the effect of misleading the stock market.

Questionable accounting at iSoft can be traced back to 2002.

The investigation suggests that the company's non-executive directors past and present were called on to deflect questions about the company's accounting.

For two years, iSoft claimed information *The Guardian* had found relating to £30 million in revenues came from confidential company papers containing errors that were later corrected but now iSoft's new management conceded the information in the original documents seen by *The Guardian* was accurate.

The £30 million figure was much higher than investors had expected. The glowing full-year results reported in June 2004 pushed iSoft shares to a new high of 446p. A week later five directors and a company founder sold shares worth £44 million.

In June 2004 a reliable source told The Guardian that in its accounts for the year ending April 2004 iSoft was recognising £30 million of payments from Accenture and CSC, who were implementing the NHS's £6.2 billion technology overhaul, the National Programme for Information Technology (NPfIT). This was designed to radically enhance the NHS's technology in three of England's five regions and iSoft was the main software supplier.

The source said: "There was a £30 million gap which had to be filled to meeting City expectations. So they went for recognition of the contracts, take £18 million from Accenture and £12 million from CSC."

The Guardian was then sent a copy of the minutes of the iSoft audit committee meeting held on 15 June 2004 to discuss the 2004 audit and the accounts.

The minutes said: "The external auditors [Robson Rhodes] then reported on the UK trading entities. In the case of the LSP contracts, £30 million of the £120 million licence revenue had been recognised."

iSoft told *The Guardian* in October 2006: "The company recognised approximately £30 million of revenues from the National Programme in the financial year ended 30 April 2004 under the accounting policy for revenue recognition that was in force."

The audit committee minutes were included in papers for the board meeting held immediately after the iSoft annual meeting in July 2004.

An iSoft spokesman said on 5 August 2004: "We suggest that *The Guardian* may be being referred to a simplistic confidential third-party summary of the results of an individual business unit that was responsible for both delivery of new system deliverables under the NPfIT plus other contractual deliveries completed prior to the rollout of the new NPfITsystem."

The spokesman said the minutes contained a drafting error. This was confirmed by iSoft lawyers, who said the minutes would be corrected when the audit committee next met later in the year. The company offered no explanation about why such a fundamental error had not been spotted before the minutes were circulated to the board.

Sir Digby Jones, a former iSoft non-executive director and former director general of the CBI who attended the audit committee on 15 June, instructed the company's lawyers to write to The Guardian on 11 August 2004 answering questions put to him about the minutes. They said: "He [Sir Digby Jones] is satisfied that there was no confusion over the matter internally, but there was an error in preparation of the draft minutes."

On 12 August 2004 Eurfyl ap Gwilym, then chairman of the audit committee who still sits as the non-executive director heading iSoft's remuneration committee, filed a witness statement saying the reference to £30 million of LSP revenue in the minutes was inaccurate. He said: "I can confirm in my capacity as chairman of the audit committee that I will propose formally to the audit committee when it next meets that

this error in the minutes be corrected to read, 'in respect of new system deliveries completes as part of the P1R1 [the first phase of the NPfIT] contractual deliveries, £5.8 million was recognised in the year. Other revenues were generated in the year from deliveries of existing products and services totally £24.5 million. These other deliveries predated P1R1 and were contractually differentiated from the P1R1 new NPfIT system rollout.'

In October 2006 iSoft conceded the original minutes seen by The Guardian were entirely accurate. Director of communications John White repeatedly confirmed to us that changes had been made to the relevant passage, but that they did not amount to a correction.

iSoft has used controversial accounting procedures to book revenues before being paid on subsequent occasions. In 2005 the company booked a cash advance from the Department of Health of £58 million, helping it to meeting City expectations. Earlier this year, a similar upfront government cash amount was paid to the company—though it was not as much as iSoft had been banking on.

Sir Digby was also called upon to assist iSoft executives to resolve a serious accounting problem relating to a bad debt. On 31 October 2002, iSoft signed a licensing agreement with Gleneagles Healthcare, a Philippines company, which agreed to pay about £2 million for the right to distribute iSoft products in the region. The deal was never announced publicly even though the one-off payment to iSoft represented more than 50% of the company's net profits for the half-yearly to 31 October 2002.

But iSoft was never paid by Gleneagles, a company only incorporated in July 2000 with net assets of just £15,000 at the end of 2001. The bad debt came to light in late summer 2003 when a due diligence report was commissioned from the accountants Deloitte Touche by the board of Torex, a rival software company, ahead of recommending a merger with iSoft to its shareholders. The report said: "This debtor arose during the financial year to 30 April 2003. Collection must be questionable although Tim Whiston is confident that payment will be received. No provision has been made against this debt."

So concerned was the Torex board by the Philippines debt that it commissioned its own investigation into Gleneagles Healthcare. The report questioned Gleneagles' credentials and the Torex board considered calling off the merger with iSoft.

The deal was only rescued when the Torex board sought personal assurances in September 2003 from Sir Digby, then iSoft's senior independent non-executive director. He conducted his own review of the Gleneagles transaction and concluded that it had been properly accounted for.

In October 2006 Sir Digby recalled the approach, which was made through Torex's financial advisers. He said that he had received personal assurances from iSoft executive directors both privately and later at a formal board meeting that the debt had been provided for.

Memorandum submitted by Simon Bowers, *The Guardian*

I thought it might be of assistance to the committee to note some research *The Guardian* carried out on the value for money being delivered by the National Programme for IT (NPfIT) between November 2006 and January this year.

I canvassed a small number of significant NHS suppliers and long-standing industry experts on how much it would cost, outside the NPfIT, to supply patient administration systems (PASs) to the standard specified by the NPfIT (a) for an acute hospital trust, and (b) for a community or mental health trust. Most gave their opinion on condition of anonymity. One exception was Stephen Critchlow, executive chairman of software group Ascribe plc.

All agreed that the a conservative estimate for an acute hospital trust system was £2 million, while a conservative estimate for a mental health/community system was less that £250,000.

I put these figures to NHS Connecting for Health. In reply, a statement was sent to me saying: "The figures you quote for costs of systems are not comparable with what Local Service Providers deliver."

All of the above information went into an article published on 22 January 2007.

22 Jan 2007: The Guardian—Page 21—(637 words)

Financial: NHS pounds 6bn IT system poor value, say experts: Schemes "costing four times going rate": Health officials reject claims of overpayments

By: Simon Bowers

Leading healthcare IT experts have warned that the NHS's troubled pounds 6.2 billion system upgrade is costing taxpayers substantially more than it should. They claim the same functions could be delivered for considerably less outside of the national programme for IT, dogged by delays and software setbacks.

Stephen Critchlow, executive chairman of software group Ascribe, said he "could not see where value for money is coming from". There was evidence, he added, to suggest the NPfIT was installing and running systems for several times the going rate.

Phil Sissons, a former executive at the software group Torex—now part of iSoft—and an ex-consultant to the NPfIT, said: "Publicity from the national programme was that they got some good deals because of the buying power of the NHS.

"But I don't believe they reduced the cost at all. There are multiple margins being added to the process each time there is an extra layer of management or another company involved."

Doug Pollock, managing director of software supplier Cambio, who has also worked within the national programme, said these multiple margins were sometimes "scandalous".

From the outset, NHS bosses promised the centrally organised 10-year IT upgrade programme—covering hospital trusts and GP practices across England—would be pounds 3.6 billion cheaper than the cost of upgrading systems on a piecemeal basis.

However, the first three years have proved troublesome, with deliveries of patient administration systems (PASs) to acute, primary care, community and mental health trusts falling far short of targets—and, most importantly, without delivering the promised clinical functionality. Cost savings, NHS bosses still insist, remain on track.

Meanwhile, the NHS's head of IT, Richard Granger, has been busy compiling a catalogue of alternative suppliers. Industry insiders believe they could help the troubled project—the largest civil IT project in the world—evolve from a national into a local programme. At the same time, the Department of Health continues to make multimillion pound payments to its five lead regional contractors, known as local service providers (LSPs).

At the end of March last year, NHS fig ures showed US consultancy firm CSC—LSP for the north-west region—had only installed PASs at 58 community or mental health trusts and at eight acute trusts.

Independent suppliers canvassed by the Guardian—including Ascribe and others who asked not to be named—said the going rate, outside NPfIT, for providing a comparable acute trust PAS was about pounds 2m, while community or mental health systems could be delivered for less than pounds 250,000. By the end of March, however, the DoH had paid CSC pounds 119 million—almost four times what it would have cost to have similar systems delivered outside the NPfIT.

An NHS spokesman told the Guardian: "We are not overpaying CSC. The NHS pays LSP suppliers in accordance with contracted schedules. The figures you quote for costs of systems are not comparable with what LSPs deliver."

The spokesman pointed out that "significant infrastructure", which is yet to be fully utilised, had also been delivered. This is believed to be a reference to computer servers housed remotely at central data centres. Last year, the NHS's largest-ever computer blackout was traced back to the Maidstone data centre. It was blamed for bringing down PAS systems at about 80 trusts for up to four days. A back-up system failed to function.

NHS bosses have repeatedly insisted tough NPfIT contracts mean taxpayers will never be left paying the cost for work that had not been delivered to standard.

No detailed figures for DoH spending on NPfIT are available since last March, but a number of sources within LSPs have privately confirmed multimillion-pound payments have continued to flow.

A number of rogue acute trusts have become so frustrated with the NPfIT that they have opted out, forgoing central government funding in favour of selecting their own IT suppliers.

Further memorandum from Simon Bowers, *The Guardian*

I thought it might be of assistance to the committee to note that in February 2006 two of the Local Service Providers (LSPs) to the National Programme for IT (NPfIT)—Accenture and Computer Sciences Corporation (CSC)—produced an assessment report on the deliverability and fitness for purpose of Lorenzo, a software package being developed in India for the NPfIT by the LSP's chosen software partner iSoft.

The report found that, beyond a basic version of Lorenzo tailored for GPs, there was "no well defined scope and therefore no believable plan for releases".

iSoft had send Accenture and CSC a series of release dates for different versions of Lorenzo. iSoft said the final, fully functional version, would not be available until the second quarter of 2008.

The Accenture/CSC report concluded "These releases must be viewed as 'indicative at best and are likely to be highly optimistic". It labelled 13 out of 39 matters relating to Lorenzo "red", meaning they raised issues requiring immediate work.

The report found "no evidence for the development, nor testing of, technical procedures that would be required for operation and maintenance of the live system . . . this is the main risk to the successful delivery of a fit-for-purpose solution".

The report, which I have seen, was marked confidential. All of the above information was included in an article published in the Guardian on August 21, 2006, a copy of which is printed below.

It subsequently emerged, in iSoft's 2006 annual report and other filings, that both Accenture and CSC had written to iSoft alleging material contractual breaches. iSoft denied all the allegations and registered claims for additional work done outside the scope of the basic contracts. The annual report states that iSoft had taken legal advice from its law firm Ashurt on these matters. It said: "Having reviewed the legal advice the board has taken the view that, in the view of the complexity of the potential claims and counter-claims, a commercial settlement is the most likely outcome."

On September 28, 2006 Accenture struck a deal with NHS Connecting for Heath terminating the LSP's two NPfIT contracts. The contracts were transferred to CSC. On the same day iSoft issued a statement saying: "Under the termination arrangements, iSoft and Accenture have agreed that no further payments will be made between the two parties and any potential litigation relating to the period between 2 April 2004 and today's date will be annulled."

21 Aug 2006: The Guardian—Page 18—(696 words)

"No believable plan" for completion of iSoft work on NHS overhaul: Review flags up 13 "red" areas of acute concern: Software firm insists parts of system are being set up

By: Simon Bowers

One of the most important pieces of software in the NHS's pounds 6.2 billion IT overhaul—which is being developed by iSoft—may miss its already delayed release dates, according to a review by the two consultancies responsible for delivering the systems.

In iSoft's annual report last year, the troubled developer said the programme, known as Lorenzo, was already "on the market" and had been "available" from early 2004.

In January this year, however, it issued a profits warning saying the NHS's National Programme for IT "had been experiencing a significant degree of rescheduling . . . as a result, it is now clear that delivery of iSoft application solutions to NHS trusts will occur, in general, later than previously expected". No revised delivery date was given, and the company did not mention progress on Lorenzo.

A month after the profits warning, Accenture and Computer Services Corporation (CSC), iSoft's partners on three NHS contracts covering 60% of Britain, produced their own review of Lorenzo's "deliverability and fitness for purpose".

The review, seen by the Guardian, is highly critical of the Lorenzo software development and iSoft's expectations of a likely release date. Beyond a basic version of Lorenzo, which has been tailored for GPs, the review found "there is no well defined scope and therefore no believable plan for releases".

Last night a spokesman for iSoft said: "The Lorenzo solution is broad and far- reaching, and elements are in the process of being implemented . . . we will be providing an update in our full-year results."

ISoft had sent the review's authors a series of release dates for different versions of Lorenzo and said the final, fully functional version would not be available until the second quarter of 2008.

"These releases must be viewed as 'indicative' at best and are likely to be highly optimistic," the report concluded. No Lorenzo system has been installed in the UK, and iSoft has been working on an interim version, which largely involves a repackaging of older software.

Last year, iSoft's then chief executive, Tim Whiston, told shareholders that "Lorenzo has achieved significant acclaim from healthcare providers, analysts and the leading technology organisations".

The Accenture and CSC review took a different view from that of Mr Whiston, who quit iSoft two months ago. It labelled 13 out of 39 matters relating to Lorenzo "red", meaning they raised issues requiring immediate work.

Among the areas of acute concern was about iSoft's ability to plan and estimate how long the development process would take and its confusing "progress management". Even "clinical safety" was labelled red by the reviewers.

Most seriously, however, the Lorenzo review found "no evidence for the development, nor testing of, technical procedures that would be required for operation and maintenance of the live system . . . this is the main risk to the successful delivery of a fit-for-purpose solution."

This month, iSoft confirmed its auditor, Deloitte, had found accounting irregularities for the 2004 and 2005 financial years. Steve Graham, one of the group's founders, was suspended as commercial director and iSoft said "other employees", who had since left the company, may also have been involved. A "more formal" investigation has been started.

The Guardian recently reported that Connecting for Health, the NHS IT procurement department, had made an up-front payment to iSoft in 2005, days before the company's year-end. ISoft confirmed at least some of this payment was booked in the accounts for that year.

Following irregular accounting revelations, iSoft has delayed its 2006 results and adopted a far more conservative accounting policy. Its figures must be filed by Thursday and are expected to be accompanied by news of Lorenzo's progress.

Connecting for Health expects Lorenzo to be deployed by 60% of Britain's GPs and hospitals. It is believed to be one of the largest IT projects in the world, with Lorenzo alone to be used by about 600,000 clinicians and managers looking after up to 30 million patients.

Last month, basic administrative computer systems at about 90 NHS trusts, including at least eight acute trusts, failed for about four days. They included iSoft software provided predominantly by CSC. Connecting for Health said the disruption followed a power cut at a CSC central data centre, adding that a standby disaster recovery unit had failed to provide a back-up.

Memorandum submitted by Robin Guenier

I wish to draw the Committee's attention to a survey conducted by Medix UK plc, on doctors' views of the National Programme for IT. It is available at: http://ixdata.com/reports/106620061121.pdf

I am particularly concerned to note that doctors know very little about NPfIT and that there still has been very little consultation with them about it (see Question 6a)—only 5% of respondents saying they have had adequate consultation. Other points of particular concern are (a) doctors' increasing criticism of the costs of the project and of how it is being implemented, (b) GPs' limited support for *Choose and Book* (see question 8 in particular) and (c) doctors' continuing worries about the confidentiality of patient records (see question 11).

20 November 2006

Memorandum submitted by David Kwo, Alan Shackman, Bernard Hunter and various NHS staff

Contents

Background: The Central Point of NPfIT

By way of background to NPfIT, it is useful to begin with the question: "What is the central point of NPfIT—its chief raison d'etre? Is it a shared medical record (otherwise known as the 'Central Spine' or 'Central Summary Care Record Service') across England?"

The answer to this important question is simply: no. In fact, the central point of NPfIT is to provide the local Care Record Service (CRS) systems, namely: Cerner Millennium in the Southern and London Clusters and iSoft Lorenzo in the North East, North West & West Midlands, and Eastern Clusters. Compared with the local CRS, the Central Spine is a much lower priority because it is totally speculative and even if delivered is likely to result in very little clinical benefit. The Central Spine is actually a distraction and anyway cannot happen without the Local Care Record Service (or Local CRS) systems being implemented first.

This is a subtle but critical point. The Local CRS systems, historically always known as "electronic patient record" (or "EPR") systems, are a proven technology and typically aimed at the local NHS organisation (acute hospitals, community and mental health hospitals and GP practices). They are sophisticated software systems and are quite complex because they need to cater for a range of clinicians and accomplish a wide range of tasks such as allowing the clinicians to maintain the clinical history of the patient, to request diagnostic tests, to prescribe drugs, to schedule theatres, clinics and physiotherapy, etc. and do so in intelligent ways with a great deal of embedded clinical knowledge to make clinical practice safer and evidence-based.

These types of software products (Cerner "Millennium", GE/IDX "Carecast", etc.) are well established and proven and earlier versions of them are successfully operating in several hospitals in the UK. They are what is most needed by hospitals to support their clinical service delivery. They are what have been contracted for from the Local Service Providers (LSPs) as specified in Schedule 1.1 of the LSP contracts.

These local CRS systems have always been costly investments (several million pounds per hospital over several years) but have been proven in the NHS and elsewhere to deliver real clinical benefits (such as reducing adverse drug events and reducing mortality) which are evidenced by sound and extensive published medical research.

This picture is entirely different for the so-called Central Spine record, or Central Shared Summary record, which NPfIT (and the government ministers) would like the public to believe is the central point of NPfIT. It is not. The Central Spine record is just a concept, the simple one of having a summary record about a patient (with his/her key clinical data such as allergies and latest drugs) which can be shared by all clinicians needing to have it.

The problem is that clinicians have told us medicine does not work like this. Clinicians do not just use a summary record to deliver care. They build and depend upon detailed and specific medical data that are relevant for each patient. They do not rely on some other clinicians' definition of what will be most relevant to put in a summary record. What is relevant clinically will inevitably vary from patient to patient.

The concept of a summary Central Spine record has no scientific basis and no significant clinical support to back it up—just an overly simplistic and naive storyline about a Birmingham patient falling ill in Blackpool. In fact, no one has ever provided any figures on how often this situation is likely to arise to show whether or the investment in the Central Spine record worthwhile.

The point here is that the Local Care Record Service is the essential building block for clinically useful health IT to support clinical care in progressive, modern and proven ways. Yes, it is difficult to implement and can take 2–3 years to roll-out across the whole hospital (or organisation), and yet it is always worthwhile—ask any of the Chief Executives of the few hospital trusts that have implemented these systems in the UK e.g. Guys & Thomas, Chelsea & Westminster, Burton Hospitals Trust, Wirral Hospitals, etc.

These Local Care Record Service systems are the building blocks and are the point of NPfIT, and what NHS Trust Chief Executives want, need and expect. They are not waiting for a Central Spine record to run their hospitals.

However, the Local Care Record Service systems (or the Local Service Providers' newest versions of them) are not likely to be fully deployed now (only the rudimentary patient administration elements of them will be) because NPfIT is putting in old "legacy" products in place of new modern Local Care Record Service products in its panic to show deployment and because the systems have been so late in being delivered by the LSPs.

What is not reported widely is that the LSPs are late in delivering the new versions largely (though not wholly) because of NPfIT's own delay in providing so-called "Spine message definitions" to the LSPs during 2004 and 2005. And when they did finally arrive, they were fluid and kept changing.

Thus, the LSPs have been delayed because of the delays and failures of NPfIT itself, but of course they are afraid to say this for fear of offending their client.

In summary, the Local CRS agenda is the real agenda for NPfIT, not the Central Summary Care Record Service.

The key point of the National Programme for IT is to provide both depth of clinical systems functionality and breadth of integration in terms of delivering the contracted Local CRS functions across organisations and care-settings (acute, primary, mental health, social services). This is the true vision of health IT promised by the National Programme which is embodied in the Local Service Provider contracts and it is what their price reflects.

The trouble is, with all the delays, the LSP schedules are being down-scoped behind the NHS's back and without any accountability to the local NHS Trust chief executives to whom the original vision was promised.

Executive Summary

This submission to the Public Accounts Committee (PAC) was produced in response to the NAO Report on "The National Programme for IT (NPfIT) in the NHS" (HC 1173 Session 2005–06 16 June 2006). It has been produced to assist the PAC in evaluating the findings of the NAO Report. It is based upon professional opinion, additional facts and references to publicly available documents.

The NAO Report attempted to evaluate the performance of the NPfIT since its inception. The NAO Report failed to ask key questions and to explore crucial evidence regarding NPfIT, in particular:

— NPfIT is critically behind schedule. By now, all acute hospital trusts in England should have new NPfIT patient administration systems (PAS) implemented as the essential first step in the introduction of the Local Care Record Service. As of April 2006, according to the NAO Report, the actual number was 9 hospitals. Since then, so far as we are aware, the number has increased

only by 4 acute hospitals[3]. All have experienced significant operational, clinical and financial disruptions because the systems are not fit for purpose. In most cases, these serious disruptions are on-going. The prognosis for future functionality beyond the basic Patient Administration Systems phase (particularly the implementation of clinical systems) is "poor to terminal".

— The severity of these delays—and the consequential negative impacts on the NHS, its patients, organisations and clinicians, and on the realisation of the benefits upon which the original investment business case was built—was not explored in any depth by the NAO. While the NAO reports on the relatively sparse adoption of systems through NPfIT, extraordinarily the adoption levels were not contrasted with original targets. While the current level of delays was still only emerging when the NAO Report was being prepared, the slow trajectory was already evident at that time.

— The original business case for NPfIT was predicated on a certain level of clinical quality, as well as operational and financial benefits. These benefits are now unlikely to be realized at anywhere near the originally projected levels, calling into question the value for money of current and future NPfIT expenditures.

— The "Spine", or the Central Shared Summary Record—or that part of it which is intended to gather patient clinical data from across the NHS—is an untested, experimental concept that is best characterised as unnecessary, unlikely to succeed and likely to cause continued delays to the Local CRS systems that are actually required to deliver the anticipated benefits.

— Delays in Local CRS systems implementation have been caused in large measure by delays in the "Spine", but not exclusively so. The other key delay factors were: the lack of clinical engagement during the system selection process; the climate of aggression and hostility engendered by Connecting for Health (CfH); and the failure adequately to consult experienced advisors on the implementation of NHS clinical information systems.

— The over-emphasis on very quick procurement was paradoxically a key element in this delay because rushed contracts only exacerbated the lack of clinician buy-in, the lack of informed product development and so the lack of successes in implementation.

— Misconstrued views of the importance of the LSP role have led CfH to placate the remaining LSPs, who are under financial pressure due to lack of revenues, by giving them faster routes to revenue. This has meant short-cuts being taken by the LSPs in local implementations at the expense of the operational and financial well-being of local Trusts. For example, one LSP is not including historical patient data in its new system to save time and effort. This Trust will therefore have to keep its old system running as well as the new one so that, for example, A&E department staff can identify that a patient has been admitted previously. This is particularly important for children at risk. In this case, the LSP's approach is dangerous and analogous to building an aeroplane without life jackets under the seats—one day it will result in a safety disaster.

— In the early LSP contract days, the transfer of risk to LSPs led to a "moral hazard" where the appearance of LSPs bearing the risk of implementation removed from hospital Trusts the local sense of urgency and responsibility. Now, the risk is being transferred the other way to the local Trusts, ironically enough, to the very people that risk transfer in the contract was meant to protect, ie the NHS.

— In this context, it seems that CfH is colluding with the LSPs to make sure that the LSPs get paid, without caring about the damage that is caused to the Trusts either operationally, clinically, financially or in the form of lowered staff morale. CfH is now trying to legitimise this harm to the local Trusts, and washing its hands of any responsibility at the same time, by respraying a failure into a policy through making local trusts responsible for local implementation.

— CfH continues to engender a general climate of fear resulting from the bullying that is occurring on the ground. Chief Executives—particularly the vulnerable ones with financial deficits—are being leaned on by their bosses to implement the LSP products and to keep quiet, no matter how painful it is on the ground. This is the case even where the pain is specifically caused by the LSP's inadequate products and where this inadequacy has led directly to: the loss of star-ratings (as in the case of the Nuffield Orthopaedic Centre); the inability to report activity and thus the loss of income; as well as having to pay higher prices than would be available on the open market (for example, with the Picture Archiving and Communications Systems).

— CfH generates what is best described as propaganda, for example in its claim to have deployed "A total of 9,600 initial deployments of software of various types . . ." (NAO Report, Page 3). The truth is that the vast majority of these systems are small departmental systems (such as standalone Theatre Department systems) which were not included in the original scope of NPfIT procurements and which in any event Trusts had been routinely implementing prior to NPfIT as part of their normal replacement programme. This report of deployments, as a meaningful

[3] The way in which information on the progress of implementation is presented in the Connecting for Health website is poor. Users are directed to the individual Clusters' sites for detailed data. Such data, however, either does not appear or is in too summary a format. It is not possible, for example, to obtain detail of which precise elements of the Local Care Record Service has been implemented, and where and when.

measure of achievement, would be analogous to a spokesperson for the DeLorean corporation, prior to its going bust, declaring that they do not know how many units of motor vehicles they produced and sold during their last financial year, but instead reporting that the DeLorean canteen did produce and sell 9,600 sandwiches in the period. This hypothetical DeLorean statistic is as irrelevant as it is misleading as a measure of achievement and the NAO Report of "9,600 initial deployments" is no more meaningful and no less irrelevant and misleading.

— One detects the distinct smell of the Emperor's New Clothes at every encounter with the National Programme for IT.

Conclusions

— The NAO Report has failed to spot poor CfH performance in the areas of: NPfIT business case delivery; benefits delivery; implementation progress; Spine delivery; the fundamental reasons for delays; accountability to the NHS; management of LSPs; delivery by LSPs; addressing the fundamental problems and possible fraud at iSoft, and other NPfIT elements such as N3 Broadband, ETP (Electronic Transmission of Prescriptions), Choose & Book and Picture Archiving and Communications System (PACS).

— The NAO Report has missed the fact that CfH has lost its way and has abandoned its vision to reduce NHS fragmentation of systems and care. CfH is driven by no vision at all except the desire to retain central authority using bullying tactics on both suppliers and NHS Trusts.

— CfH has failed. Having been given the responsibility for the largest sum of money (now stated at £12.4 billion) ever allocated to a health IT programme anywhere in the world—a number which dwarfs the total NHS deficit of around £500 million per year—it has conspicuously failed to deliver.

— The CfH mantra is "deploy anything that moves just so we can say we are deploying something" with no care for the wider picture or indeed value for money.

— Any clinical benefit which may eventually derive from the Central Summary Care Record is likely to be miniscule compared to the evidence-based benefits that the NHS needs and which have been contracted for in the form of Local Care Record Service systems (otherwise known as Electronic Patient Record Systems) for each NHS acute, community and mental health Trust in England.

— Not one of the LSPs has delivered to contract. The NAO should not have praised the so-called "speedy" completion of a contract procurement process which was so clearly flawed. The extraordinarily hasty way in which the original LSP contracts were let, ignoring all other considerations such as the need to achieve buy-in from clinicians and from chief executives of local Trusts, is one of the main causes of the enormous problems which have followed in attempting local deployments. The NPfIT procurements can only regarded as failures.

— GPs have in effect opted out, putting paid to the concept of "ruthless standardisation".

— Our conclusions cause us therefore to take serious issue with the key conclusion of the NAO Report that "The Department and NHS Connecting for Health have made substantial progress with the Programme"[4]. All the evidence, particularly that relating to delivery of the originally envisaged Local Care Records Service functionality, points the other way.

Recommendations

I. The Department of Health should take steps to:

(i) Retain the sensible aspects of NPfIT, namely: (a) ring-fenced money for IT; and (b) discounted prices.

(ii) Stop the tactics of bullying NHS Trust Chief Executives into taking take unfit systems and stop the climate of secrecy surrounding CfH where people are afraid to speak out, even to share lessons learnt or to suggest how problems could be solved.

(iii) Empower the local Trust Chief Executives with final authority to decide when payments are made to LSPs.

(iv) Recast the contractual relationship between the LSPs and each NHS Trust so that each Trust is legally the customer rather than the Secretary of State for Health.

(v) Restore the NPfIT vision of sharing information and functionality (ie wide area, cross organisation and cross care-setting Local CRS systems) particularly across local health economies or care communities (as is already stated in the LSP contracts).

(vi) Put the "Spine" investment on hold and ask clinicians and IT specialists to pilot and test it objectively and with scientific rigour.

[4] NAO Report, Summary, Conclusions & Recommendations 7.

(vii) Disband the central NPfIT team within CfH in favour of allowing systems procurements and implementations to be handled by local care communities in accordance with agreed standards. This level of management would support the integration of the different care settings such as primary and community care, acute hospital care, mental health care and social services, and therefore achieve the main benefits of using IT to deliver patient-centred care.

(viii) Make the money which is saved from reducing central overheads available locally for change management for each care community.

(ix) Establish an open framework of CfH accountability where future decisions on NPfIT budget and central IT contract changes are made in full consultation with, and with accountability to, patients, local NHS trust management and clinicians.

(x) All NHS trusts in the West Midlands & North West, North Eastand Eastern Clusters should be asked whether they wish iSoft to remain the sole subcontractor for the local Care Record System, with appropriate action to be taken to reflect their answer.

II. The NAO should:

(i) Review its methods of investigating large IT programmes in the light of the points made in this submission eg measuring progress should be undertaken against baselines and appropriate metrics rather than merely accepting what the programme managers claim.

(ii) Address the shortcomings of its report on NPfIT according the section 3. below.

(iii) Ask the questions set out in section 4. below.

1. Introduction

This document presents evidence to the Public Accounts Committee (PAC) regarding its investigation into the NHS National Programme for IT (NPfIT) and the NAO Report on the same subject. This paper is provided at the request of Richard Bacon MP as a member of the PAC. It consolidates an earlier submitted to Richard Bacon (see Annex 1-Ev) in June 2006 and is updated here to include more recent evidence.

The evidence contained in this document is based solely upon publicly available information ie information from websites that are accessible by anyone with access to the internet. The specific websites containing the source documents used are listed in Annex 2.

This document has been prepared by David Kwo with assistance from Alan Shackman and contributions from various colleagues working in and around the NHS. David Kwo was formerly the Regional Implementation Director for NPfIT (London) and Chief Information Officer (CIO) for the NHS in London and Alan Shackman is a management consultant who works for various NHS organisations.

Specifically, this paper:

— identifies what the NAO Report on NPfIT failed to do;

— raises questions that the NAO Report failed to ask;

— draws conclusions regarding NPfIT; and

— makes recommendations for improving NPfIT.

2. Current Context

This paper focuses on the deployment of the core Local Care Record Service (CRS) originally contracted for from the Local Service Providers (LSPs) by Connecting for Health (CfH), this being the central plank of the NPfIT vision and to which the overwhelming majority of the funding is allocated. It largely excludes consideration of Picture Archive and Communication Systems (PACS) which were not originally included as a core deliverable; it also excludes the plethora of relatively minor acute and primary/community departmental systems that LSPs have implemented.

The position with the Local Care Record Service at January 2007 is summarised as follows:

I. For acute trusts in the three "iSoft" clusters (ie North West and West Midlands; North Eastern and Eastern): no core clinical functionality for virtually all Trusts until at least 2009–10 unless trusts are prepared in the interim to move to iSoft's pre-Lorenzo legacy PAS (Patient Administration System) product which many Trusts consider inferior to their own present PAS.

II. For acute trusts in the two "Cerner" clusters (ie London; and Southern): little core clinical functionality until Release 1 of the Cerner product is available, timeframe as yet unclear because of delays with anglicising the current Release 0 (PAS) product.

III. For mental health trusts and PCTs in the three "iSoft" clusters North West and West Midlands; North Eastern and Eastern): possibility of limited clinical functionality from 2007 dependent upon development of iSoft's pre-Lorenzo legacy iCM system, but no core clinical functionality from the strategic Lorenzo solution until at least 2009–10 if at all given the many doubts about the existence of Lorenzo.

IV. For mental health trusts and PCTs in Southern Cluster: no core clinical functionality until Cerner development available, timeframe is unknown.

v. For mental health trusts and PCTs in London Cluster: considerable core clinical functionality is available now from standalone (ie non-integrated) software, CSE Servelec's RiO system, which has been adopted by BT as its strategic solution because Cerner's integrated mental health/community product has not yet been developed.

VI. GPs remain free to use the GP system of their choice and hence are little affected by NPfIT. There are, however, recent reports of a small number GPs in the North East and Eastern clusters implementing a system originally offered by Accenture and now by CSC.

The situation as summarised above invites the following comments:

VII. NPfIT is at least 2 years behind schedule and it is likely to be a further 3 years before many trusts start to have any significant clinical software available to them, always assuming software development currently being undertaken is successful. In the context of a 10 year programme this is nothing short of disastrous

VIII. The LSP which is achieving relatively the most success in terms of introducing functionality of use to clinicians (referring to the RiO implementations in London) has done so by introducing a standalone system and ignoring the original contracted plan to provide a single suite of integrated software and adhere to "ruthless standardisation".

IX. The central purpose of NPfIT to provide a Local Care Record is in danger of being lost. With GPs having, in effect, opted out no LSP will be able to provide a system that is integrated across all local care settings (GP, community, mental health, acute hospitals). Unless, that is, they develop what is termed an "integration engine" the function of which is to sit over standalone systems and expedite information sharing between them. The danger is compounded in the case of London with the adoption of a standalone strategic solution for mental health and PCTs.

3. What the NAO Report Failed To Do

I. *The NAO Report failed to understand the Business Case benefits upon which the LSP contracts were based*

The Local Service Providers, LSPs, were contracted to deliver Local Care Record Systems, CRS, to NHS organisations in three Phases. The LSPs are already three years late in delivering Phase 1 and it is expected to be another two to four years before even that can be implemented, if then, due to mismanagement of the suppliers and the fact that the software products, despite over three years of preparation, are still not fit for purpose. That is, NPfIT will be at least five years late in delivering just the first element of its main programme. This element (Phase 1) is the least important element from a clinical care point of view because it contains mainly administrative functionality.

The next two phases, Phases 2 and 3[5], are meant to provide the NHS with functionality that would enable organisations to support integrated clinical care processes (scheduling, investigating, prescribing, treating, assessing, etc.) by healthcare staff no matter in what organisation (hospital site or GP practice) or in what care-setting (primary, mental health, community, tertiary). The patient could move from one care provider or setting to another and the detailed patient record, and, importantly, the functionalities needed to care for the patient, would be available to the care provider in a consistent and standard fashion. The care provider would not have to log into and be familiar with different screens, and search for the same patient each time, and the patient would not have to be asked the same questions by different care providers at different visits.

These benefits were the core of the business case for the high cost LSP contracts, as shown in the Eastern Cluster Business Case (see Annex 3 and 4). The high LSP costs (around £1bn per contract) were felt to be justified when originally presented to local NHS chief executives (at Trust and SHA levels) because of the new integrated care benefits that were being promised in the Cluster LSP Business Cases.

However, these crucial benefits were not acknowledged by the NAO Report which means that the NAO assessment of NPfIT performance was not measured against proper baseline metrics (ie the expected benefits).

II. *The NAO Report failed to measure NPfIT progress using basic contracted milestones; it missed the expected shortfall at contract out-turn; and it failed to measure Value for Money.*

The NAO Report should have used publicly available data[6] to measure the progress of NPfIT in terms of the contracted modules and the contracted delivery dates. The LSPs were contracted to deliver these modules to all Trusts in the NHS in order to achieve their milestones. The NAO Report failed to use this measure and this is a major shortcoming of the document.

[5] As described on page 5 in Part A above and described in detail in Annex 1 below.

[6] See the Eastern Cluster LSP Business Case at Annex 3 and 4. http://www.portal.nscsha.nhs.uk/imt/Document%20Library/AtP%20Eastern%20cluster%20v0.20%20(no%20finance%20case).doc

By either 2010 (when LSPs are contracted completely to implement all 3 phases to all hospitals and trusts in England) or 2013 (the end of the contract, when other items were meant to be delivered, too), only Phase 1 of the 3 Phases will have any chance of being delivered (many NHS staff doubt that even Phase 1 will be delivered fully).

However, the later the module, the more clinical it is in nature; and thus, the larger the number of clinicians who need to be engaged with it; and therefore the more time overall it will take to implement. This militates against LSPs meeting their contracted delivery milestones, given the deep gap in clinician engagement that NPfIT has allowed to develop.

In terms of software product, CSC and Accenture[7] (who are the LSPs in the North West & West Midlands; North Eastern; and Eastern clusters) themselves reported in February 2006 that there is "no believable plan" for the development of Lorenzo, which is the software product upon which Phases 1, 2 and 3 are based for these clusters.

Therefore, hospitals in England cannot expect Patient Administration Systems (PAS) products that are integrated across different NHS organisations but instead can only expect yet more organisation-specific PAS, which each hospital had anyway prior to NPfIT. Similarly, they can only expect yet more organisation-specific Order Communications Systems (OCS) which was also already available before NPfIT. NPfIT is thus perpetuating the fragmentation of records, functions, processes and care within the NHS which the LSP contracts were meant to overcome. This perpetuates what the NHS has always had (PAS), and what the NHS was already on course to achieve (OCS) prior to NPfIT.

If we will only get what we've always had, or were on course to get, is the price we are paying the LSPs good value for money compared to what we were paying previously? Did we need NPfIT, with its additional £1.5bn+ central overhead costs, to bulk-buy what NHS Trusts were already buying for themselves?

III. *The NAO Report failed to recognise that the Central Spine Record is unproven and only likely to deliver relatively small benefits.*

CfH is attempting to claim that the Central Spine Summary Record will provide the cross organisation and cross care-setting integration promised in the LSP business cases. However, this is not a plausible claim because the Central Spine Summary Record offers no proven clinical benefit. It will only have partial patient record data and no (or little) clinical system functionality.

Furthermore, due to the delay in functional deployment of the local CRS, it is unlikely to achieve any administrative let alone clinical effectiveness at all for many years.

The concept of a summary Spine record has no scientific basis and no significant clinical support to back it up—it is just an overly simplistic and naïve storyline about a Birmingham patient falling ill in Blackpool. Yet no one has ever provided any figures on how often this situation might arise or whether the incidence would be high enough to make the investment in the Spine record worthwhile. There are also severe doubts about whether the problems of patient confidentiality can be overcome.

By contrast, the local CRS functionality is evidence-based because there is published scientific evidence showing how it improves the quality of care (eg by reducing medical errors in the form of adverse drug events).

Table 1 below shows that when the two systems (Local CRS and Central Spine Summary Record) are compared, it is impossible to maintain that the Spine Summary Record will provide anything more than the most marginal of benefits and even then only potentially.

Table 1: Comparison of Local CRS and Central Spine Summary Record

Feature	*In Central Spine Summary Care Record*	*In Local Care Record Service*
Provides functionality for clinicians (prescribe a drug, order a test, book a treatment, create a discharge summary, send a communication to another clinician, etc).	No	Yes

[7] Accenture has since pulled out of its LSP contracts.

Feature	*In Central Spine Summary Care Record*	*In Local Care Record Service*
Provides detailed clinical information for that patient's episode under the patient's lead clinician.	No, Spine clinical data will always by definition be incomplete for each of its patient records.	Yes
Provides real time alerts if a patient for instance has liver dysfunction (eg high creatinine levels) thereby contra-indicating an antibiotic being prescribed (eg gentamycin) or levels of potassium when prescribing Digoxin.	No, Spine alerts will not be real-time and will always be out-of-date because the uploads are always delayed.	Yes
Is evidence-based: can offer scientific publications to justify its benefits	No, the Spine as a passive summary record has no scientific evidence behind it.	Yes, as a real-time alert at the point of care, the Local CRS (or electronic patient record) has incontrovertible evidence behind it.
Is likely to provide real clinical benefit to large numbers of patients.	No, the statistical probability of a clinician finding useful clinical data on the spine that it has not already been received has not been proven.	Yes, the probability of reducing medical errors and therefore improving patient safety is very high, at least compared to the Spine.
Has been proven to work in the NHS with NHS clinicians of all types using it.	No, the Spine summary record has never been developed or tested, even in pilot form, amongst NHS clinicians.	Yes, several dozen NHS organisations, comprising thousands of NHS clinicians, are actively using PAS, OCS and to a lesser degree, electronic prescribing with real success.

The Local CRS has two main features: (1) real-time alerting of e.g. drug allergies at the point of decision-making (because the local Care Record Service is, when implemented, the only means for a doctor to prescribe a drug) and (2) storing data about the patient's allergies to drugs. Although the Central Spine stores data about patient allergies, at no point would the Spine actually be used to prescribe a drug, for example, because it would not provide the functionality to do this; indeed, it does not provide any functionality at all. The evidence[8] showing the benefits of clinical systems in terms of avoiding adverse drug events, such as preventing doctors from prescribing a drug to which the patient is allergic, is based on clinical systems that have both characteristics (1) prescribing functionality; and (2) storing patient data. CfH is trying to say that the Central Spine will reduce adverse drug events because it has characteristic (2), without mentioning that it does not have characteristic (1).

This is not a scientific basis upon which to claim that the Central Spine will reduce adverse drug events. If CfH wants to make such (and similar) claims, then it will need to produce supporting evidence which matches the features of the intervention it is proposing with the outcome it is claiming. It is not enough to say that the Central Spine shares some characteristics (eg holding patient allergy data) with Local CRS systems and then claim that it will therefore generate the same benefits. It won't.

The NAO should have recommended that the Spine be rigorously investigated and tested before further millions of pounds in funding and resources are put into its development. One system (Local Care Record Service) is evidence-based, the other (the Spine) is not. Both should be pursued, but one should be pursued with more confidence and commitment because the evidence justifies it. The other should be properly tested before any commitment is made to develop it or roll it out.

[8] This evidence is provided in the following publication: "*Improving Safety With Information Technology*", Bates and Gawande, New England Journal of Medicine 2003; 348(25);2526-2534.

A common axiom within healthcare, missed by the NAO Report, is: mere provision of information does not lead to change in clinician behaviour.

The Spine has caused delay to LSP delivery of Local CRS systems, due to the inordinate amount of time it took for CfH to issue its Spine message definitions to the LSPs.

The Spine has served as a decoy for the NAO, media, ministers and the NHS. People have been lulled into thinking that the central objective of the NPfIT is the Spine and that CfH is on the way to achieving something clinically beneficial, when actually the Spine is a speculative concept without empirical evidence. The empirical evidence demonstrating e.g. reductions in medical errors, cannot be attributed to the Spine because the research is based on benefits from real-time active Electronic Patient Record (EPR) alerts at the point of care, using EPR systems where electronic prescribing or ordering is the only mode of practice for the clinician. This will not happen with a passive summary record where the clinician does not have to access the record in order to prescribe and might only do so, time permitting, in the hope that there is something useful there. Statistically, the chances of finding clinically beneficial data not already held has yet to be established.

It is important to note that the National CRS Central Spine record will not deliver the claimed benefits as it requires functionality which is only available with the Local Care Record Service solutions which contain the full and detailed patient record and advanced and intelligent functionality. By contrast, the Central Spine Record is just a passive "bucket" or repository of what will only ever be a subset of the patient medical record.

The focus on the Spine is deluding many people into thinking that the clinical challenge in NPfIT is simply about getting the right clinical data defined for the Spine Summary by some "representative" group of clinicians, and that once this is done then all that is needed would be to link into GP systems (and eventually hospital systems) and then copy this data into the central summary record "bucket". If the clinicians don't use the Spine, that will be their fault, but CfH will have done its job, according to what CfH would have us believe.

The Spine is clinically invalid. Clinicians have consistently told us that they consider it sheer arrogance to think that a group of clinicians can decide on behalf of all clinicians what the key data items are for all their patients and casemix and circumstances. Clinicians don't mind using data from other clinicians, their work depends upon it. What they do mind is a "committee" telling them the important data fields that they are to use for all their patient care practices and range of patient conditions.

The Spine distracts the NHS, perhaps deliberately, into thinking that what is important in computerising the NHS is data (eg the things that the Spine may hold), rather than functionality (eg the operational systems support that the Local CRS provide). An age-old lesson in the health IT sector is that "*Reliable data is best derived from systems that are relied upon*". That is to say, where clinicians are using systems routinely as an integral part of treating patients, and where clinicians are in effect 'forced' to use the system to take the next clinical step, then the data will generally be complete and accurate. Where the system is merely a passive tool which is available for reference but which the clinician is not required to use in order to progress treatment, then the data is likely to be of a much lower quality. This lesson has not been learned by CfH. It is trying to shortcut improvements in clinical practice by building a data bucket, rather than by working with clinicians to redesign clinical processes and embed clinical knowledge into systems in ways that clinicians deem appropriate and can use routinely as part of day to day clinical practice.

IV. The NAO Report failed to detect the real causes of NPfIT delay

Clinician involvement has been virtually ignored by NPfIT, in the crucial sense of engaging clinicians on the front-lines (in hospitals, GP practices, mental health facilities, etc) and getting them to take "ownership" of the NPfIT and the new systems that were being procured centrally on their behalf. NPfIT made the mistake of rushing to break a speed record to sign the contracts with the LSPs.

While record-breaking size (£1 billion) contracts were signed in record-breaking time (in 1 year), it is clear in retrospect that time was lost, not saved. This is because the point is not how quickly one can sign a contract but rather how quickly one can implement the system and change NHS staff behaviour for the benefit of clinicians and patients.

On this measure, NPfIT has already lost the race. Instead of taking around 2 years from the start of procurement to implementation (go-live), which is what it used to take the NHS. NPfIT has already taken over three years from the start of procurement (early 2003) and has delivered almost no core local Care Record Service functionality for acute hospitals, certainly none that is fully operational.

This extensive delay is due to a blinkered view (on the part of both CfH and LSPs) of what implementation means in healthcare and an ignorance of past experience. There is a refusal to believe that (a) it takes time and effort to get clinicians to accept the need to redesign their practices prior to putting in new computers and (b) it takes time to make the new computer systems ready for use to support the new practice designs.

These two points are widely known as clinical process redesign, or simply change management, for which there are no short cuts if one wants to implement clinical systems, not just patient administration systems, that are used by every clinician in the organisation.

Such change management is a multi-year journey which begins with the first day of procuring a new system (actually even before, with the need for business cases to justify the procurement). Clinicians who are involved in the procurement from the beginning will then "own" the decision with respect to the chosen supplier and product. It is a psychological transformation which turns a group of clinicians in a health organisation (alongside their executive and IT colleagues) from the "sceptical buyer" state of mind to the "proud owner" state of mind. Successful implementation of clinical systems in the NHS have demonstrated that the "proud owner" state of mind is essential to keep the project on track when "turbulence" is encountered in the early days of clinical systems implementations (turbulence which is perfectly natural and expected in relation to early "growth pains").

For instance, when the local clinicians complain that the pathology results are not coming through quickly enough, or in the form in which they were used to, or without reference values presented exactly as before, or in an unreliable fashion, which are all normal concerns during early days of going live with order communications, the Medical Director can step in to calm nerves. This is because the Medical Director will have been fully committed to the project, typically after two or so years of being involved with the project from procurement to implementation.

Such involved, informed and committed Medical Directors, Nursing Directors and Chief Executives hardly exist in the NHS today because they have been kept at arms length by CfH. CfH and LSPs have generally adopted the technocratic and autocratic attitude of "*They will get product when we say it is ready and they'll use it whether they like it or not, or else their CEO will get leaned on from above*". This experience of getting "leaned on from above" has recently been reported to us confidentially by a number of NHS Chief Executives (who obviously do not want to be named).

Disengagement and disillusionment of NHS managers in this way, due to the top down approach (typified by LSPs simply coming along and presenting implementation deadlines which invariably slip), is enormously damaging and corrosive for the successful implementation of clinical systems.

With the NPfIT implementations (even the rudimentary PAS modules) that are due to begin in early 2007, when such problems occur, which are more likely now because of over-stretched software supplier staff, the Medical Directors/Chief Executives are not so likely to step in and give the assurance to fellow clinicians that the clinical safety aspects of the systems are in the hands of reliable people, simply because they will not have invested the time in understanding the product, the supplier and the other people involved with the procurement, selection, configuration and go-live management. Unfortunately, neither CfH nor the LSPs have taken this lesson on board and nor has the NAO Report.

To exacerbate the NPfIT delays even further, the Spine message definitions were also delayed as reported in e-Health Insider[9] (Issue 30 January 2006, our underlining):

> *Delays—what delays*
>
> *"At my hospital we were originally supposed to go live last February. That was postponed to July and then November. We are currently looking at this July 2006 at the earliest for go-live. This has been blamed on a combination of problems with a large deployment, messages to the spine not being available and issues with the multi-campus deployment. It is very depressing for hospital staff who were keen (but sceptical) at first, but who now don't believe there will ever be a new system."*

The LSPs need these spine messages in order to modify their Local CRS systems accordingly. This added further delay to the development and implementation of Local CRS systems.

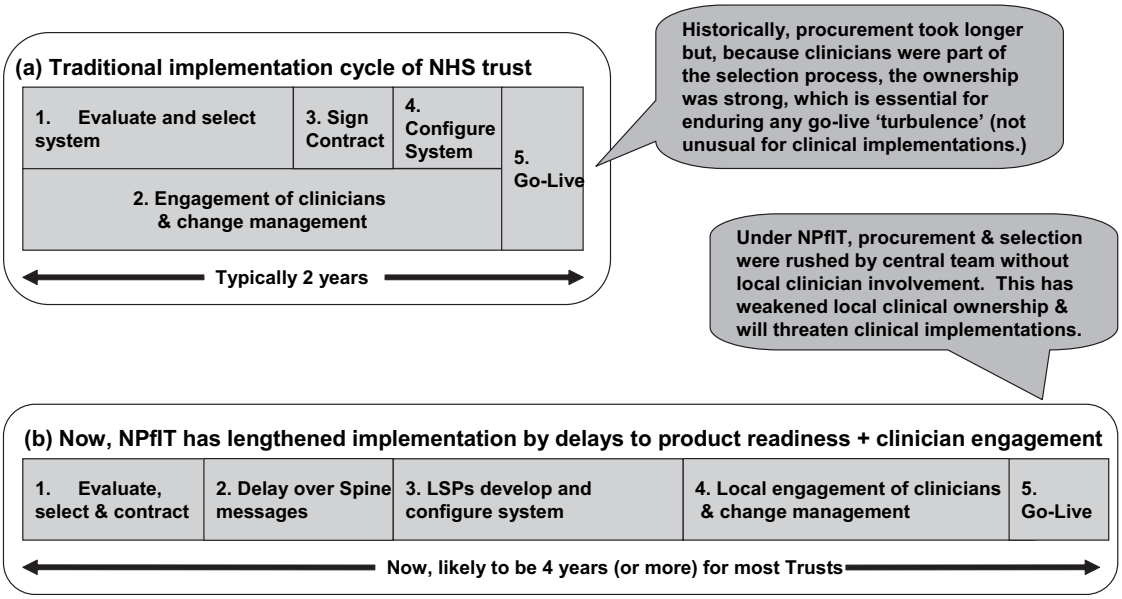
All of these problems were avoidable and have the consequence of (a) causing delay of systems to the NHS (b) increasing the CfH internal management costs because of their expenditures in legal resources and other consultancy fees during supplier swap-outs and (c) causing the supplier incomes to be delayed.

The third consequence, which is delayed incomes for suppliers, will have a knock-on effect in that the suppliers will focus even more on recovering their delayed incomes and therefore focus upon trigger events for payment, rather than working closely with local clinicians to gain ownership and proper process redesign and product configuration to make their systems fit for purpose.

[9] This publicly available information is accessible at the following website address: http://www.e-health-insider.com/news/item.cfm?ID=1670

See Diagram 1 below for a summary of these points.

Diagram 1. The real causes of NPfIT delay. In the healthcare sector, local clinician involvement & change management has always been intrinsically linked to IT procurement – ignorance of this fact has caused massive delays and will result in massive shortfall in NPfIT delivery in terms of Value for Money



Professor John P Kotter, a specialist in organisational change at Harvard University, wrote in the Harvard Business Review in March–April 1995:

"The change process goes through a series of phases that, in total, usually require a considerable length of time. Skipping steps creates only the illusion of speed and never produces a satisfying result. A second very general lesson is that critical mistakes in any of the phases can have a devastating impact, slowing momentum and negating hard-won gains."

V. *The NAO Report failed to address the question of accountability, particularly in respect of the high levels of public funding which underpin NPfIT.*

Taxpayer monies, originally appropriated in 2003 for IT systems on behalf of local NHS organisations, are now being spent by central CfH senior managers without any consultation with local NHS staff. The local Trusts do not know therefore exactly what they are getting and when and most importantly, what they are not getting but were expecting as part of the initial scoping of the LSP specifications (see the Eastern Cluster's schedule of 59 modules in Annex 3). As the NAO Report has indicated, no one is currently in a position to assess the performance of the National Programme except the National Programme themselves—this means they are only accountable to themselves.

Chief Executives of local NHS Trusts are under close scrutiny for their performance, including public Board meetings, internal and external auditors and various levels of management line reporting. CfH management only appears to be accountable to itself. CfH controls some £12 billion, including £1.5 billion or so to run themselves and to pay for management consultants and lawyers over long periods of time, apparently with little or no scrutiny. NHS Trusts control far smaller budgets but with far greater levels of scrutiny.

VI. *The NAO Report failed to spot NPfIT's mistakes with respect to Local Service Providers (LSPs).*

NPfIT misjudged the role of the LSP. LSPs were brought in to serve as large companies with deep pockets to absorb risk. However, it is clear that the LSPs do not add any value to the delivery of clinical software because they do not have the prerequisite experience or skills. They do not understand clinical process redesign, the need to involve local clinicians in clinical systems configuration, the need to have staff with experience of NHS culture, processes, systems, numbering, reporting, etc. The LSPs tried to bring in some of these skills but failed to manage them effectively. In particular, they treated the electronic patient record software suppliers adversely, deploying a master-slave culture, rather than a collaborative one, where aggressive and dominant relationships were their means of hiding healthcare ignorance.

CfH believes that contract management is more important than change management. The senior management at CfH spend more time with lawyers and talking to suppliers about contractual matters than in engaging with Chief Executives and clinicians within the NHS. CfH is not interested in addressing the

real challenge of redesigning clinical processes, configuring clinical software and change management. The philosophy is: if something is wrong, bash a supplier and if it continues to go wrong, threaten to replace them. As CfH hold the purse-strings, the suppliers do not fight back.

The LSPs will inevitably pass their ill-fortunes with NPfIT back on to the NHS either in the form of additional charges, poor delivery, and/or poor support. At least 3 NHS Trusts have reported recently that PACS costs for their Trusts are now significantly higher under NPfIT, through their LSP, than if they were able to buy PACS themselves. CfH has created precisely the type of relationships with IT suppliers that one always strives to avoid i.e. one where any request for software change or support service from local NHS staff is turned by the LSP into a formal change request requiring additional cost for the customer.

Misconstrued views of the importance of the LSP role have led CfH to placate the remaining LSPs, who are under financial pressure due to lack of revenues, by giving them faster routes to revenue. This has meant short-cuts being taken by the LSPs in local implementations at the expense of the operational and financial well-being of local Trusts. Such short-cuts have resulted in PAS solutions that are not fit for purpose for local Trusts and in not taking account of variations in local processes for reporting and information management. This has threatened the ability of local trusts to manage tight budgets/financial deficits with proper operational and performance reporting.

An example of a CfH engendered short-cut that favours the LSP but is detrimental to the Trust is the fact that Fujitsu, the Cerner LSP in the Southern Cluster, refuses to load historical patient data into the new PAS system, contrary to long-established industry practice, where patient historical data is invariably loaded by the clinical information system supplier because it is essential for treating patients properly. Not having historical administrative and clinical data in new electronic patient record systems is dangerous and analogous to building an aeroplane without life jackets under the seats—one day it will result in a safety disaster.

For the acute Trust, this means that A&E and outpatient clinic staff have to do double work because they must keep their existing A&E and outpatient clinic administration systems going in "read-only" mode to look-up historical patient data, at the same time as using their new NPfIT A&E and outpatient clinic administration modules. As an example, it is important for records of past child attendances at A&E to be flagged if the child is deemed potentially at risk of child abuse. Multiple attendances at A&E with symptoms of bruising are one of the indicators of a child at risk. If A&E reception or triage staff do not have time to use two systems because their volume of patients is very high, they may find themselves forced not to look up historical data in the old system, and thereby risk important patient data, such as that for At-Risk children, being missed.

The hospitals are left without any legal recourse because they do not hold the contract with the LSP, but instead the Secretary of State does—a legal mechanism that further disadvantages the NHS trusts because if the LSP does not deliver workable software, the NHS trust is powerless to do anything about it.

In the early LSP contract days, the transfer of risk to LSPs led to a "moral hazard" where the appearance of LSPs bearing the risk of implementation removed from hospital Trusts the local sense of urgency and responsibility. Now, the risk is being transferred the other way to the local Trust, ironically enough, to the very people that risk transfer in the contract was meant to protect, the NHS.

In this context, it seems that CfH is colluding with the LSPs to make sure that they get paid, but does not care about the damage that is caused to the Trusts either operationally, clinically, financially or in the form of lowered staff morale. CfH is now trying to legitimise this harm to the local Trusts, and washing its hands of any responsibility at the same time, by respraying a failure into a policy through making local trusts responsible for local implementation. But how can the local Trust Chief Executive be expected to implement the LSP product if it is unsuitable and if the contract does not give him/her any leverage over the LSP?

CfH continues to engender a general climate of fear resulting from the bullying that is occurring on the ground. Chief Executives—particularly the vulnerable ones with financial deficits—are being leaned on by their bosses to implement the LSP products and to keep quiet, no matter how painful it is on the ground. This is the case even where the pain is specifically caused by the LSP's inadequate products and where this inadequacy has led directly to the loss of star-ratings (as in the case of the Nuffield Orthopaedic Centre), the inability to report activity and thus the loss of income, as well as having to pay higher prices than would be available on the open market (for example, with the Picture Archiving and Communications Systems).

CfH is operating in a climate of aggression and hostility aimed at both the suppliers and the NHS where CfH has contracted for products which do not work, with LSPs that refuse to spend the money or expend the resources to adapt their products for local reporting, or to migrate important patient data. At the same time, Chief Executives are powerless to complain because of bullying from above, because they are not the holders of the contract and thus have no legal power over the LSP, and because the official policy is that local Chief Executives are responsible for the successful implementation of a product they did not choose in the first place and which anyway does not work.

VII. *The NAO Report failed to spot NPfIT's mistakes with respect to iSoft.*

iSoft was contracted as the Local CRS software provider to three clusters (ie North West & West Midlands; North Eastern and Eastern) on the basis of its proposal to develop a new product, Lorenzo. Our understanding is that a new product was deemed necessary because at the time of the procurement (circa 2003) NPfIT did not consider iSoft's existing range of products to be a sound starting point. The following is a summary of subsequent events.

- Phase 1 of Lorenzo was due to be available to trusts in 2005. This was not achieved. iSoft now states, as reported by e-Health Insider on 11 December 2006, that Lorenzo will be delivered to CSC in the first quarter of 2008 but that it will then be some months before it becomes available to trusts and that thereafter its introduction will be gradual, supposedly to occur, in the 2009–10 timeframe at the earliest.
- iSoft's accounting practices are currently being investigated, its share price has collapsed and it has yet to obtain the long term funding it requires to meet its commitments.
- In lieu of Lorenzo, the LSPs have been offering to Trusts existing pre-NPfIT iSoft products known as iPM and iCM. The former is a PAS with no clinical functionality. The latter is an additional module which does include some clinical functionality eg order entry and results reporting, relevant primarily to acute trusts. A substantial number of mental health trusts and PCTs who for various reasons did not have a corporate PAS facility have implemented iPM. The general view of acute trusts has been that iPM is no better than their existing PAS products and hence there has been virtually no interest in iPM/iCM.
- CSC/iSoft has promised to develop iCM to include for 2007 some elements of clinical functionality relevant to mental health trusts and PCTs, eg support for patient assessments and the development and monitoring of care plans (see Annex 1).

These facts raise a number of questions which were not addressed by the NAO Report and which remain to be answered by CfH.

- CfH has rightly insisted that non-delivery from suppliers will not be tolerated. And indeed the principle that the position of key suppliers is not sacrosanct has been well established with the withdrawal of Accenture as the LSP for the North Eastern and Eastern Clusters and with the withdrawal of one of the Local CRS software suppliers, GE/IDX, from the London Cluster—this latter despite successful delivery of products, including compliance to the Spine, in the two London Trust contracts that pre-dated NPfIT (at UCLH and at Chelsea & Westminster). How then does CfH explain the stance it has taken with iSoft given iSoft's failure to meet contracted timescales for software development; given that neither the future of the Company nor the successful development of Lorenzo is by any means assured; and that even if Lorenzo were to become a reality it would not be available to be deployed in many Trusts until 2010?
- What steps are being taken to ensure that iSoft and the development of Lorenzo does not fail, and what are the implications of those steps in financial and other terms? Is there not a risk that iSoft's apparent commitment to develop iCM further as an interim solution will reduce the resources available for Lorenzo development? And what happens if Lorenzo development does indeed fail?
- Given iSoft's statement that "*our aim over the next few years is to exploit fully the existing portfolio of strategic products—especially iPM and iCM—prior to the gradual introduction of Lorenzo from 2008 onwards*", why has there been no protest from CfH particularly when the contract was for Lorenzo and not the inferior legacy products? How is it that products rejected back in 2002–03 as an unsound starting point are now being accepted as strategic and suitable for further development? Why did the NAO not pick up on this given that iPM/iCM were already being implemented when the NAO's Report was being prepared?
- In declaring iPM and iCM to be "strategic products", are CSC and iSoft in fact laying the foundation for abandoning the development of Lorenzo, the totally new product iSoft is contracted to deliver? We note with concern (see Annexes 5 and 7) that Trusts are already being encouraged to use the nomenclature "Lorenzo" to describe the legacy products iPM and iCM.
- Even more serious is the question why CfH is sanctioning an approach whereby some three to four years into the programme (and rather longer for many NHS Trusts since their pre-NPfIT initiatives and procurements were halted) the NHS still has to wait a further three to four years before even the possibility of obtaining any substantial clinical software which works? Consider first the position of acute Trusts. Few want to move to iPM and so will not have iCM available to them. They will, therefore, not be able to obtain Local Care Record System functionality before 2009–10, with even this dependent on the successful development of Lorenzo. And those who are prepared to countenance iPM appear to have little confidence that timescales will be met (see Annex 7).
- Now consider the position of mental health trusts and PCTs. Feedback from those who have implemented iPM appears to be good (see Annex 5) with staff involved recognising the benefits to patient administration and service management. How galling, therefore, and how wasteful of people's present positive attitude that there is now to be a standstill (barring the possibility of some

limited iCM development) until substantial clinical functionality becomes available, if it ever does, with Lorenzo. Given the precedent of BT's approach in London for mental health trusts and PCTs (i.e. to adopt a completely different software product, CSE Servelec's RiO system, as its strategic solution) why is CfH not insisting that CSC widen its Local Care Record System solution portfolio beyond that of iSoft to include products that have already been developed and can offer clinical benefits now? Why has CfH sanctioned an approach which clearly is good for iSoft, enabling it to obtain revenue from off-the-shelf products in advance of Lorenzo, but which holds back mental health Trusts and PCTs and risks creating disaffection amongst clinicians at grass roots level?

— What value is the public getting from supporting the central CfH administration team and local CfH outposts until 2010 when all that is being delivered for the Local Care Record Service are old iSoft systems?

— There is an important governance principle at stake which CfH appears to ignore and upon which the NAO did not comment. CSC and Accenture were awarded their CfH contracts on the basis of developing a new product. Yet they will be obtaining revenue from CfH for many years from old iSoft products which were actually rejected during the initial procurement. Other suppliers with products at least as good as iPM/iCM might well feel aggrieved.

— Finally, given that Lorenzo, if ever developed, would be deployed only towards the end of the contract period (2013), should the NAO not have questioned CSC's apparent expectation for its contract to be extended from 2014?

VIII. *The NAO Report failed to spot problems in other areas of NPfIT.*

The other main sections of NPfIT are also cause for concern.

(i) Given that millions of ordinary homes now enjoy broadband access to the internet it is hard to be impressed by the often lower speed connections of N3 Broadband and the fact that CfH themselves describe N3 Broadband as an "insecure, hostile network".

(ii) The claims for the Electronic Transmission of Prescriptions (or ETP) appear odd given that only 1.5% of the transactions stated (less than 30,000 out of 16 million) were actually paperless and that the remainder involve printing the prescription in much the same way as GPs' standalone systems currently do (as reported in E Health Insider, 23 June 2006).

(iii) Choose & Book continues to miss its targets.

(iv) Whatever the success of the PACS programme, reports from the field suggest that obtaining PACS via NPfIT is more expensive than directly from suppliers. One large hospital Trust has reported that its costs of procuring PACS from NPfIT are some £600,000—£1 million higher per year than if they were to buy it directly from the supplier. Given that these extra costs will be incurred for several years and given the number Trusts who are buying PACS through NPfIT, the potential additional costs for Trusts over the life of the contracts runs into hundreds of millions of pounds.

4. Questions That the NAO Report Failed to Ask

In view of the points raised above, several basic questions remain unanswered.

I. Given that the LSPs are contracted to fully roll-out Phase 1 Release 1 by 2004, Phase 1 Release 2 by June 2005, and Phase 2 Release 1 by June 2006, according to the Eastern Cluster Business Case document, what has actually been rolled-out (ie implemented, not just made available for implementation) to date out of the 375 or so acute (and other community) hospitals in England? This is the real measure of programme performance, not just accepting what CfH claim has been deployed with respect to miscellaneous IT systems (most of which do not pertain to the LSP contracts) without any target figures.

II. Given that Phases 2 and 3 are due for full roll-out in 2008 and 2010 respectively, but are dependent upon full roll-out of Phase 1, what modules are expected to be implemented by contract end, and therefore what is the expected actual total cost for each LSP contract?

III. What is the Value for Money in terms of the expected cost of each Trust system at contract end compared to pre-NPfIT market prices?

IV. To what extent are the LSP delivery delays due to delays in CfH managing its own obligations to the LSPs upon which the LSPs were dependent for completing their software modifications?

V. Where is the scientific evidence for the Central Spine Summary Record's purported clinical benefits to justify Spine investment?

VI. How much has been invested in the Spine already, given that it has never been piloted or tested (and that the Scottish experience with their Spine system reports very low clinician uptake)?

VII. Which NHS CEOs and clinicians were consulted on the decision to down-scope the LSP contracts from effectively 3 phases to 1 phase (or at best, "Phase 1 Plus") of software delivery?

VIII. Will the LSPs be paid 66% (or whatever the correct contract value is for the phases) less as a result of the down-scoping from 3 delivery phases to 1 or will they still be paid 100% of the original contract value in order that the LSPs can recoup their losses due to delay and also reduce their costs from delivering much less product to the NHS?

IX. Which NHS CEOs and clinicians were consulted on the decision to re-define the NPfIT main objective as the delivery of the Central Spine Summary Record, and not the delivery of the Local Care Records Service to NHS Trusts?

X. Is this redefining of the NPfIT main objective not just a PR ploy to try and manipulate the perceptions of the ministers, the NHS, the media and the public in order to lower expectations (i.e. a Central Spine Summary Record, even if partially populated and therefore partly functional, by 2010 rather than a deeply functional and truly integrated Local CRS System for each acute trust, PCT and care community)?

XI. Has not the time saved on LSP procurement been more than used up by the subsequent NPfIT delivery delays?

XII. Has not the lack of clinician involvement in the software (and LSP) selection process further delayed the programme?

5. Conclusions

I. The NAO Report has failed to spot poor CfH/NPfIT performance in the areas of business case delivery, benefits delivery, implementation progress, Spine delivery, the fundamental reasons for delays, accountability to the NHS, management of and by LSPs, iSoft delivery, and other NPfIT elements such as N3 Broadband, ETP (Electronic Transmission of Prescriptions), Choose & Book and Picture Archiving and Communications System (PACS).

II. The NAO Report has missed the fact that CfH/NPfIT has lost its way. CfH/NPfIT has abandoned its vision to reduce NHS fragmentation of systems and care. It is driven by no vision at all except the desire to retain central authority using bullying tactics on both suppliers and Trusts. Now it seems it is also bullying patients by not allowing them to opt out of sharing their medical records (despite its earlier promise that they could opt-out). These drivers and tactics could almost be tolerable if CfH/NPfIT were delivering the goods, but it is clearly failing on all sensible and common sense measures: workable products (there is no workable new LSP product), on time (over 3 years late now and likely to be well over 5), within budget (the billions keep adding up).

III. The CfH/NPfIT mantra is "deploy anything that moves just so we can say we are deploying something" with little care about the wider picture or indeed value for money. This pressure, along with lack of deep understanding of the link between clinical systems and clinical culture, has led to the misguided secondary mantra which is "*oh don't worry about clinical systems and integration of the NHS, the Central Spine Summary Record system will take care of that*".

IV. Any clinical benefit which may eventually derive the Spine is likely to be miniscule compared to the evidence-based benefits that the NHS needs and which have been contracted for in the form of Local Care Record Service systems (otherwise known as Electronic Patient Record Systems) for each NHS acute, community and mental health Trust in England.

V. Not one of the LSPs has delivered to contract. The NAO should not have praised the so-called "speedy" completion of a contract procurement process which was so clearly flawed. The extraordinarily hasty way in which the original LSP contracts were let, ignoring all other considerations such as the need to achieve buy-in from clinicians and from chief executives of local Trusts, is one of the main causes of the enormous problems which have followed in attempting local deployments. The NPfIT procurements can only regarded as failures.

VI. GPs have in effect opted out, putting paid to the concept of "ruthless standardisation".

VII. Our conclusions cause us therefore to take serious issue with the key conclusion of the NAO Report that "The Department and NHS Connecting for Health have made substantial progress with the Programme"[10]. All the evidence, particularly that relating to delivery of the originally envisaged core Care Records Service functionality, points the other way.

[10] NAO Report, Summary, Conclusions & Recommendations 7.

6. Recommendations

I. *The Department of Health should take steps to:*

(a) Retain the sensible aspects of NPfIT, namely: (a) ring-fenced money for IT; and (b) discounted prices.

(b) Stop the tactics of bullying NHS Trust Chief Executives into taking take unfit systems and stop the climate of secrecy surrounding CfH where people are afraid to speak out, even to share lessons learnt or to suggest how problems could be solved.

(c) Empower the local Trust Chief Executives with final authority to decide when payments are made to LSPs.

(d) Recast the contractual relationship between the LSPs and each NHS Trust so that each Trust is legally the customer rather than the Secretary of State for Health.

(e) Restore the NPfIT vision of sharing information and functionality (ie wide area, cross organisation and cross care-setting Local CRS systems) particularly across local health economies or care communities (as is already stated in the LSP contracts).

(f) Put the "Spine" investment on hold and ask clinicians and IT specialists to pilot and test it objectively and with scientific rigour.

(g) Disband the central NPfIT team within CfH in favour of allowing systems procurements and implementations to be handled by local care communities in accordance with agreed standards. This level of management would support the integration of the different care settings such as primary and community care, acute hospital care, mental health care and social services, and therefore achieve the main benefits of using IT to deliver patient-centred care.

(h) Make the money which is saved from reducing central overheads available locally for change management for each care community.

(i) Establish an open framework of CfH accountability where future decisions on NPfIT budget and central IT contract changes are made in full consultation with, and with accountability to, patients, local NHS trust management and clinicians.

(j) All NHS trusts in the West Midlands & North West, North Eastand Eastern Clusters should be asked whether they wish iSoft to remain the sole subcontractor for the local Care Record System, with appropriate action to be taken to reflect their answer.

II. *The NAO should:*

(i) Review its methods of investigating large IT programmes in the light of the points made in this submission e.g. measuring progress should be undertaken against baselines and appropriate metrics rather than merely accepting what the programme managers claim.

(ii) Address the shortcomings of its report on NPfIT according the section 3. above.

(iii) Ask the questions set out in section 4. above.

Annex 2—Information Sources Website Addresses

— Eastern Cluster LSP Business Case (ATP2)

http://www.portal.nscsha.nhs.uk/imt/Document%20Library/AtP%20Eastern%20cluster%20v0.20%20(no%20finance%20case).doc

— London LSP Business Case (ATP2) Sign-Off

http://www.royalfree.nhs.uk/DOC/appxe2.doc

— Report on Serious Untoward Incident at Homerton and Newham 2004 using Cerner EPR

http://www.newhampct.nhs.uk/docs/board/060117.pdf

— Spine Message Delays

http://www.e-health-insider.com/news/item.cfm?ID=1670

Annex 3—Modules to be Delivered by the LSPs

SUMMARY OF MODULE FUNCTIONS

101 *User Environment/Tools*

The aim of this module is to identify the core toolset which is required from each LSP to control the user environment and the operation of the component functions of Local ICRS Service and local system tailoring which will be required to support the diversity of clinical and patient needs which the LSP Services will address.The following components are required:

- tools to enable the collection of locally-defined information
- tools to support the reporting and analysis of information
- parameter controls to support the behaviour of the solution to meet needs within a Cluster and the diversity of clinical practice
- controls to support information governance, including but not limited to access and confidentiality
- controls to support the operation and activation of workflow as an inherent function.

102—*Patient Index*

Typically, each Trust and GP practice currently holds its own patient index. The new service shall provide a method to ensure that all systems and services for which the LSP is responsible use the national PDS as their unique source of patient demographic information although local Systems will need to hold temporary supplementary information.

103—*Prevention, screening and surveillance*

The purpose of this module is to support national and local promotion, prevention, screening and surveillance programmes. The service requirements specified in this module should enable:

- the comprehensive identification of persons at risk of developing particular problems, to enable implementation of systematic prevention programmes, which will lead to a reduction in the incidence of these problems or conditions
- improvements in the coverage of screening programmes in order to detect the incidence of problems and conditions at an early stage, which will lead to improvements in the subsequent outcomes of care.

104—*Assessment*

This module specifies the requirements for the service to support all clinical assessments across all care settings, incorporating the specific requirements of the Single Assessment Process (SAP)—with links to social and other care agencies. ICRS seeks to address, specifically, the generic functional requirements that arise from the distributed nature of care services and the need to deliver patient -centred, integrated, evidence-based care. NSFs are driving the latter and require the development of increasingly shared (integrated) assessments and care planning within and between services.

Scope

- Support for the documentation of uni- and multi-disciplinary assessments in a structured form eg templates linked to the Patient Record
- Support for integration of structured assessments within care plans and care pathways, as required
- Support for access to assessment documentation
- Support for access to clinical knowledge eg guidelines and protocols to be available during assessment.

Components

- Structured assessment templates for specific types of clinical assessment, with the ability to create and amend templates (including an Audit Trail for amendments)
- Common data dictionary of data items to enable sharing of common information across each assessment template
- Incorporation of different types of clinical assessment and evaluation information, including graphical, textual, numeric, audio and video data.

105—*Integrated Care Pathways and Care Planning*

An Integrated Care Pathway or ICP describes a process within health and Social Care, which maps out a pre-defined set of activities and records care delivered and the variations between planned and actual care. ICPs will be used to support "whole systems" processes spanning Primary Care and Secondary Care service boundaries. ICPs are largely based on conditions or diagnoses. The development of ICPs is a complex process and, from a clinical perspective, will take time to develop. The current reliance on paper-based care pathways has made the task of defining pathways of care more difficult in terms of design and application as a real-time tool to assist in delivery of evidence-based care. The incorporation of ICPs within the LSP Services will enable ICPs to become an active tool to assist in the delivery of care incorporating clinical decision support to identify actions, reminders and guidance at the point of care, across the continuum of care.

106—*Clinical Documentation, including Clinical Noting and Clinical Correspondence*

The purpose of this module is to provide functionality which will support the recording of structured and, where necessary, unstructured clinical notes, summaries and letters. Key elements of clinical documentation covered by these requirements include:

- Clinical notes, including, but not limited to: operation notes; medical history, where this is not part of a structured assessment; treatment notes; and documented observations; referral letters; out-patient clinic letters
- Alerts from systems in one sector to another that a patient is undertaking an Episode of care (eg GP system alerted to patient's admission to A&E)
- Immediate discharge summaries, including ToTakeAways (TTA)
- Final discharge summaries
- Copies of the above to patients, either in electronic or printed format.

107—*Care management*

This module specifies the requirements for the management of specific types of care event, independent of care setting. Requirements are provided for unscheduled care management, domiciliary care management, ambulatory care management, bed management and demand or access management. With the shift from acute-based care to community and primary -based care, the traditional approach to provision of out-patient and in-patient management wholly within a hospital environment is no longer valid.

108—*Scheduling*

Scheduling will often involve the scheduling of resources from more than one organisation, across a range of care delivery environments. Effective scheduling will also require the adequate capture of demand data and prediction of future capacity use. The scheduling solution proffered must be flexible enough to accommodate existing and emerging working practices, across the whole range of health care delivery environments and locations.

Components

The scheduling functionality must provide a process in which events that need to occur in order to deliver patient care are assigned a date, time and place in the future when the resources that are required to carry out those events are available. It is to be available at three levels:

- Departmental scheduling (intra-departmental)
- Enterprise-wide scheduling (inter-departmental and intra-organisational)
- Scheduling across a healthcare community (inter-organisational).

109—eBooking compliance

To support eBooking, the following components are required:

- Changes to Primary Care systems to make them support eBooking
- Changes to Secondary Care systems to make them support eBooking.

Note that the LSPs, and not the e-Booking service provider, are responsible for connecting all GP and local systems, and have responsibility for data migration.

110—*Requesting and order communications*

Orders are used to request services or goods, and may result in results being reported back. Orders may be fulfilled by electronic systems, manually, or by a combination of both. In order to deliver an order, whether it is styled as an order or request, the initiator may also need to take a sample or schedule a procedure. Requests can be placed for diagnostic and investigative services. This is not just for pathology/radiology tests, but also for other diagnostic services (eg, audiology, cardiology, endoscopy, pulmonary function and neurophysiology) and for other goods and services.The following components are required:

— Order definition
— Order creation
— Order routing
— Sample collection
— Order receipt
— Order enquiries
— Order management.

111—Results reporting

This module specifies the requirement for results reports to be made available to the requestor and/or other authorised persons, including the patient. Results are generated by diagnostic and investigative services. They are generally provided in response to orders/requests. Results may be generated by electronic systems or be provided manually, or by a combination of both. Results can be provided by a range of departments; not just by pathology/radiology departments, but also by other services (eg, audiology, cardiology, pulmonary function and neurophysiology).The following components are required:

— Results definition
— Results generation
— Results reporting
— Reports and alerts routing.

112—*Decision support*

ICRS will enable Clinicians to make decisions based on the best-available patient information and currently-accepted evidence of best practice. ICRS will also provide managers with quality summarised data for service planning. The following components are required:

— Elective—structured access to reference material
— Passive—implementation of local protocols
— Active—alerts
— Clinical management—management and maintenance of protocols
— Service development—forward planning of clinical services.

113—*Prescribing and pharmacy*

Prescribing and administering drugs to patients is a key care process. Both processes, if inadequately informed, can also cause serious risks to patient safety. This module describes the core functionality required to allow and support the safe prescribing of drugs by Clinicians, as well as assisting in managing the dispensing and administration of drugs (mainly in the hospital setting), and monitoring and presenting each patient's drug history and compliance. The scope of this module includes all prescribing and drug use across the NHS: in Primary Care; in the Acute Care sector; and by community practitioners, as well as provision of drugs in the community. The following components are required:

— Reviewing medication history prescribing
— Prescribing
— Repeat prescriptions
— Decision support
— Dispensing and administration.

115—*Digital imaging including specification for a picture archiving and communications system (PACS) solution*

This module specifies the requirements for the service provider to enable management and distribution of digital images used for clinical purposes. An integrated care record shall include a wide range of non-textual information; eg, graphs, scans, etc. An important element within the record shall be digital images. This section describes the requirements for collection, management and presentation of digital images, functionality commonly referred to as a Picture Archiving and Communications System (PACS). The following components are required:

— Initially restricted to static radiological images and associated reports, but rapidly expanding to cover other disciplines, including dermatology, orthopaedic surgery, endoscopy and cardiology

— Needs to link to existing (or replacement) radiology management systems demographic and administrative/scheduling functions (eg Patient Administration Systems/functions) to allow for pre-fetching and auto-routing

— Supports transfer of individual images/reports (or the images/reports for an individual) between health communities—generally through a remote viewing process, rather than actual transfer.

116—*Document Management*

Today a large proportion of care records are held on paper. ICRS will increasingly reduce the amount of paper needed. In some settings, at least, the need for paper could be eliminated if documents could be managed by capturing them electronically and making them part of the Patient Record. For this module the following components are required:

— Document creation and capture

— Indexing and profiling

— File system services/storage

— Document viewing, annotation and editing

— Tracking of paper-based documents and X-ray films.

Other components

There are a number of other components which are required to be delivered by the LSPs. These components do not actually provide additional functionality over and above that described already. For instance Maternity services (Module 118) will require "patient index", "scheduling", "results reporting" etc. The full list of other components is as follows:
114—Diagnostic and Investigative Services
117—Financial Payments to Service Providers
118—Maternity
119—Social Care
120—Dental Services
121—Maintain Patient Details
122—Emergency\Unscheduled Care
123—eHealth and Clinical Development
124—Information to support secondary analysis and reporting
125—Surgical Interventions
151—Primary and Community Care
153—Acute Services
154—Ambulance Services
160—National Service Frameworks
161—Mental Health
162—Diabetes
163—Cancer
164—Coronary Heart Disease
165—Older people
166—Children's Services
167—Renal services

The functionality within these components will be delivered in accordance with the timescales described above.

1. The following text describes the roll out of functionality by phase.

Phase 1 Release 1—Available June 2004—Complete by December 2004

2. The principle purpose of this phase is to install systems, hardware and software that will form the framework on which future functionality will be built.

3. Nationally we will see the establishment of a Personal Demographics Service (PDS) that will store demographic data for every individual in England in one central data store accessible through local systems. In parallel the Personal Spine Information Services (Spine) will be established. This will form the basis of the lifelong health record for every patient in England. In order for these two services to work effectively and to be accessible from the start each person registered will be assigned a single unique identifying number (NHS Number) that will form the common link between local and national applications.

4. There will also be a secure Access Control Service (ACS) which will register and authenticate users, (including patients), provide a single sign on and record the consent of the patient to clinicians accessing their personal health record.

5. Whilst these three key services are put in place, additional work will be undertaken to set up an infrastructure to handle and process the data that will flow between the various local and national systems. These data "messages" will be processed through a Transaction Messaging System (TMS). Each message will contain tagged data in XML format; the tags indicating the route the message should take through the system—perhaps from a GP to a pharmacy in the case of electronic prescribing or one PCT to another in the case of GP: GP transfers. The key message processing functionality that will be built in this phase is:

— Initial e-booking
— Prescribing
— Basic Patient Information
— Birth and death notification
— Allergies.

6. ICRS is thus providing the enabling technology for two key initiatives, eBooking and Electronic Transfer of Prescriptions, as well as starting to share basic patient information across the NHS clinical community; given some basic facts it will be possible to clearly identify the patient and get a snap shot of medical history, reducing the scope for errors and improving the service to patients.

7. There will clearly be a need for user support and a helpdesk will be available from the start of the phase. This will expand in size and scope through each subsequent phase.

Phase 1 Release 2—Available December 2004—Complete by June 2005

8. The next release of phase 1 is concerned with building on this infrastructure to start managing more complex business processes and handle messages from different clinical situations. This will deliver;

— Full e-booking functionality
— Outpatient clinic letters
— Inpatient discharge summaries
— Report of the Single Assessment for elderly people
— Diagnostic imaging and pathology result (flag and locator)
— Screening results
— Recording of care episode events
— Routing of orders for some blood tests and diagnostic images.

9. These new services will start to change the way people work within the health service. There will be a gradual migration towards electronic working with easier, faster access to patient demographic details and medical history, with routine use of electronic indexing systems.

10. GP's will routinely be using electronic prescribing tools with the roll out of electronic prescription transfer to the community pharmacy, reducing the potential for error and fraud as well as enhancing the patient experience.

11. Maternity units will start to use systems that automatically record birth details and demographics and link the baby's records to the mother's.

12. All healthcare staff will have access to a wide range of digital libraries and support systems to assist in diagnosis and treatment.

13. Clinicians will routinely capture clinical notes electronically, saving time and making key health information available to others directly involved in delivering care.

Phase 2 Release 1—Available June 2005—Complete by December 2006

14. This phase sees the consolidation of the process and the enhancement of functionality to deliver;

— NSF assessment and review record

— Secondary uses of spine data* Planning and recording of the total care journey—integrated care pathways

— Full linking and electronic transfer of correspondence

— Pathology and image order and result (HL7 messaging)

— Integration of dental services.

15. By this time, electronic support for business processes will be commonplace within the NHS;

16. Clinical teams will be able to create and share assessments for specific National Service Frameworks such as Cancer and Diabetes, leading to faster more relevant treatment

17. Secondary users such as medical researchers will have access to a growing pool of pseudonymised data about health events and outcomes, improving both the quality and speed of research

18. Clinicians and others involved in delivering care will be able to maintain patient-specific care pathways, tailoring care to reflect both the patients needs, and any specialist skills available

19. A significant proportion of ordering of services such as Pathology and Diagnostic Imaging, and the subsequent distribution of results will be electronic, leading to faster and more predictable reporting.

20. Dental practitioners will have access to the patient health records through the Spine, with the benefit of added knowledge about a patient's medical history facilitating more effective care.

Phase 2 Release 2—Available June 2006—Complete by December 2008

21. At this time there will be greater sophistication in the technology available with an increased level of integration and seamless care in three key areas;

— More sophisticated Access Control Services

— Extensions of the eBooking Service

— Links to remote care settings.

22. Patients will be able to place elements of their medical history in a virtual "sealed envelope", allowing them to more closely control access to their data.

23. Clinicians too will be able to seal particular elements of data, protecting patients from information which might be harmful, and there will be audited "break glass" functionality enabling them to gain access even to "sealed" data in emergencies.

24. Health care professionals and patients will be able to extend the eBooking concept to a wider range of health encounters both inside and outside the NHS, giving greater choice, control and certainty to patients.

25. Health care delivered through remote settings such as ambulances, NHSDirect, walk-in centres or non-NHS facilities will be integrated with ICRS.

26. Tertiary care centres will routinely be linked to each other, secondary care and to primary care.

Phase 3—June 2010

27. Significant changes will take place over this phase, with further enhancement of systems and processes to ensure seamless care. The scope of this phase is deliberately open; clinical priorities will change, leading to new processes and in turn new functionality and messages. The trends, however, are clear:

— The majority of clinical events and episodes will be recorded electronically; the majority of clinical processes will be supported by IT, reducing costs and providing a faster, more effective patient journey

— Clinicians will have widespread access to information and integrated decision support at the point and time of need, with links into the knowledge base, improving decision making and hence clinical outcomes

— This information will enable the development of individually tailored care pathways with linked tracking and exception reporting and dynamic monitoring of progress; Workflow will trigger alerts to clinicians both when planned events fail to take place, and when expected outcomes are not achieved.

28. Systems will be "self aware" with sophisticated error and pathway deviation monitoring enabling consistent care and a consequent reduction in mistakes due to human error.

29. However, it must be noted that these are the minimum levels of functionality that must be achieved by the given dates. They do not preclude procurement and rollout at a faster rate, subject to local priorities and affordability.

30. Implementation of ICRS is expected to take place via the procurement and implementation of "undles"of ICRS functions, covering both the core services (within the scope of this AtP2) and additional services (the case for which will be set out in AtP2 supplementaries). The core service "undles"are described in Appendix E1 (Annex 4 Core Service Bundles), in relation to the ICRS functions they comprise and the implementation phasing to which the bundles relate.

31. Eastern will aim to push the pace of implementation across many locations simultaneously. An urgent driver is the age of existing systems and status of some of the support contracts. The more important driver is that Eastern is seeking to gain benefits from a common ICT infrastructure to drive service redesign benefits as early as possible, where affordability permits.

Annex 4—Economic Case of Eastern Cluster ATP

(Extract showing the Importance of Cross-Organisation and Cross-Setting Benefits)

1—Benefits–Should Cost v LSP

			Individual Trust procurements ("should cost")		*Cluster ICRS procurement*		
Overall aim + subsidiary "SMART" objectives	*Notable ICRS phase 1 & 2 functionality required locally*	*Relative weight*	*Raw score*	*Weighted score*	*Raw score*	*Weighted score*	*Commentary*
1. Improve the experience of patients at all stages of care from the initial contact, through referrals, to scheduled treatment and back home as described in the NHS plan.							
By 2005, patients should expect that an NHS organisation providing care already have any existing demographic information it needs for care to hand. They should only be asked to confirm personal demographics (name address etc). Any changes that are made to this record should automatically update the record for any future episodes of care.	Integration across cluster organisations, and with PDS, Spine.	9	1	9	3	27	Cross boundary issues likely with "should cost".
From 2005, patients will be able to securely access their own records through a range of channels.	Many components plus integration across cluster organisations.	5	1	5	2	10	More difficult with "should cost" to provide access to comprehensive records.
From 2006, every patient requiring an elective procedure will be given a choice of provider, whenever it is practical, depending on the patient's condition and treatment required, in accordance with National policy.	Integration with e-bookings.	7	1	7	3	21	High risk with "Should cost" of lack of integration between primary and secondary care and within each care setting.
From 2005, every patient requiring an outpatient clinic or day case appointment will be provided with a confirmed date, time and place, at the time of referral or through the booking management service, in accordance with National policy.	Integration with e-bookings.	7	1	7	3	21	High risk with "Should cost" of lack of integration between primary and secondary care and within each care setting.
From 2007 all test results (Pathology and Radiology as a minimum) should be held electronically (Including those tests that are performed at remote locations from where the patient's treatment is performed).	Order entry, results reporting.	9	2	18	2	18	Risk will remain in place for both options as it will rely on total integration.
From 2007 all order for all tests should be recorded electronically. Including those tests that are performed at remote locations to where the patient's treatment is performed.	Clinical correspondence, assessments, scheduling, results reporting, PACS.	8	2	16	3	24	Higher chance of information falling between the cracks with "should cost".

Overall aim + subsidiary "SMART" objectives	*Notable ICRS phase 1 & 2 functionality required locally*	*Relative weight*	*Individual Trust procurements ("should cost")*		*Cluster ICRS procurement*		*Commentary*
			Raw score	*Weighted score*	*Raw score*	*Weighted score*	
From 2007, patients who need to make a series of visits for investigations and treatments, will be able to agree and book a mutually convenient schedule of contacts, based around the clinic, theatre schedule of the relevant clinicians.	Scheduling, E-booking.	7	2	14	3	21	Risk with "Should cost" of lack of integration between primary and secondary care and within each care setting.
From 2007, clinical interventions should never be postponed to another date because the information required for treatment is unavailable in electronic format.	Scheduling, Results Reporting, Order entry.	6	2	12	3	18	Medium risk for "should cost" of systems not all being integrated.
2. Improve the quality of care by enabling standards to be implemented across the NHS and Clinical and Social Care networks.							
By 2006, patient level information will routinely be available to support clinical governance relating to NSF's which span care settings.	Decision support as part of ICPs, order entry, Clinical correspondence etc.	9	1	9	2	18	Risk with "should cost" of systems not all being integrated.
By 2007, ICRS will have had a significant impact in reducing the impact of clinical error. This will arise from the improved quality of records and access to them, legible clinician orders and use of defined order sets, together with the increasing use of clinical decision support.	Clinical correspondence, Order Entry, Decision Support, results reporting.	10	2	20	3	30	Some risk with "should cost" of information not being available regarding previous tests conducted at another organisation.
By 2010, ICRS will have reduced the number of avoidable adverse incidents arising from medications management.	e-prescribing.	9	2	18	3	27	In "should cost" some risk of not picking up interactions with drugs recorded on other organisations' systems.
By 2006, investigations will not need to be repeated because information relating to earlier tests is not available in electronic format. (Pathology and Radiology as a minimum).	Results reporting, clinical correspondence.	9	2	18	3	27	Some risk with "should cost" of information not being available regarding previous tests conducted at another organisation.
By 2005, provide all clinical staff will have the infrastructure made available to them to quickly and easily access the latest evidence and best practice.	Access to electronic reference material.	9	3	27	3	27	Both options will provide this functionality.
By 2007, patient's medical records from their registered GP practice will be available to clinicians at an acute or community hospital where routine medical treatment is provided.	Many components plus integration across cluster organisations.	8	0	0	2	16	High risk for "Should cost" due to legacy systems and lack of spine record.
3. Enable effective access to clinical and administrative information across care providers and locations to support NHS clinical priorities.							
By 2007, a summary of a patient's recent medical history from acute or community hospitals will be available to clinicians at within the community.	Integration across cluster organisations + with PDS, Spine.	8	1	8	3	24	More difficult with 'should cost' to provide access to comprehensive records.

Overall aim + subsidiary "SMART" objectives	*Notable ICRS phase 1 & 2 functionality required locally*	*Relative weight*	*Individual Trust procurements ("should cost") Raw score*	*Individual Trust procurements ("should cost") Weighted score*	*Cluster ICRS procurement Raw score*	*Cluster ICRS procurement Weighted score*	*Commentary*
4. Reduce the fragmentation of care through improved consistency and coherence of systems and records.							
By 2005, provide clinical staff with fast and convenient access to the summary of previously electronically recorded healthcare interventions delivered (regardless of by whom) for any one patient and to the detail about patients in their care and which are held on the National Spine.	Integration & messaging across cluster organisations + with PDS, Spine.	5	1	5	3	15	More difficult with "should cost" to provide seamless information exchange during referrals, discharges & transfers.
By 2010, General Practitioners and others actively providing care (eg within a clinical network) will be able to access and maintain a consistent and detailed patient record irrespective of care location.	ICPs within and between organisations	8	1	8	3	24	More difficult with "should cost" to provide integrated pathways across different organisations.
By 2008, ICRS should contribute to a 25% reduction in nurse's administrative workload.	Many components plus integration across cluster organisations.	6	2	12	3	18	More risk with "should cost" due to lack of full integration.
By 2008, ICRS should contribute to a 20% reduction in doctor's administrative workload.	Many components plus integration across cluster organisations.	6	2	12	3	18	More risk with "should cost" due to lack of full integration.
By 2006, significantly reduce the time spent obtaining missing/lost patient information during referrals, discharges and transfers.	Clinical correspondence, integration across communities.	5	1	5	2	10	More difficult with 'should cost' to pull together information from different organisations.
5. Improve health policy development and health research through increased availability, improved quality and speed of retrieval of data.							
By 2010, facilitate the operation of multi-disciplinary and multi-organisational integrated care pathways.	Facilities for the abstraction, management and reporting of information.	3	2	6	3	9	More difficult with "should cost" to pull together information from different organisations.
By 2008, provide up to date, accurate and fully anonymised patient data for policy development where the source data is less than 3 months old at time of making it available.	Facilities for the abstraction, management and reporting of information.	5	2	10	3	15	More difficult with "should cost" to pull together information from different organisations.
Total			246		438		

Key to relative weighting	*Key to raw score*
1 = least important through To 10 = most important	0 Does not deliver goal at all 1 Low delivery of goal 2 Medium delivery of goal 3 Maximum delivery of goal

Annex 5—Extract from a Recent PCT Report

Caveat. The word "Lorenzo" in this extract, which is taken verbatim from a PCT report, is no longer being used strictly to refer to the new product that iSoft is supposed to be developing but instead is being used to rebadge the old ISoft products, iPM and iCM, thereby creating the impression that Lorenzo is in fact a reality. The author of the extract is aware of this but explains that he wished to avoid confusing his readership and so employed what increasingly is becoming common terminology.

EXTRACT FROM A RECENT UPDATE REPORT ON NPfIT FROM A PCT TO THE LOCAL PEC[11] IN A CLUSTER SERVED BY CSC/iSOFT

Reference Solution—Lorenzo

There has been a considerable amount of activity over the last 15 months to implement the NPfIT Reference Solution, usually referred to as the Lorenzo system. The roll out of Phase 1 of the system is now complete, and we have recently completed a joint exercise between the local NHS and the NPfIT Local Service Provider to capture the Lessons Learned from that project.

There have been some excellent examples of PCT staff using this system to fully support patient care, and the majority of services are now using the system. There has been some reluctance to use the system in a few services, and the project team has been very active to provide support before and during the go live period.

Future Outlook

Over the next 3 months a major exercise will be undertaken to plan the implementation of the next phase of Lorenzo, iClinical Manager, which will be available for deployment from May 2007. This will provide significant clinical functionality for the PCT's clinical services, such as the ability to support patient assessments, and the development and monitoring of care plans.

Further major releases are planned as Lorenzo Enterprise 3.5 (including e-prescribing) available from February 2009, and Lorenzo Enterprise 4.0 (including support for Integrated Care Pathways) available from May 2010.

Annex 6—Contribution from Bernard Hunter

Bernard Hunter is a health IT consultant with over 15 years experience of working for the NHS.

"*Some thoughts—largely from an acute trust perspective.*

(a) I always thought the whole thing was TOO big—human beings and human systems can only cope with so much.

(b) the surprising thing is that it appears to be the software that has been letting the project down; for some reason, the private sector seems not to be very good at developing big healthcare systems—much of the legacy stuff dates back to NHS-development days (notwithstanding some recent front-end sexing up); the database design (data model) is specified, the requirements have been known and documented for decades, so—yes—that has been a surprise.

(c) having said that, in London, things really seemed to be coming together with BT and IDX, until GE lost interest (assuming that is what happened)

(d) where I thought it would fall down, and this remains untested, is in local implementations.

- *are there enough good people to manage local implementations?*
- *will local data quality problems—horrible to resolve, but must be resolved before migration—kill the whole thing?*

(e) the talk now is of local involvement/control, and the massive gains are being ignored in all the statements (in favour of "why should we move from existing if what is on offer is no better")—sounds like a death-knell to me; I can see the baby following the bathwater!

(f) My guess re the future: they will keep the centralised services and design, but go back to 1999 or so, to the precursor of NPfIT (was it called "Information for health"?), requiring trusts to implement system according to given standards, sharing data through the spine in that way. I just hope those contracts are as good as Grainger says, and the NHS does not have to pick up the tab.

(g) to some extent, implementation at a particular trust will take as long as it takes, so shoe-horning into a regional timetable is not helpful—another reason for local control

(h) the lack of experienced people could partly to be addressed by having region-wide shared implementation services

Bernard"

[11] Professional Executive Committee, comprising, amongst others, local GPs

Annex 7—Comments from an Acute Trust Director of IM&T

Note that the author of these comments, inserted below verbatim, has enclosed "Lorenzo" in parentheses to indicate his awareness that the word is no longer being used strictly to refer to the new product that iSoft is supposed to be developing but instead is being used to rebadge the old ISoft products, iPM and iCM, thereby creating the impression that Lorenzo is in fact a reality.

Our first major implementation is for the replacement PAS and we are attempting to agree our 'go live' date. This has become problematic because the date depends on training being able to be delivered in a three month window where there can be no slippage. Commencement of the training is dependent upon CSC delivering LE2.2 of Lorenzo for testing by the NHS, testing and resolution of issues identified and agreement to deploy on a specific date. There is not a lot of confidence that all these milestones will be delivered on the dates due. This is probably down to previously poor CSC delivery of releases and version and the NHS capacity to respond to issues effectively.

There is evidence that CSC performance is improving and that the "Lorenzo" product is fit for purpose. This needs to be put into context however, in that a fully integrated solution will not be available until, I believe, 2010 at the earliest.

PACS, I think, is going to be an NPfIT success but not without hard work.

Choose and Book application is working but performance is poor. My detailed knowledge of the Choose and Book application is not great but there have been some problems with adequacy of functionality and the Trust has put hundreds of man hours into "workarounds".

Summary spine record . . .. not available, although we have had some discussion with a local PCT and CfH in respect of the piloting of a GP summary record.

A final point may be that agreeing contractual changes is difficult in the extreme and the logistics of involving the NHS, CfH, LSP and often the 3rd party provider are somewhat horrendous. It took approximately 4 months to agree a CCN to deliver PACS in advance of the main deployment to one of our sites.

Annex 1—Evidence Submitted to the PAC in June 2006

Evidence for the
Public Accounts Committee (PAC) Hearing on 28 June 2006
Regarding the National Programme for IT (NPfIT)

1. Evidence that the PAC should note, for its Hearing on the NPfIT on 28 June:
   (a) Evidence demonstrating that the most important areas of functionality contained in the LSP contracts are unlikely to be delivered by the National Programme (Exhibit A)
   (b) Evidence demonstrating that the benefits required by the NHS to justify the business case in the LSP contracts are unlikely to be delivered (Exhibit B)
   (c) Evidence demonstrating that the National Programme mis-managed the implementation of the Local CRS solution at the first Southern Cluster site and caused preventable local disruptions (Exhibit C)
   (d) Evidence demonstrating that the National Programme is operating without proper accountability (Exhibit D).

2. The PAC should note that the delays to the delivery of software by the LSPs have largely been due to Connecting for Health (CfH) management decisions, not the suppliers. This is because the Spine message definitions were delayed in being published by the NPfIT staff in 2004 and 2005.
   (a) The PAC should pose the question to the NP leadership: what delays were caused to the LSP deliveries as a result of the NP's delay in publishing its Spine Message definitions?
   (b) The PAC should also realise that the LSPs are afraid to reveal this fact for fear of damaging their relationship with the NP. In effect, they are afraid of placing blame on their customer, despite the fact that the customer is to blame for their own non-performance.

3. The PAC should note that the NAO report is a travesty because it simply published what the NPfIT claims is their deployment statistics. This is useless without target data as to what was supposed to be deployed and when.
   (a) The PAC should take the NAO to task. There ARE target figures in the LSP contract schedules for what modules of Local CRS were due to be deployed, where and by when. Unless these targets are used to compare the ACTUAL implementations (the only figures published in the NAO report) made by NPfIT, the "Audit" element of the NAO's role has been woefully neglected.
   (b) It is akin to an Annual Report of a large publicly-quoted company reporting that it earned £2m in revenues last year, but not reporting what it was supposed to earn that year. Without the target figure, the annual report is useless and its shareholders would not stand for it.

EXHIBIT A

Evidence demonstrating that the most important areas of functionality contained in the LSP contracts are unlikely to be delivered by NPfIT

Background: The National Programme intends to deliver a Care Records Service (CRS) which is made up of (a) the National Care Records Service (National CRS), or patient summary record, also known as the "Spine CRS", and (b) the Local Care Record Service (Local CRS), also known as the "electronic patient record (EPR)" or "core EPR", which contains the full patient details and full "electronic patient record" functionality.

NPfIT admit that the National "Spine" CRS is going to be at least 2.5 years late in being delivered. However, in reality, this delay does not matter and is merely a (perhaps deliberate) distraction that is drawing attention away from the real problem, which is that the National CRS is a flawed and unproven concept. What is much more important to patients and the NHS, but not reported by the media, is the Local CRS (core EPR) because this is a proven and crucial set of computer tools that doctors and nurses need to treat patients on a day to day basis.

There is extensive published evidence[12] to demonstrate that, for instance, doctors using the electronic prescribing functionality in the Local CRS (but not a part of the National CRS), will certainly reduce medical errors and patient deaths due to improper drugs prescribing practices.

This is in contrast to there being no published evidence to show that the National CRS patient summary record, or Spine CRS, will have any significant clinical benefits. In fact, the Scottish experience with using their equivalent of the patient summary record is that it rarely used by clinicians. This is largely due to the fact that the summary record is "unintelligent" with no direct interaction with the clinical system, containing the patient's detailed local electronic record, which clinicians use on a day to day basis.

Furthermore, the limitations of the Spine CRS underscore the need to have a local CRS (EPR) deployed across care settings which provides embedded clinical knowledge to support the efficacy and efficiency of the provision of health care to patients. For example if a patient develops an allergy to a drug in the acute care setting, the "alert" for this will be immediately applied in primary care. Thus preventing that drug from being prescribed without a warning whatever setting the patient is in.

The Evidence: Appendix 1 shows the list of the 59 Local CRS functions (labelled as "modules") that the Eastern Cluster LSP, as an example of all 5 LSP contracts which are virtually identical in their scope of functionality, was contracted to deliver for the Eastern Cluster and the contracted delivery "phase" in which they are to be delivered. The timescales for these phases are listed as follows in the Eastern Cluster contract (page 23 of the Approval to Proceed 2 document):

"The ICRS programme is intended to be implemented in three phases. These phases have now been subdivided into five elements whilst still retaining the three overall phases:

- Phase 1 Release 1 (roll-out complete 31 December 2004)
- Phase 1 Release 2 (roll-out complete 30 June 2005)
- Phase 2 Release 1 (roll-out complete 30 June 2006)
- Phase 2 Release 2 (roll-out complete 31 December 2008)
- Phase 3 (roll-out complete 31 December 2010)."

Source: This data is extracted from the Eastern Cluster "Approval to Proceed" document ("*AtP Eastern cluster v0.20 (no finance case).doc*") which is available on the Norfolk, Suffolk and Cambridge Strategic Health Authority website.

This table shows that the LSP contracts were full and extensive in the "depth" of Local CRS functionality to be delivered to NHS organisations. In fact, every function that was considered possible and useful for local CRS systems to support clinicians was included.

The Problem: The reality now however is that, due to the massive delays to the delivery of the early phases, only the rudimentary elements of Local CRS functionality (only elements of Phase 1 and Phase 2, such as patient administration) are likely to be delivered by the National Programme which only replicates what the NHS have already and adds no new value to the NHS. At the current rate of implementation, where only the early and less clinically important modules are beginning to be implemented, the latter, more clinically important and difficult to develop modules will not be available and implemented prior to the end of the contract.

The conclusion here is that the NHS would most likely have been better off without the National Programme in terms of what is likely to be delivered and when. The National Programme has not advanced the NHS IT implementation trajectory at all; in fact, it has put it back from where it was going. For example, local initiatives to deliver more seamless care through common systems across care settings have been stopped for several years although the National Programme promised to deliver such a solution.

[12] Effects of computerized physician order entry and clinical decision support systems on medication safety: a systematic review. Kaushal R et al Arch Intern Med. 2003 Jun 23; 163(12): 1409–16.

GP's having not seen anything developed to address their needs have lobbied to retain the right to choice for their systems, thus fragmenting the National Programme further. In fact, what is currently happening (largely due to the delays and the emphasis on the National Spine CRS), is that LSP's are being forced by the Programme to deliver out-dated legacy systems, which the Programme was established to replace, with no cross-care setting functionality, but instead all on a "standalone" or "silo" basis. This step backwards has been taken simply to try and demonstrate to the Government and general public that the Programme is "delivering something" against the £6.2b funding provided.

Appendix 1—Scope of Functionality in LSP Contract (Eastern Cluster)

Module	P1R1	P1R2	P2R1	P2R2	P3	Additional
101 User Tools						
101.6 Data Capture		◆				
101.7 Workflow		◆				
101.8 Process Support		◆				
101.9 Data Retieval					◆	
101.10 Remote Access to information					◆	
101.11 Clinical Stakeholder involvement					◆	
101.12 Set-up and Management					◆	
102 Patient Index		◆				
103 Prevention, screening and surveillance				◆		
104 Assessment		◆				
105 ICPs and Planning Current Environment		◆				
105 ICPs and Planning Integration with Patient Record				◆		
105 ICPs and Planning Advanced Decision Support Process Monitoring and Alerting					◆	
106 Clinical Documentation Current Environment		◆				
106 Clinical Documentation Integration with patient record				◆		
106 Clinical Documentation Generation as by-product of operational process					◆	
107 Care Management Within an Organisation						
107.5 Domicilliary Care Management		◆				
107.6 Ambulatory Care Management		◆				
107.7 Bed Management		◆				
107.8 Demand Access Management		◆				
107.9 Dental Chair Management		◆				
107.10 Prisons					◆	
107.11MoD Personnel					◆	
107 Care Management Across Organisations and Communities						
107.5 Domicilliary Care Management				◆		
107.6 Ambulatory Care Management				◆		
107.7 Bed Management				◆		
107.8 Demand/Access Management				◆		
107.9 Dental Chair Management				◆		
107.10 Prisons					◆	
107.11 MoD Personnel					◆	
107 Care Management Cluster wide						
107.5 Domicilliary Care Management					◆	
107.6 Ambulatory Care Management					◆	
107.7 Bed Management					◆	
107.8 Demand/Access Management					◆	
107.9 Dental Chair Management					◆	
107.10 Prisons					◆	
107.11 MoD Personnel					◆	
108 Scheduling Within and Organisation		◆				
108 Scheduling Across organisations and communities				◆		
108 Scheduling Cluster wide					◆	
109 Electronic Booking Early Adopters	◆					
109 Electronic Booking eBooking Compliance		◆				
109 Electronic Booking Booking to Primary Care						
110 Requesting and order communications Within an Organisation		◆				
110 Requesting and order communications Within an Organisation and Communities				◆		
110 Requesting and order communications Cluster wide					◆	
111 Results Reporting		◆				
112 Decision Support Effective		◆				
112 Decision Support Passive				◆		
112 Decision Support Active (basic alerts)				◆		
112 Decision Support Advanced Additional						
113 Prescribing and Pharmacy					◆	
113.12 Dispensing and Managing Stocks of Medical Products						
115 Digital Imaging and PACS						
116.14 Documentation Tracking						
116 Document Management General Additional		◆				

EXHIBIT D

Evidence demonstrating that the National Programme is operating outside the bounds of accountability

Background: The National Programme's £6.2 billionn budget for IT supplier contracts was secured from HM Treasury on the back of local NHS approvals. Each local Trust Chief Executive was asked to approve the content of each Phase of the National Programme. Thus, in 2003, each Chief Executive was asked to sign a letter showing their approval for Phase 1 of the Programme, including its content and its deployment timetable. The NP promised that further Phases (their content and timetable) would also be approved by the local NHS, after all, these systems were being procured on their behalf.

However, only Phase 1 was ever signed-off by the local NHS and no further requests for approval of subsequent Phases, were sought by the National Programme. This despite the fact that the National Programme is already implementing Phase 2 elements.

Evidence: The document shown below is the ATP2 letter, drafted by the NP, for London Cluster and shows that an undertaking was made by the NP to go back to local management for subsequent phases. (This document is available on the Royal Free Hospital Trust website www.royalfree.org.uk).

The following quote is taken from this document:

> "This local full business case agreement for the first phase of ICRS implementation (and national elements) is being completed and requires agreement across London before a contract can be awarded to the preferred LSP. Approval is required by the London ICT Programme Board (21 October 2003), London Trusts (17 October 2003), and Department of Health and HM Treasury (by 21 November).
>
> Future phases of ICRS will require further locally developed ATP cases."

Problem: The problem is future phases of ICRS (the previous name for Local CRS) have proceeded to be developed by the LSPs across all 5 cluster WITHOUT THE EXPRESS APPROVAL OF LOCAL NHS TRUST CHIEF EXECUTIVES. In fact, critical decisions about the content, scope and delivery times for all phases of the LSP contracts are being made by the NP management, without any recourse to the local NHS senior executives or clinicians.

This means that the taxpayer monies, that were originally appropriated in 2003 for IT systems on behalf of local Trusts, are now being applied by NP senior managers without any further involvement of the local Trusts. The local Trusts do not know therefore what they are getting and when and most importantly, what they are not getting but were expecting as part of the initial scoping of the LSP specifications (see the Eastern Cluster's schedule of 59 modules in part one above.

As the NAO report has demonstrated, no one is in a position to assess the performance of the National Programme except the National Programme themselves—and this means they are only accountable to themselves.

How is it that Chief Executives of local NHS Trusts are under such close scrutiny for their performance, including public Board meetings, internal and external auditors and various levels of management line reporting, when the NP senior executives only seem to be accountable to themselves?

This is particularly wrong when one compares the level of taxpayers' monies each is responsible for: the NP controls some £12billion, including £1.6 billion to run themselves and paying for expensive management consultants for long periods of time, without any scrutiny. The NHS Trust will control considerably less than this amount with far greater levels of scrutiny.

What is needed is an open framework of accountability whereby:

(a) what is to be delivered is confirmed to local NHS leaders

(b) any changes to the scope is done with the approval of local NHS leaders

(c) performance of the NP is measured against the baseline targets set in the LSP contract schedules.

EXHIBIT B

Evidence demonstrating that the benefits required by the NHS to justify the business case in the LSP contracts are unlikely to be delivered

Background: The Eastern Cluster Business Case (Approval to Proceed 2) (attached) contains explicit reference to the benefits that were needed to justify the investment in LSPs. In particular, the implementation of "cross-organisation" (eg systems operating in an integrated way across separate acute trusts) and "cross-setting" (eg systems operating in an integrated way across primary, secondary and mental health sector organisations) systems was required as essential benefits.

On pages 92 to 95 of this document, the text shown below entitled "Qualitative comparison of benefits—Should Cost v LSP" is provided in the Economic Case section of the ATP2 for the Eastern Cluster.

Qualitative comparison of benefits—Should Cost v LSP

1. The previous discussion was concerned with justifying the total quantum of expenditure on ICRS core functions. While that discussion indicates that there is likely to be substantial financial benefit from the LSP solution over and above that available from the should cost option, the empirical evidence estimating such benefit is largely acute based.

2. A qualitative approach has therefore been adopted to the comparison of "should cost" and LSP cases and benefits have been scored by assessing the extent to which the "should cost" and LSP options scenarios would deliver the investment objectives described within the Strategic Case, as a basis for comparing the Should cost option with the LSP solution.

3. This has been achieved by using a weighting and scoring system, the results of which are presented below.

4. The LSP option presents a clear advantage over the "should cost" option in terms of the ability to meet investment objectives and so deliver the overall benefits sought.

Figure 1—Benefits—Should Cost v LSP

Overall aim + subsidiary "SMART" objectives	*Notable ICRS phase 1 & 2 functionality required locally*	*Relative weight*	*Individual Trust procurements ("should cost")*		*Cluster ICRS procurement*		*Commentary*
			Raw score	*Weighted score*	*Raw score*	*Weighted score*	
1. Improve the experience of patients at all stages of care from the initial contact, through referrals, to scheduled treatment and back home as described in the NHS plan							
By 2005, patients should expect that an NHS organisation providing care already have any existing demographic information it needs for care to hand. They should only be asked to confirm personal demographics (name address etc). Any changes that are made to this record should automatically update the record for any future episodes of care.	Integration across cluster organisations, and with PDS, Spine	9	1	9	3	27	Cross boundary issues likely with 'should cost'
From 2005, patients will be able to securely access their own records through a range of channels.	Many components plus integration across cluster organisations	5	1	5	2	10	More difficult with 'should cost' to provide access to comprehensive records
From 2006, every patient requiring an elective procedure will be given a choice of provider, whenever it is practical, depending on the patient's condition and treatment required, in accordance with National policy.	Integration with e-bookings	7	1	7	3	21	High risk with "Should cost" of lack of integration between primary and secondary care and within each care setting
From 2005, every patient requiring an outpatient clinic or day case appointment will be provided with a confirmed date, time and place, at the time of referral or through the booking management service, in accordance with National policy.	Integration with e-bookings	7	1	7	3	21	High risk with "Should cost" of lack of integration between primary and secondary care and within each care setting

Overall aim + subsidiary "SMART" objectives	*Notable ICRS phase 1 & 2 functionality required locally*	*Relative weight*	*Individual Trust procurements ("should cost")*		*Cluster ICRS procurement*		*Commentary*
			Raw score	*Weighted score*	*Raw score*	*Weighted score*	
From 2007 all test results (Pathology and Radiology as a minimum) should be held electronically (Including those tests that are performed at remote locations from where the patient's treatment is performed).	Order entry, results reporting	9	2	18	2	18	Risk will remain in place for both options as it will rely on total integration
From 2007 all order for all tests should be recorded electronically. Including those tests that are performed at remote locations to where the patient's treatment is preformed.	Clinical correspondence, assessments, scheduling, results reporting, PACS	8	2	16	3	24	Higher chance of information falling between the cracks with 'should cost'
From 2007, patients who need to make a series of visits for investigations and treatments, will be able to agree and book a mutually convenient schedule of contacts, based around the clinic, theatre schedule of the relevant clinicians.	Scheduling, E-booking	7	2	14	3	21	Risk with "Should cost" of lack of integration between primary and secondary care and within each care setting
From 2007, clinical interventions should never be postponed to another date because the information required for treatment is unavailable in electronic format.	Scheduling, Results Reporting, Order entry	6	2	12	3	18	Medium risk for "should cost" of systems not all being integrated
2. Improve the quality of care by enabling standards to be implemented across the NHS and Clinical and Social Care networks							
By 2006, patient level information will routinely be available to support clinical governance relating to NSF's which span care settings.	Decision support as part of ICPs, order entry, Clinical correspondence etc.	9	1	9	2	18	Risk with "should cost" of systems not all being integrated
By 2007, ICRS will have had a significant impact in reducing the impact of clinical error. This will arise from the improved quality of records and access to them, legible clinician orders and use of defined order sets, together with the increasing use of clinical decision support.	Clinical correspondence, Order Entry, Decision Support, results reporting	10	2	20	3	30	Some risk with "should cost" of information not being available regarding previous tests conducted at another organisation
By 2010, ICRS will have reduced the number of avoidable adverse incidents arising from medications management.	e-prescribing	9	2	18	3	27	In "should cost" some risk of not picking up interactions with drugs recorded on other organisations' systems

Overall aim + subsidiary "SMART" objectives	*Notable ICRS phase 1 & 2 functionality required locally*	*Relative weight*	*Individual Trust procurements ("should cost")*		*Cluster ICRS procurement*		*Commentary*
			Raw score	*Weighted score*	*Raw score*	*Weighted score*	
By 2006, investigations will not need to be repeated because information relating to earlier tests is not available in electronic format. (Pathology and Radiology as a minimum).	Results reporting, clinical correspondence	9	2	18	3	27	Some risk with "should cost" of information not being available regarding previous tests conducted at another organisation
By 2005, provide all clinical staff will have the infrastructure made available to them to quickly and easily access the latest evidence and best practice.	Access to electronic reference material	9	3	27	3	27	Both options will provide this functionality
By 2007, patient's medical records from their registered GP practice will be available to clinicians at an acute or community hospital where routine medical treatment is provided	Many components plus integration across cluster organisations	8	0	0	2	16	High risk for "Should cost" due to legacy systems and lack of spine record
3. Enable effective access to clinical and administrative information across care providers and locations to support NHS clinical priorities							
By 2007, a summary of a patient's recent medical history from acute or community hospitals will be available to clinicians at within the community.	Integration across cluster organisations + with PDS, Spine	8	1	8	3	24	More difficult with "should cost" to provide access to comprehensive records
4. Reduce the fragmentation of care through improved consistency and coherence of systems and records							
By 2005, provide clinical staff with fast and convenient access to the summary of previously electronically recorded healthcare interventions delivered (regardless of by whom) for any one patient and to the detail about patients in their care and which are held on the National Spine.	Integration & messaging across cluster organisations + with PDS, Spine	5	1	5	3	15	More difficult with 'should cost' to provide seamless information exchange during referrals, discharges & transfers
By 2010, General Practitioners and others actively providing care (eg within a clinical network) will be able to access and maintain a consistent and detailed patient record irrespective of care location.	ICPs within and between organisations	8	1	8	3	24	More difficult with "should cost" to provide integrated pathways across different organisations
By 2008, ICRS should contribute to a 25% reduction in nurse's administrative workload.	Many components plus integration across cluster organisations	6	2	12	3	18	More risk with "should cost" due to lack of full integration
By 2008, ICRS should contribute to a 20% reduction in doctor's administrative workload.	Many components plus integration across cluster organisations	6	2	12	3	18	More risk with "should cost" due to lack of full integration

Overall aim + subsidiary "SMART" objectives	*Notable ICRS phase 1 & 2 functionality required locally*	*Relative weight*	*Individual Trust procurements ("should cost")*		*Cluster ICRS procurement*		*Commentary*
			Raw score	*Weighted score*	*Raw score*	*Weighted score*	
By 2006, significantly reduce the time spent obtaining missing/lost patient information during referrals, discharges and transfers	Clinical correspondence, integration across communities	5	1	5	2	10	More difficult with "should cost" to pull together information from different organisations
5. Improve health policy development and health research through increased availability, improved quality and speed of retrieval of data							
By 2010, facilitate the operation of multi-disciplinary and multi-organisational integrated care pathways	Facilities for the abstraction, management and reporting of information	3	2	6	3	9	More difficult with "should cost" to pull together information from different organisations
By 2008, provide up to date, accurate and fully anonymised patient data for policy development where the source data is less than 3 months old at time of making it available.	Facilities for the abstraction, management and reporting of information	5	2	10	3	15	More difficult with "should cost" to pull together information from different organisations
	Total			**246**		**438**	

Key to relative weighting	*Key to raw score*
1 = least important	0 Does not deliver goal at all
Through	1 Low delivery of goal
To	2 Medium delivery of goal
10 = most important	3 Maximum delivery of goal

Problem: What is clear from this text is that the benefits of the LSP solution (versus the "should cost" meaning what would have been done if an LSP was not used but instead a more traditional procurement approach taken), were highly centred around "cross-organisational" and "cross-setting" information systems being implemented by the LSP (see last column in their table).

However, it is also clear that the current National Programme approach to implementing Local CRS systems is purely "single-organisation" based and not at all oriented towards "cross-organisation" and "cross-setting" approaches. This means that one of the main "radical" and innovative benefits of the National Programme, which was intended to justify the high cost of the contracts, will not be delivered by the Programme.

It is important to note that the National CRS Spine record will not deliver these benefits as they require functionality only available with Local CRS solutions containing the full and detailed patient record and advanced and intelligent functionality, as opposed to the Spine record, which is just a passive "bucket" or repository of what will only ever be a subset of the patient's medical record.

Exhibit C

Evidence demonstrating that the National Programme mis-managed the implementation of the Local CRS solution at the first Southern Cluster site and caused preventable local disruptions

Background: The Cerner solution was implemented at the Homerton and Newham NHS Trusts in London in September 2004, as part of a local NHS contract which pre-dated the National Programme LSP contracts. The implementation encountered many difficulties (reported in the London Evening Standard at the time), to the extent that the local Primary Care Trust was forced to declare a "Serious Untoward Incident (SUI)" as a result of the fact that critical data for monitoring clinical activity by the two trusts were made unavailable for several months and the Trusts' paediatric outpatient waiting lists were persistently breached. It was known at the time that the Cerner system did not have a suitable reporting module, for producing the necessary activity reporting to the local PCT and national bodies, and yet the local managers decided to proceed with the implementation.

In December 2005, over a year later, the same Cerner solution was implemented at the Nuffield Orthopaedic Centre (NOC) in Oxford, as the first deployment of the Cerner solution in the National Programme's delayed roll-out programme for Southern Cluster. It is known from sources within the National Programme, that the decision to go-live before the end of the 2005 calendar year was politically motivated (ie the NP wanted to show a "success" to counter the mounting delays to the Programme's implementation schedule), despite internal concerns about readiness of the Cerner product at the local trust.

In the event, the implementation at the NOC encountered very similar difficulties to that of the London Trusts and, remarkably, a Serious Untoward Incident was also declared as a result. An investigation into the problems behind the SUI at the NOC was apparently instigated but its report was never made public, despite its importance to other Southern Cluster trusts.

Evidence: The report of the investigation into the London Trusts' Serious Untoward Incident is available on the Newham PCT website: www.newhampct.nhs.uk on pages 182–218.

Problem: The problem here is that, because of the politically driven motives to show results "at any cost", the National Programme management (a) failed to learn important lessons, as documented by the report shown above, about shortcomings in the Cerner software from the Homerton and Newham implementation in 2004, and (b) demonstrated poor management judgement by deciding, despite such documented warnings, to implement the system at the NOC thereby causing preventable deleterious effects on the patients, staff and management of the NOC in 2005.

Memorandum submitted by Brian Randell

I am writing to you on behalf of the group of 23 senior acedmics in computing and systems who have over recent months been expressing their urgent concerns about the National Programme for Information Technology in the NHS (NPfIT).

We have assembled a document[13] that brings together a substantial *corpus* of information and opinion about the National Programme for IT (NPfIT). We are sending copies of this document to a wide range of people: among the recipients are about one hundred Parliamentarians of both Houses, who have spoken on NPfIT issues in recent debates, who are Members of the Health Select Committee or of relevant parliamentary groups, or who have other clear interests in the NHS.

Our view is that the NPfIT is showing symptoms that lead to proper concern over its prospects of success. The symptoms match those seen in a number of previous public-sector IT system projects that culminated in large negative returns on the investment of public funds and on occasion to complete project abandonment. In our opinion an urgent, thorough and open review of NPfIT objectives, technical architecture and implementation is essential if the NHS is to be provided with IT systems that will support cost-effective healthcare in the coming decades. Securing such a review is the objective that motivates the work that we have done.

Last April, following our open letter to the Health Select Committee calling for such a review, we were invited by Richard Granger to meet him and his senior team. The meeting resulted in agreement that such a review could be helpful to the NPfIT, and an invitation to us to propose terms of reference to be discussed at a follow-up meeting. We sent draft terms of reference to Dr Granger in May. We have not subsequently heard from him.

In October, we sent a second open letter to the Select Committee, in which we said: "As a review will take several months to organise, conduct and report, we believe that there is a compelling case for your Committee to conduct an immediate inquiry: to establish the scale of the risks facing NPfIT; to initiate the technical review; and to identify appropriate shorter-term measures to protect the programme's objectives". We are pleased that the Committee has stated recently that it will indeed undertake an inquiry, and trust that this document will prove helpful to their planned inquiry, as well as to the detailed technical review which we hope will ensure.

Brian Randell DSc CEng FBCS
Emeritus Professor of Computing Science

19 January 2007

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[13] Available online at http://nhs-it.info/

Wednesday 7 March 2007

Members present:

Mr Edward Leigh, in the Chair

Mr Richard Bacon
Mr Philip Dunne
Mr Sadiq Khan
Mr Austin Mitchell
Mr Alan Williams

Sir John Bourn KCB, Comptroller and Auditor General, and Mr Chris Shapcott, Director, National Audit Office, gave evidence.

Mr Marius Gallaher, the Alternate Treasury Officer of Accounts, HM Treasury, gave evidence.

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL

THE NATIONAL PROGRAMME FOR IT IN THE NHS (HC 1173)

Witness: **Mr Andrew Rollerson**, Formerly Practice Lead, Business Consulting Unit, Fujitsu, gave evidence.

Q261 Chairman: Good afternoon. Welcome to the Committee of Public Accounts where we have two sessions today, first, on *The National Programme for IT in the NHS* and, secondly, the *Assets Recovery Agency*, which we hope to start around 4 pm. This is the second hearing we have had on *The National Programme for IT in the NHS* and we have summoned to this hearing Mr Andrew Rollerson, who was formerly practice lead healthcare consultant with Fujitsu. The reason why we have summoned him is that there were very widespread reports in the national press based on an article by Tony Collins of *Computer Weekly* on 13 February, in which, Mr Rollerson, he attributed various remarks to you. In fairness to you, this Committee does not take evidence from newspapers, because not everything we read in the newspapers correctly reports people, so it is only fair to you that we should give you a chance briefly to come along here and for us to ask if these reports attributed to you are correct. I suppose the first question I am going to ask by way of introduction is about your qualifications to speak on this programme. What was your involvement in it?
Mr Rollerson: I have been with Fujitsu approximately 10 or 11 years, joining in 1996 as a managing consultant, and was assigned in the middle of 2003 to work on the Fujitsu response to the tender for the national programme. I took a fairly leading role in that process, leading one of the workstreams and also following through, and leading one of the negotiation streams in Leeds which, clearly, led to the ultimate success of Fujitsu in the bid.

Q262 Chairman: Could I stop you there. Presumably at that stage, because you were involved in the bid process, you believed in this programme?
Mr Rollerson: Absolutely. It was a gradual process of coming to believe in it, but very quickly I bought into the vision and, in fact, helped to engineer a response from Fujitsu which was very much, in my view, aligned with the vision of the programme. As a result of Fujitsu's success, I was given the position of Head of Change Management, being a management consultant that was an appropriate appointment, and had the responsibility, therefore, for providing consultants for each of the deployment projects who would assist the NHS trusts in the changes they would have to make in order to make the technical deployment successful, so, in other words, the process for redesign, the organisational restructuring, the benefits realisation and so on and so forth. I built a team, a very significant team in fact, in order to do that and spent the next year and a half to two years leading that team. Then in the middle of last year I was transferred to a different part.

Q263 Chairman: So I have to ask you, are your views up-to-date?
Mr Rollerson: I believe my views are up-to-date. In terms of knowledge of what is happening on the ground day-to-day, I would say no, but given that I built a team of 40 consultants, all of whom are still deployed and with whom I still have regular contact and regular discussions about the programme, I would say, yes, my knowledge is broadly up-to-date.

Q264 Chairman: Of course, you are speaking for yourself, you have been summoned to the Committee. You are speaking personally, it is purely your view, it is not the view of Fujitsu. We have received a letter from Mr Peter Hutchinson, who is a managing director at Fujitsu, saying that you are expressing your personal view.
Mr Rollerson: That is correct.

Q265 Chairman: Before I bring in my colleagues, in all fairness to you, I think we had better then investigate whether this widely reported story is correct. It says here that you said at this meeting there was: " . . . a gradual coming apart of what we are doing on the ground because we are desperate to

get something in and make it work, versus what the programme really ought to be trying to achieve". Correct?
Mr Rollerson: Yes, that is correct.

Q266 Chairman: You said: "The more pressure we come under, both as suppliers and on the NHS side, the more we are reverting to a very sort of narrowly focused IT-orientated behaviour. This is not a good sign for the programme". Did you say that?
Mr Rollerson: I did. In fact, to save you reading them out, yes, the quotes are correct.

Q267 Chairman: Did you say: "What we are trying to do is run an enormous programme with the techniques that we are absolutely familiar with for running small projects. And it isn't working. And it isn't going to work"?
Mr Rollerson: Yes.

Q268 Chairman: Did you say: "Unless we do some serious thinking about that—about the challenges of scale and how you scale up to an appropriate size—then I think we are out on a limb"?
Mr Rollerson: Yes.

Q269 Chairman: So what does all this mean then?
Mr Rollerson: If I may take one step back, the conference itself, the Eyeforhealthcare conference, was called "Successful Implementation of NPfIT" and, therefore, was a conference organised in support of the programme. I was invited to speak—this was the third time I had spoken—and, in fact, I gave a talk in support of the programme. That was my intention, to support the programme, and I think the transcript will bear that out. The quotations attributed to me, which are correct, are lifted—some of them are partial sentences, some of them are whole sentences—completely out of context where I was seeking to demonstrate that unless certain aspects of the programme were addressed then the programme would not succeed, so I was seeking, therefore, to say we must address these things, all of them.

Q270 Chairman: Now is your chance to put these things in context.
Mr Rollerson: Yes.

Q271 Chairman: So go ahead, briefly.
Mr Rollerson: Briefly?

Q272 Chairman: Let me put it this way, you believed in this programme. Do you believe in it philosophically and intellectually; in other words, it is the right thing to do as a concept, or do you believe in it as the way it has been carried out on the ground, and what do you think and how can we make it a success? In our recommendations, we can advise the Government on the basis of evidence taken from you and the Permanent Secretary. We want to help the Government to make this a success, we want to point out what is wrong now and what we can do to make it a success so, please, help us.

Mr Rollerson: I believe in this programme philosophically and intellectually, and have from a very early date, and have been very committed personally to doing everything in my power to make it succeed and, in fact, the talk I gave at the conference was aimed at assisting that process. I believe that there are certain elements of the deployment that could be done better but, given one cannot re-write history, the track we are going down can be made to succeed. It is a tremendously ambitious programme, it is enormously risky, but, having said that, the analogy I would like to use, if I may use another dramatic analogy, is of the American Space Programme. President Kennedy announced it in 1963, succeeded in aligning an entire nation behind it and its aims, including the academics, politicians, scientists and the commercial sector, the nation accepted increased taxes in order to pay for it and was euphoric when it succeeded. I believe that this programme is on a similar scale in terms of its ambition and vision. It is not about, in my view, a single patient record, which I believe to be a means to an end. I think the capability that this programme has the potential to unleash in this century for improved healthcare and the quality of service to patients is just—

Q273 Chairman: We all accept that, but did you question whether the standard project and programme management techniques needed to be re-thought given the enormity of the programme?
Mr Rollerson: I did.

Q274 Chairman: Right. So how can we make this programme work then?
Mr Rollerson: My view is that there is a natural tendency to apply the techniques that one understands in any given situation, so standard project management techniques, even relatively low level programme management techniques, are applied to programmes in general. This programme is on a scale beyond anything attempted before and I believe, therefore, requires some innovative thinking and some of the best minds to be applied in terms of structuring it so that it can succeed over the long-term. It is naive to assume, in my view, that because something may go well in the early stages when things are relatively simple, crossing the foothills, if you like, as you start to climb what is going to be an enormous mountain that those techniques will still work. Therefore, I believe this needs to be carefully thought out. If I may use another analogy, and it is one I used in the conference, it makes the point better than a thousand words could. It was when Boeing sought to replace the 707 in the late 1950s with a new aeroplane, they realised very early on that scaling it up to be a jumbo jet would not work because it would never take off, it would be too heavy. They had to go back to first principles and ask what is it that makes an aeroplane fly. Consequently, the 747 was a totally new design, totally different, but it works, of course, and it is highly successful. I believe we are in a situation where we need to be looking at the programme in that kind of light: what is it going to take in terms of

project management techniques, in terms of vision and leadership, to actually make this work over the ten-year life of the programme. I do not think we are asking those questions yet.

Q275 Chairman: We are not asking those questions. Finally, before I pass to colleagues, you said: "There is a belief that the National Programme is somehow going to propel transformation in the NHS simply by delivering an IT system. Nothing can be further from the truth. A vacuum, a chasm, is opening up. It was always there". Do you believe that?
Mr Rollerson: Yes.

Q276 Mr Khan: Have you got lawyers acting for you?
Mr Rollerson: In this particular situation, no.

Q277 Mr Khan: You have not retained lawyers in respect of your employment with Fujitsu?
Mr Rollerson: I have not seen it as necessary at this point.

Q278 Mr Khan: Are you facing disciplinary proceedings from Fujitsu?
Mr Rollerson: There is an internal inquiry under way that may lead to disciplinary proceedings.

Q279 Mr Khan: You have not approached any lawyers since you made this speech?
Mr Rollerson: I have.

Q280 Mr Khan: You have approached lawyers?
Mr Rollerson: Yes, I have approached lawyers.

Q281 Mr Khan: Have you retained lawyers?
Mr Rollerson: Not at this point.

Q282 Mr Khan: Have you sought advice as to whether you should come to this Committee to give evidence?
Mr Rollerson: I have not, no, because I made the assumption that it was not something which I was able to question.
Mr Khan: We are not in the habit of asking people who have not worked on a project for more than a year to come and give evidence, so I thought you may have sought advice on whether you needed to come and give evidence yourself.
Chairman: He was summoned by us.

Q283 Mr Khan: I know, that is why I asked if he sought advice. You did not deem it fit to seek advice?
Mr Rollerson: Not about my attendance at this Committee.

Q284 Mr Khan: Did you speak to Tony Collins before he wrote his article for *Computer Weekly?*
Mr Rollerson: No, I did not.

Q285 Mr Khan: The first you knew of his article was when you saw it in *Computer Weekly*?
Mr Rollerson: No, the first I knew about it was when the communications manager of the NHS account rang me to let me know what was about to appear in *Computer Weekly*.

Q286 Mr Khan: Is there anything in this article that you disagree with?
Mr Rollerson: I suppose I agree fundamentally with the whole thing.

Q287 Mr Khan: Do you accept the caricature of you as a heroic whistleblower taking on an employer who seeks to make billions of pounds from this contract to bring to the attention of the Committee of Public Accounts and others the huge problems the IT contract faces?
Mr Rollerson: Can you repeat the question?

Q288 Mr Khan: Do you see yourself as a heroic whistleblower who is bringing to the attention of the public and the PAC a doomed project from which your employers will make a huge sum of money?
Mr Rollerson: Absolutely not. I do not believe that I am a whistleblower and I do not believe the programme is doomed.

Q289 Mr Khan: Do you see yourself as somebody seeking to jump on a bandwagon knowing that there is now disquiet and concern about the project to make yourself more marketable?
Mr Rollerson: Certainly not. I am discomfited by the situation which I find myself in.

Q290 Mr Khan: Do you think you are in a position to give expert opinion on a project you have had no hands-on experience within for the last 12 months and more?
Mr Rollerson: I do for the reasons that I stated earlier.

Q291 Mr Khan: Can you name the people working on the project that you said you have spoken to in your capacity as a hands-off person involved who told you the project was a disaster?
Mr Rollerson: I am sorry, can you repeat that?

Q292 Mr Khan: In answer to the Chairman you accepted that you had no direct experience of this work any more, but you said you came into routine daily contact with people working on the project who had told you it was disastrous.
Mr Rollerson: No, I did not say that at all.

Q293 Mr Khan: What did you say?
Mr Rollerson: I said I am in routine daily contact with the people who are on the ground operating in trusts, I did not say that they viewed the project as a disaster.

Q294 Mr Khan: None of them have given you a negative opinion of the project implementation?
Mr Rollerson: People have expressed a wide variety of opinions, some of them negative, of course.

Q295 Mr Khan: What astounds me is that somebody like yourself managed to get the attention you have got by giving a hearsay speech based on what people have told you and you have got no direct experience of recent work in this area.
Mr Rollerson: They were direct employees of mine, I hired them.

Q296 Mr Khan: Who are they?
Mr Rollerson: I could go through a long list.

Q297 Mr Khan: Just give us 10 of those people.
Mr Rollerson: Is it appropriate to name individuals?

Q298 Mr Khan: I think it is.
Mr Rollerson: I will do it but is it appropriate for me to do so?
Mr Khan: I think it is, Chairman. This man comes here and tells us that he has heard from others who have experience and do know what they are talking about who have told him that they have got concerns about this project.

Q299 Chairman: Would you give us this list in private?
Mr Rollerson: I would be happy to do it here. I could rattle off a list of names now if the Committee wishes, but I could also provide it as a note.

Q300 Chairman: I think provide it in a note.[1]
Mr Rollerson: I would be very happy to do that.

Q301 Mr Khan: Have you been suspended from your employment?
Mr Rollerson: I have.

Q302 Mr Khan: Since when?
Mr Rollerson: Since the day the *Computer Weekly* article appeared.

Q303 Mr Khan: That was when?
Mr Rollerson: Monday 13 February, I think.

Q304 Mr Khan: Your evidence is that you have not retained lawyers?
Mr Rollerson: I have retained lawyers but not for the purposes of attending this Committee.

Q305 Mr Khan: That was not my question, my question was have you retained lawyers to do with your employment?
Mr Rollerson: Yes.

Q306 Mr Khan: Do you want to change that evidence? My question was quite specific, have you retained solicitors to deal with your employment and your answer was "No".

Mr Rollerson: I have not retained lawyers at this point. I am waiting to see the outcome of the internal inquiry within Fujitsu before I determine whether I will do that.

Q307 Mr Khan: During the period of time when you have moved on internally from Fujitsu, from the post you previously held where you had an opinion worthy of being deemed an expert to where you are now, during that period of time where these concerns were brought to your attention, have you brought to the attention of those now in charge of this project the concerns brought to your attention?
Mr Rollerson: There is ongoing debate within Fujitsu about the best way of delivering the contract.

Q308 Mr Khan: It is a really easy question, I will ask you again. Have you brought to the attention of those people who can do something about it and not seek publicity your concerns?
Mr Rollerson: Two things. No, I have not specifically sought influence on either of those two subjects, neither have I sought publicity.

Q309 Mr Khan: Do you think that it would be a sensible thing to do, to bring to the attention of your employers the concerns that you brought to the attention of these executives and these journalists?
Mr Rollerson: I went through the official internal process within Fujitsu for gaining approval for a talk before I delivered it.

Q310 Mr Bacon: Mr Rollerson, I have to say you seem like a fairly unlikely folk hero and it is very obvious from your comments that you are not comfortable in that role, and I do not suppose when you attended this conference that you were expecting at all to be cast in that role. When you read the comments on the Internet—and I have looked at a few from various specialist websites that deal in health IT—it is as if somehow you were the one who let the finger out of the dam and then a whole collective sigh of relief went around the health IT sector. Do you think that is a fair characterisation?
Mr Rollerson: I think that is absolutely spot on.

Q311 Mr Bacon: One comment said, "I cannot believe there are many people who have been surprised by what Andrew Rollerson said. Such openness and realism in those close to health is a refreshing change". Another one said, "It is good to hear the truth from the top at last". Another one said, "Those at the coalface within NPFIT have been telling their masters much of what Mr Rollerson said. Well done to Andrew Rollerson and others for exposing the real issues", "Kudos to Rollerson", and so it goes on. I suppose the real issue is what is to be done to try and improve things? I know it is difficult, but in one or two sentences can you say what the nub is of what you think should be changed to make it work better?
Mr Rollerson: There are two things. One, I believe, is visionary and proactive leadership from the business itself, from the trust, from the NHS. It is, in my view, very much an IT-driven project and historically they

[1] *Note by witness*: The list of names of people with whom I have regular contract is as follows: Peter Loomes, Peter Karran, Emily Ryder, Jo Box, Dwayne Dawson, Clive Tomsett, Roy Dainty, Anjanish Sharkhar, Kathy Wallis and Kenny Dalton.

have not succeeded. There is and there will be more resistance from the trusts if it is driven relentlessly along an IT path. I believe it is essential that the trusts are engaged so that the ultimate aim of the programme, which is the enablement of the transformation, the NHS, can be realised.

Q312 Mr Bacon: Do you think trusts are more likely to be engaged if they are installing systems they want?
Mr Rollerson: I think that would be true.

Q313 Mr Bacon: In other words, to get ownership, that is really what you would think of almost as a precursor. If they do not like what is being foisted upon them, they are less likely to be engaged, and if they want the systems that they are being offered they are more likely to be. That would be fair, would it not?
Mr Rollerson: I think it would be fair, but it is essential to engage the trusts in the discussions about why the national programme is the way it is and how it needs to be the way it is to achieve what it is trying to achieve. I do not subscribe to the view that the fragmented approach of before with a myriad of suppliers would have led to the possibilities of achieving what we are about to achieve.

Q314 Mr Bacon: Do you think there is a balance that might provide a sensible way forward, not necessarily with a myriad but from a framework agreement, a panel of proven suppliers, where you have a balance between a central setting of standards and local choice, subject to compliance with those common standards?
Mr Rollerson: That is one potential way forward, but within the current contract the trusts have the ability to contract through the suppliers for additional services, so there are many suppliers engaged but they are now focused through the LSPs.

Q315 Mr Bacon: In terms of the core systems that they take, they do not have a regular choice, do they? With Fujitsu they have to install Cerner Millennium; if it is any of the three clusters now with CSC they have to install iSoft Lorenzo, assuming iSoft Lorenzo eventually gets developed. That is correct, is it not?
Mr Rollerson: It is correct, yes.

Q316 Mr Bacon: So as far as the core system is concerned, they have to go with that one?
Mr Rollerson: Yes.

Q317 Mr Bacon: The managing director, Mr Peter Hutchinson, who wrote to the Committee, describes you as: "nor is he a senior executive of the company". If you led a team of 18 healthcare consultants, does that not make you quite a senior manager?
Mr Rollerson: A senior manager, yes, but not an executive.

Q318 Mr Bacon: So that is a definition of the executive committee of the company?
Mr Rollerson: Yes, I am not on the executive committee.

Q319 Mr Bacon: But you are a senior person within Fujitsu?
Mr Rollerson: Yes.

Q320 Mr Bacon: It is not being immodest to say that.
Mr Rollerson: No.

Q321 Mr Bacon: I did not think you were being immodest. Mr Hutchinson also raised in a letter last June—this was at my request, that the letter was sent to the Committee—the number of patient administration systems that were being installed between June and the end of October, just a period of four months. In his letter Mr Hutchinson said that there would be 12 hospitals and he listed them, we have copies of those in our evidence already. So far only four of those have installed the systems and the other eight have not. Why do you think that is? Is it basically because there are serious problems with the software because it is not suitable for the NHS in its present form if it has got things like billing on it, which is an American concept and is not appropriate here, or what? What are the reasons for those delays?
Mr Rollerson: The initial reason for the delay was the change of supplier, of course.

Q322 Mr Bacon: You mean when IDX were sacked?
Mr Rollerson: Yes, when IDX were sacked and they were replaced by Cerner.

Q323 Mr Bacon: Can you remind the Committee how long IDX were there for before they were sacked?
Mr Rollerson: I honestly cannot remember, but it was a matter of maybe 12 months, I am not sure. Subsequently, the service system was modified to meet the requirements and Fujitsu has worked with the local NHS trusts through the contracted mechanism to make the changes to the specification to meet the requirement, and the deployment projects have been underway in many trusts for some time.

Q324 Mr Bacon: But this was a fairly short-term schedule, this was saying at the end of June what they had done by the end of October.
Mr Rollerson: There is no difference actually in some of the problems faced by this particular programme from many IT programmes; in other words, it is when it comes to things close to implementation, such as data migration, Reporting or printing across networks and things of this sort, that problems tend to emerge which need to be addressed before a go-live can take place. These cannot necessarily be anticipated and I think many of these problems caused the implementation timescales to be drawn out more than one would have hoped, but the momentum for deployments has now risen significantly. I think there are five rather than four deployments under way and the rest are scheduled

over the next few months, so the momentum has picked up and the programme has recovered in that respect.

Q325 Mr Bacon: There are loads of bugs in the software, are there not?
Mr Rollerson: There are always bugs in software.

Q326 Mr Bacon: Is it not true that some of the hospitals, like Winchester, have had to take many steps backwards rather than forwards in terms of having to do things like clinical noting and prescribing compared with where they were before?
Mr Rollerson: That is nothing specifically to do with bugs in the software. In order to be part of the programme, the trusts have had to accept that they will be taking Cerner Millennium in its entirety, built to a specification, as it is laid down in the contract, over a series of releases. In some cases, the trusts have invested in the sorts of point systems which have functionality that goes beyond the functionality they will receive as the first stage of the Millennium deployment, but this is the price a number of them need to pay in order to be part of a much broader, larger programme and it is inevitable that will be the case.

Q327 Mr Bacon: When the go-live date is set and then there is a delay, there is a cost to the trust in terms of staff time, training foregone which is not used and so on. It is very disruptive having a new computer system installed.
Mr Rollerson: Delays, yes.

Q328 Mr Bacon: That includes, effectively to the trust, a financial cost.
Mr Rollerson: It does, but the delays are not necessarily attributable to the software. There have been delays on both sides.

Q329 Mr Dunne: Mr Rollerson, the *Computer Weekly* article of 13 February referred to the concerns of 23 senior academics. Were you aware of the concerns raised by that group?
Mr Rollerson: I was not.

Q330 Mr Dunne: Have you had sight of the open letter to the Health Select Committee that group submitted in April last year?
Mr Rollerson: No, I have not.

Q331 Mr Dunne: Have you had any discussions with any of the 23 signatories to the letter?
Mr Rollerson: Yes, I have. I met a number of them at the London School of Economics last October.

Q332 Mr Dunne: One of signatories was Dr Ewart Carson who happens to be a constituent of mine and somebody you spoke to directly. Do you recall that?
Mr Rollerson: I do not recall, it is possible that I did speak to him.

Q333 Mr Dunne: The thrust of their concerns fell, I think, into two broad categories, the first was the risks to the security and confidentiality of patient data, and the second was the lack of technical oversight within the Department of Health for the project that they were embarked upon. Do you recognise those as the principal thrusts of those concerns?
Mr Rollerson: Yes, I do.

Q334 Mr Dunne: Do you share their views?
Mr Rollerson: No, I do not. Personally, I see no concern around data confidentiality because a lot of effort is going into making sure that is dealt with adequately. Clearly, no matter how old the system is, if users share their smart cards or log-ins, there is nothing that the most rigorous system design can cater for.

Q335 Mr Dunne: Does the system, as far as you are aware, conform with patient data confidentiality required under the Data Protection Act?
Mr Rollerson: I am not qualified to answer that.

Q336 Mr Dunne: Are you aware that the Health Select Committee has decided to instigate a review into this project this year?
Mr Rollerson: I am not aware of that either.

Q337 Mr Dunne: You have not been asked to submit evidence to that select committee?
Mr Rollerson: No, I have not.

Q338 Mr Williams: Does this mean state-of-the-art work?
Mr Rollerson: I am sorry?

Q339 Mr Williams: Does this project mean state-of-the-art work or is it possible to use off the hanger, equipment and software?
Mr Rollerson: It is essentially being deployed with existing technology which is being modified, as all applications are, to meet the requirements of the contract.

Q340 Mr Williams: So there are no great challenges in the range of capability of IT there? There should be no great challenge at issue there?
Mr Rollerson: In theory, no. In some areas the functionality is quite straightforward, but in other areas it is moving into places where the ground is soft, if I may say so, areas where, for example, clinical pathways are being designed and new clinical technologies are being introduced. Therefore, given that the area of concern is uncertain, there is a great deal more design work to be done and these typically have been left to the later phases of the contract.

Q341 Mr Williams: You said it should not be IT-driven. Is it, and why should it not?
Mr Rollerson: The history of the IT projects is that typically where they are left to an IT department they fail. The reason they fail is because the people who are expected to use the application in the end have not been engaged. I suppose, if I may turn it the other way around and talk about best practice in this case, best practice in the commercial world for

many, many years has been that a business need is identified, the business solution is described and only part of that business solution will be technology. There will be restructuring, retraining, all sorts of things, redesigning of processes in order to deliver the business solution. The technology will then be delivered as part of that solution. The danger that I foresee in this situation is that we will be heading too far in the other direction, that the driver, if we are not careful, will become the technology itself.

Q342 Mr Williams: That is where I was going next. You made the point it is essential trusts are engaged, are you suggesting that they have not been engaged, because time and again we have looked at IT failures and the failure has been in the preparation stage and the initial examination through the eyes of those who are going to use it of what they want and how they want it to work. What do you think?
Mr Rollerson: There is a difficult balance to strike between the imperative of delivering something in time and within budget versus consulting a wide constituency of people and prolonging the entire thing through extended consultation. The challenge in this programme is that there are so many people to consult that one suspects nothing would ever be delivered if everybody who wanted to be consulted was consulted.

Q343 Mr Williams: Are you satisfied in your own mind or worried about the level of consultation that was there? You said, "It is essential that the trusts are engaged", which to my mind suggests you were critically implying that they had not been involved.
Mr Rollerson: I am concerned that the appropriate mechanism for consultation in order to achieve the objective has not yet been found.

Q344 Mr Williams: Not yet?
Mr Rollerson: Not yet.

Q345 Mr Williams: It is a bit late, is it not? When should it have been done?
Mr Rollerson: Arguably much earlier than it has been.

Q346 Mr Williams: How much, because you were in at the early stage so you have got some idea of what was or was not going on?
Mr Rollerson: Ideally, the mechanisms would have been set up when the programme itself was established in 2004 to have the consultation associated with the development of the application. The mitigating circumstances, such as they are, were that at that time all of the participants of the programme were learning including suppliers, CFH themselves and the NHS trusts as to how best to drive forward a programme of this scale and complexity. I frankly believe that this learning process is going to go on and on for the whole life of the programme. It would be naive to suggest that some ideal consultation mechanism could have been conceived at the very beginning and put in place that would have allowed the whole programme to sail forward unhindered.

Q347 Mr Williams: You made some comment about—and I scribbled it down but I may have got it jumbled—the early techniques would be adequate. What did you mean by that?
Mr Rollerson: I think I hinted at it before that there is a tendency to use simple techniques that we are all familiar with, such as project management techniques, whereas there are already available in the marketplace—this is not blue sky thinking—techniques such as value management, if you like, benefit that allow realisation, a programme to be driven by the value that is going to be created out of it and not through managing tasks.

Q348 Mr Williams: Who should have taken the initiative in applying those, and would it be part of the role of the supplier to draw attention to those so that the buyer avoided some of the pitfalls?
Mr Rollerson: I do believe that an open consultation between the supplier and the CFH is absolutely required.

Q349 Mr Williams: Was there one?
Mr Rollerson: Yes.

Q350 Mr Williams: How was this missed?
Mr Rollerson: I do not think it was missed in the sense that Fujitsu, and I can only obviously speak for Fujitsu, created a value management office specifically in order to work with the southern cluster to prioritise projects on the basis of the benefit that they would create, the risks involved and so on and so forth. Fujitsu worked with the cluster office to schedule projects so as to reflect this value creation.

Q351 Mr Williams: You were involved, they described it as "in the early stages", trying to push your knowledge of what was going on, but you would have been involved at this very time when these crucial decisions were being made.
Mr Rollerson: I was.

Q352 Mr Williams: Did you at that time criticise the processes that were being applied?
Mr Rollerson: I did not at that time because I believed what Fujitsu attempted to put in place and work with the cluster was actually, I believed the right way to go.

Q353 Mr Williams: So you are not attributing blame?
Mr Rollerson: Absolutely not.

Q354 Mr Williams: Should I decide? Should the buyer have been more aware of what they needed to do if they wanted to get a good end product?
Mr Rollerson: I think it is very easy, clearly, to be wise after the event.

Q355 Mr Williams: That is what I am coming to.
Mr Rollerson: An implementation programme of this scale and complexity continually runs into challenges and this was one of the aspects of the talk that I gave the other day, that there is a tendency to

start shooting the alligators closest to the canoe in order to ensure that something at least is achieved, and this is the right thing to do provided that one does not lose sight of what one is trying to achieve overall. To extend the analogy, I suppose, if you are shooting alligators but fail to observe that you are about to go over a 300-foot waterfall, then you have essentially wasted your time by pursuing these immediate tactical goals, addressing tactical problems. In a programme this size you need to keep your eye on both.

Q356 Chairman: Does the National Audit Office want to ask any questions?
Sir John Bourn: We are grateful to hear the evidence and we have not got any questions, Chairman. Thank you.

Q357 Chairman: Is there anything else that you wish to say?
Mr Rollerson: No, thank you very much.
Chairman: Thank you for appearing before us.

Letter from Managing Director, UK Public Sector, Fujitsu Services to the Chairman of the Committee

We note that, having heard the evidence of Mr Rollerson, you are now preparing your Report on the NHS National Programme for Information Technology (NPfIT).

We observe that the evidence Mr Rollerson presented was generally in support of the Programme. There were several areas where Mr Rollerson's comments may have caused some doubt within the Committee and we would like to set the record straight on these matters.

1. *Mr Rollerson's seniority and ability to comment on the Programme:*

Mr Rollerson is not a senior manager in the company. During the period of time Fujitsu has been involved with NPfIT, Mr Rollerson has been at least five levels down the Fujitsu Services organisation and at no time during this period he has been a member of the Fujitsu Services NHS account leadership team. During the period between early 2004 and June 2006 he did build up a team of Change Managers which peaked at 47 staff members. In the post he has occupied since June 2006, when he left the Programme, he had a team of two.

Mr Rollerson informed the Committee that his responsibility or providing consultants . . . who would assist the NHS Trusts in changes they would have to make in order to make the technical deployment successful . . . in other words the process for redesign, the organisational restructuring, the benefits realisation . . . " The company stresses that the NHS Trusts are responsible for delivery of these items through the company assists by providing information and support. Mr Rollerson recruited and managed the consultants to enable Fujitsu to do this.

Mr Rollerson has at no time been a member of any of the various committees which provide governance on the Programme either internally within Fujitsu or with NHS Connecting for Health or NHS officials.

Mr Rollerson is not an expert on Project and Programme Management. His direct project management experience is limited and comes from early in his career.

Mr Rollerson has stated that he was speaking at both the conference and the PAC for himself and not for the company. We would confirm this.

2. *Mr Rollerson's observations about managing the Programme with techniques normally used for small projects:*

As noted above, Mr Rollerson has limited expertise in these areas and was unable to observe the conduct of the overall Programme directly. His evidence is that he was informed about the Programme by the Change Managers provided by Fujitsu working in each deployed project. These Change Managers would themselves have had only a view limited to the individual projects in each NHS Trust.

We can confirm that we are not aware of Mr Rollerson raising any concerns with any member of the account or programme leadership team regarding the direction, strategy or performance of the programme during his time on the bid, the programme or whilst supporting the account in business development activities over the four years of Fujitsu's involvement in NPfIT.

The Fujitsu team is led by managers with many years experience in running some of the largest programmes ever conducted in the UK. We are unaware of any more advanced programme management techniques than those being used by the Fujitsu team.

The same team has been responsible for the roll-out of the Picture Archiving and Communications System and Radiology Information Systems across the South of England which has just completed and which has been absolutely on schedule whilst delivering patient and clinician benefits as planned.

The only advanced project management technique mentioned by Mr Rollerson was Value Management and, as he observed, Fujitsu has deployed this technique.

3. *Mr Rollerson's observations about the Programme becoming too IT-driven and the need for greater involvement of the Trusts.*

We would agree that, for any IT-enabled Programme to be successful, it should be seen as a business change and managed as such. There is a great deal of evidence of the Programme being business-led which was not discussed at the PAC hearing:

- There has been substantial involvement of clinicians in the selection and detailed design of the solutions being deployed. The Southern Combined Clinical Advisory Group (SCCAG) has been involved from the start and is part of the governance of the Programme. There are 40–50 full-time NHS clinicians, matched by a similar number working for Fujitsu and Cerner, plus around 200 part-time subject matter experts working on the definition and design of future releases of the systems.
- Each deployment project is co-led by the NHS Trust, is subject to full Trust Board approval and is reviewed regularly at Trust Board meetings.
- Deployment projects include the development of new internal processes in order that the benefits of the new systems can be realised. This is a Trust responsibility supported by Fujitsu Change Managers.
- The vast majority of Trusts in the South of England continue to support the increased IT investment and are keen to move forward with the installation of the Cerner Millennium system, just as they were keen to participate in the successful and rapid roll-out of PACS and Radiology Information Systems.
- Through the NHS Local Ownership Programme, David Nicholson, the NHS Chief Executive, is moving moiré of the responsibility from the centre to the local NHS ownership.

Conclusion

In conclusion, I would like to reiterate the comments I made in my letter of 5 March 2007. Fujitsu Services is proud to be part of the industry team chosen to deliver the NHS National Programme for IT. We are fully committed to delivering our contract for the NPfIT Programme. We have already delivered a huge a mount of patient and clinician benefits through our successful deployment of Picture Archiving and Radiology Systems across the whole of the South of England. Over 140,000,000 clinical images are already stored on our database. We are now successfully deploying the first release of the Cerner Millennium Care Records System and already have the system live in 26 sites across five deployment families and used by approximately 7,000 users.

Peter Hutchinson
Managing Director
UK Public Sector
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