NHS Core Principles

1. The NHS will provide a universal service for all based on clinical need, not ability to pay
2. The NHS will provide a comprehensive range of services
3. The NHS will shape its services around the needs and preferences of individual patients, their families and their carers
4. The NHS will respond to different needs of different populations
5. The NHS will work continuously to improve quality services and to minimise errors
6. The NHS will support and value its staff
7. Public funds for healthcare will be devoted solely to NHS patients
8. The NHS will work together with others to ensure a seamless service for patients
9. The NHS will help keep people healthy and work to reduce health inequalities
10. The NHS will respect the confidentiality of individual patients and provide open access to information about services, treatment and performance.
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Foreword by the Secretary of State

Building the Information Core: Implementing the NHS Plan

Implementing the NHS Plan will make the NHS a modern public service meeting modern public expectations. Redesigning and delivering care and services that are based around the needs and circumstances of patients is a massive transformation. The task in hand should not be underestimated.

Front-line staff, professional groups, patients and the public were all involved in discussing the problems facing the NHS and shaping the changes put forward. A change of approach is necessary not just to meet their demands but also to embrace new ways of delivering all our public services.

Reforming the system to create new and more effective clinical practices, care processes and ways of working relies on good quality information and modern information and communication technology. Building this information core is vital.

For too long the NHS has thought of IT projects in isolation. Something to be left to the IT specialists. Something that is not a priority for patient care and health services. Let us set this right. The better capture, management and use of information - analysed, communicated and shared through modern systems and networks - is central to managing change and modernising the front-line delivery of care, treatment and services to patients. It is central to improving the day to day working and skills of staff. It is about improving the very nature of care itself - information, communication and understanding.
Modernising our information systems to meet our challenging targets will require continued investment. We are providing sustained investment.

In the last two years we have made an additional £214m available to support modernisation of NHS information systems. This includes £79m announced in 1999 as a recurring sum and a further £53m made recurrently available to Health Authorities from 2000. Additional sums are now being made available as part of the allocations for the next three years. An extra £113m will be provided to the NHS for IM & T investment in 2001/02, increasing to £210m in 2002/03 with £210m also in 2003/04.

Improving the capture, management and use of information through a national IT infrastructure is a core part of the NHS Plan. We need an infrastructure that is robust, flexible, secure and standardised. By putting in place the information core outlined in this overview we will provide a solid, national platform that provides the best chance of achieving lasting improvements to our health service.

Patients will see a difference. They will have ready access to quality and trustworthy information on personal care and local health services. This will be through a range of channels: telephone, e-mail, digital TV or face to face intermediaries. They will make appointments quickly and conveniently through a national booking system. They will have easy access to their personal medical records. They will receive reminders before appointments and proactive calls to help them manage their medicines or treatment. They will have the confidence and reassurance that the professionals referring, diagnosing and caring for them are working with the best quality knowledge about their condition and treatment.

Proper management of information through modern information systems makes this possible.

The Rt. Hon. Alan Milburn MP
Secretary of State for Health
1 Summary

1.1 This document considers the implications of the NHS Plan for the necessary information and IT infrastructure that will support the patient centred delivery of care and services. It builds on and updates Information for Health, the information strategy for the NHS, and provides a clearer focus on what our priorities for successful delivery need to be. It details what will be delivered over the next few years and the actions required to ensure successful implementation. This document is also supported by more detailed online material which can be found at: www.doh.gov.uk/nhsexipu/strategy/update/

1.2 Whilst the e-government strategic framework requires “building services around citizens’ choices”, the NHS Plan requires an “NHS designed around the patient”. The NHS Plan stresses the need to support well co-ordinated “seamless” services across “whole systems”. The information and IT systems needed to deliver these objectives must be capable of being personalised to meet the needs of the individuals who provide these services as well as those who receive them. Information for Health sets out a strategic direction that supports both the NHS Plan and e-government. But, whilst much has been achieved in the two years since its launch, much remains to be done and it is time to update it in the light of the new policy agenda and developments in technology.

1.3 The vision of the NHS Plan focuses on a redesigned care system. Chapter 3 of this document illustrates how information and IT will support the modernisation of NHS organisations that will be delivering preventive care, enabling self-care, and providing primary care, hospital care and intermediate care. It also shows what this might mean from the perspective of the delivery of cancer services. There is much to do in bridging the gap between the NHS now and a service shaped around
the needs and preferences of individuals. There is an urgency to put workable and person centred systems and solutions throughout the NHS and enable links with social care. And, in doing this, it is vital that information and IT is used to improve the delivery of good quality services, and to help the NHS get the best out of its investment in its most valuable resource - its staff. Getting best value from the £10bn spent by the NHS each year on goods and services by exploiting the opportunities of e-commerce also requires a properly networked NHS.

1.4 Given the developments in the policy environment, and emergence of an increasing variety of electronic channels over which services can be delivered, what are the requirements of the different stakeholders – and in particular patients and the public, clinicians and managers - across all types of NHS organisation? Chapter 4 presents these requirements in terms of:

- Information Services (e.g. NHS Direct, National electronic Library for Health)
- Electronic Records (both within organisations and between them)
- National or Local applications (such as Human Resources and Payroll).

It is access to these sorts of services that helps individuals take better informed decisions. But to deliver them requires a properly developed infrastructure and standards.

1.5 Chapter 5 makes it clear that in developing the essential infrastructure it is important that standards, once agreed, are used across the NHS. By having a standard infrastructure, new and innovative ideas which can be shown to work can be rolled-out much more quickly and effectively than at present. But the first step is to continue Project Connect (connecting GPs to NHSnet) and get all NHS staff connected with “desktop” access to some basic tools. Safe and secure access to the networked NHS for health and social care professionals is essential to this infrastructure, as is the process of making information skills a basic part of the education and training of all staff.

1.6 Putting in place the essential infrastructure that enables services to be delivered electronically to the end-users when and where they want it is a major implementation exercise that needs to be properly supported. Chapter 6 outlines the key roles of different parts of the NHS organisations, and stresses the importance of developing partnership arrangements. These include working in partnership across local health economies and with IT suppliers. Encouraging innovations and using the outcome of them as one way of improving procurement...
is important. Developing more national solutions, framework agreements and catalogues to speed up procurements is vital. With appropriate partnerships, the potential to exploit the NHS brand to help develop knowledge resources is considerable.

1.7 Delivering the information core, converting policy into practice, needs clear targets to be set. Chapter 7 sets out what they are for connecting NHS staff, delivering information, electronic records and national applications, together with local planning and preparation. Building the information core will meet the commitments of the NHS Plan and deliver the right solutions for patients, the public, NHS staff and all care professionals and workers. In short it will deliver:

- by March 2001 – 95% of GP practices and 25% of Trust clinical staff with NHSnet connections and using NHS information services such as the National electronic Library for Health

- by March 2002 – desktop connections for NHS clinical staff to basic e-mail, browsing and directory services, and roll out of NHS cryptography support services begins

- by March 2003 – migration to national standards for e-mail, browsing and office systems completed and all NHS staff with desktop access, and clinical information systems start to use the SNOMED Clinical Terms

- by March 2004 – major national payroll/HR systems implemented

- by 2005 – a vibrant networked NHS, with booking systems in place, electronic transfer of records within primary care, all acute Trusts with level 3 Electronic Patient Records and first generation Electronic Health Records.

Summary
2

The case for change

• What has been achieved so far?

2.1 To deliver the NHS Plan, information and IT must be an intrinsic part of the agenda for change. The principles, objectives and direction of travel set by the national information strategy in September 1998 remain. However much of the reform and innovation necessary to translate the NHS Plan into practice requires a hard look at information management and how to make the best use of modern information and communication technologies in healthcare. The challenge is to enable the patient centred delivery of care and services by delivering an appropriate information infrastructure.

2.2 People across society are rapidly changing the way they live, work and play through the application of and interaction with modern information and communication technologies. The e-government “strategic framework for public services in the Information Age” and the associated targets for delivering public services in new and electronic ways aim to ensure that public services are an integral part of this radical transformation of our society. The challenge is to innovate and in particular to: “improve public services for the benefits of citizens to be more convenient, more joined-up, more responsive and more personalised” (e-gov: Electronic Government Services for the 21st Century September 2000).

2.3 The NHS Plan will give people a health service fit for the 21st Century by shaping its services around the needs and preferences of patients. “Step by step over the next ten years the NHS must be redesigned to be patient centred - to offer a personalised service” (NHS Plan July 2000). Over the next few years individuals will have far greater information about how they can look after their own health and how they can use their local services. They will have the option of having much more information about the care being planned for them and the possible
outcomes. Waiting for their tests, diagnosis or any stage of treatment will be reduced. They will have the right to see their own medical records and will require easier access to records. They will be able to book their own appointments and have better out-of-hours services.

What has been achieved so far?

<table>
<thead>
<tr>
<th>Commitment</th>
<th>Achievement</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>To ensure the NHS copes with the Year 2000 problem</td>
<td>The NHS was fully prepared for the date change. As a result of good planning there was no adverse effect on patient services, staff or safety</td>
<td>Considerable investment in IT infrastructure updated and improved NHS systems</td>
</tr>
<tr>
<td>NHS Direct services to cover England by end of October 2000</td>
<td>NHS Direct now covers the whole population of England with almost 50,000 calls per week handled through 22 call centres</td>
<td>Provides 24 hour access to advice, information and care services and has already transformed many peoples experience of the NHS</td>
</tr>
<tr>
<td>To improve public access to information on healthcare and services</td>
<td>NHS Direct Online is receiving 1 million hits per week from over 17,500 visitor sessions</td>
<td>Provides trustworthy and clearly branded advice and information on keeping healthy, self-care and illnesses and treatments. Enables the patient to be an informed partner in their own care</td>
</tr>
<tr>
<td>To improve access to knowledge bases and evidence based information</td>
<td>The full pilot National electronic Library for Health was launched in November 2000</td>
<td>Provides online knowledge and know-how through new resources such as Clinical Evidence and makes the Cochrane Library available to the whole NHS</td>
</tr>
<tr>
<td>All computerised GP practices to be connected to NHSnet by March 2002</td>
<td>80% of computerised GP practices are connected to NHSnet along with all health authorities and 95% of NHS trusts by December 2000</td>
<td>Increasing potential for desk top access to e-mail and web browsing, with in built capability to support messaging and booking</td>
</tr>
<tr>
<td>To review the cost and benefits of the time spent on collecting data for Körner returns</td>
<td>The instructions to stop recording total face to face contacts on a number of central returns has been issued</td>
<td>Less time will be spent by care professionals collecting information and the NHS can decide locally to adopt more appropriate measures of performance and delivery in community services</td>
</tr>
<tr>
<td>To support patient care through electronic records</td>
<td>Four health communities are piloting electronic health records to share patient information across health and social care. A further 13 NHS sites are focusing on the delivery of patient care in a range of settings, from NHS Direct to mental health or cancer care</td>
<td>A person’s health record will be available at the time they are seen and will hold a complete and up to date summary of their clinical history or current condition. This work is essential to developing national standards for electronic records</td>
</tr>
</tbody>
</table>
To remove the contractual requirement for GPs to maintain paper records

From October 2000 the terms of service for GPs have been amended to allow them to maintain all or part of their patient records on a computer system

GPs can now provide the full benefits of running paperless practice

To develop pathology messaging for exchanging electronic results

The first Trust systems pathology EDI specification including an updated GP specification has been published

NHS wide and electronic pathology results and messaging will reduce delays in treatment, potential errors in paper based reports and provide cost savings

Improve funding for IT investment

In the last two years to March 2001 additional funding for IT has totalled £214m.

The NHS will have spent over £1.5billion on IM & T in the three years to March 2001. The Departmental Investment Strategy published in November 2000 sets out the intention to invest an additional £851m to March 2004 over and above annual NHS spend

Develop Local Implementation Strategies for information and IT

There are 98 LISs providing clear and costed plans for working through the original goals in Information for Health

Local partnership and planning provides real confidence in the ability of health communities to satisfy their information and IT needs and deliver national priorities

2.4 Despite such good and positive progress the NHS Plan highlighted certain home truths about the use of information and IT in the delivery of care and services. “Information is not shared and investigations are often repeated. Delay seems designed into the system.” “Performance has been inhibited by lack of reliable information for clinicians, managers and patients.” “The NHS needs a system which spots problems early on, takes action swiftly and can act decisively.” “The NHS has inadequate levels of modern equipment. IT investment has been too slow and too patchy.”

2.5 This reinforces the need to deliver the key objectives and targets from the information strategy and put in place the information core and infrastructure outlined in this overview. Through urgent and co-ordinated action we will address such shortcomings and ensure that we achieve real benefits for patients and the public, and lasting improvements to the service provided.
3.1 The vision of the NHS Plan focuses on a redesigned care system. Bridging the gap between the NHS now and the vision of fast and convenient care delivered to a consistently high standard requires a greater sense of urgency in delivering visible and workable information and IT solutions. Introducing information systems and the electronic delivery of services has to be understood as a business, not a technological, issue. We must not lose sight of the fact that the purpose of improving the use of information and IT is to ensure that people receive the best possible care, and through making quality outcome data available we will monitor the continuing effectiveness of that care. The key lies in integrating information across the various parts of health and social care to achieve a single or “whole” system centred around the individual that also meets the requirements of all parts of the care system e.g. Primary Care Trusts, NHS walk-in centres or NHS Direct. In this context we need to explain the role and benefits of improving the quality and management of information and harnessing modern technology alongside the model of care given in the NHS Plan. Examples are provided to show how the information infrastructure required by the Plan will impact on the delivery of cancer services.

Preventive care

3.2 Information systems will help care professionals deliver preventive care by supporting health promotion advice and screening services. They provide decision support and alerting systems to prompt the provision of advice during the consultation, or provide customised advice on paper, or prompt referral to advice and support groups. In addition, they will facilitate the development of routine
call and recall systems through disease and patient group registers as well as supporting the major screening programmes. The information strategies to support National Service Framework topics are an initial focus for this work.

3.3 **NHS Direct** will also be taking a more proactive role in helping people manage their medicines, get the most out of a course of treatment or check that the more vulnerable people are better targeted with direct advice and support. Because the most vulnerable are also the least likely to have computers, mobile phones or digital TV, improvements must also be made to the information networks that support alternative and familiar services e.g. the telephone, community facilities or face to face contact. For example, Lincolnshire Health Authority in collaboration with the Local Authority provides free community wide access to NHS Direct Online. This includes a free printed copy of any information required in all 46 public libraries, numerous local pharmacies and shops, several GP practices' waiting areas and the reception area of Pilgrim Hospital, Boston. Some 60% of users of this service are aged over 60.

**IMPLICATIONS FOR CANCER SERVICES**

The Smith family routinely use the Internet for online banking, income tax returns, booking travel and holidays, reading the OFSTED reports on their children's schools or to supplement their children's studies. They expect to access information on health and healthcare in the same way. They also expect the health professionals they visit to use information systems to provide accurate, tailored and timely health promotion and healthcare advice.

Mrs Smith has a family history of breast cancer and looks to her GP and local specialist services to offer the best advice and monitor her health through the development of population and disease topic registers. Mrs Smith also regularly visits NHS Direct Online for accredited information on reducing the risk of developing cancer through a healthier diet and for public versions of evidence-based guidance on prevention and treatment breakthroughs. She maintains a personalised online health record that amongst other things provides a risk score based in part on her family's history of cancer.

**Self-care**

3.4 People deal with some 80% of healthcare episodes through self-care. If the frontline in healthcare is the home then easy access to the right advice, information and services has to be made available from the home. All care providers must consider what it means to be a remote resource which people can use routinely every day to help look after themselves and their families and how they need to support such use.
3.5 People will be helped to navigate the maze of health and care information through the development of consistent information and services with easy access from the home or key public places close to home. Providing good quality and trustworthy content is well under way. **NHS Direct Online** provides information on healthy living, self help, illnesses, conditions, treatments and outcomes and will soon feature information on local care and services and how best to use them. A further step is to group information and services around common events or life episodes, e.g. “having a baby”, to result in better co-ordinated and more meaningful information for the citizen with better access to the full range of relevant public services: health, social security, housing etc. This citizen-focused approach is central to the e-government strategy.

**IMPLICATIONS FOR CANCER SERVICES**

More, and more accessible, information to help people like Mrs Smith recognise the signs and symptoms of cancer is available through the Internet, digital TV health channels, public information kiosks, GP surgeries, NHS walk-in centres, libraries and advice centres e.g. Citizen Advice Bureau. It is important that Mrs Smith is “breast aware” and reports any changes to her GP. Her GP can refer a woman of any age for consultation and assessment if he or she feels that this is clinically necessary.

Primary care

3.6 At the moment some 90% of patient contacts with the NHS are through primary care. We need to build on the strengths of co-ordination and continuity of care provided by primary care and to support GPs and primary care teams in delivering more patient centred services. The creation of new Care Trusts will bring about even closer integration of health and social services which, together with the extension of Personal Medical Services and NHS walk-in centres, will allow more flexible primary care services to evolve.

3.7 Recognising the need to provide better and more convenient services to individuals, the NHS Plan sets out ambitious targets to provide comprehensive systems for booked appointments by 2005. GPs or practice staff will be able to book their patients into outpatient clinics at hospitals, and within hospitals patients will also be given booked appointments for inpatient or daycase care. In due course making booked appointments with other health and social care providers will become routine.
3.8 In addition, the new one-stop primary care centres including GPs and other members of the Primary Health Care Team working alongside dentists, opticians, pharmacists and social care workers will provide faster more accessible services to people. The new interface between health and social care provision has significant business implications in developing joint patient assessment, monitoring and review systems. These new services will need to be supported by modernised primary care information systems capable of improving the co-ordination of services between different professionals and agencies involved with individuals leading to an improved quality of care. These same systems are also needed to support the implementation of National Service Frameworks, ensuring older people receive a one-stop service, providing repeat dispensing schemes to make obtaining repeat prescriptions easier for patients with chronic conditions, providing integrated care pathways or for clinical audit and Clinical Governance.

3.9 Providing care professionals with access to common and consistent decision support systems will ensure that they are able to offer people the best diagnosis, referral and care across the country, translating research evidence and best practice into day-to-day practice. Access to such common evidence-based decision support systems - provided across a common national technical infrastructure - will enable consistently high standards of care to be provided, regardless of the setting - e.g. in A&E departments, NHS walk-in centres or NHS Direct call centres.

3.10 The 36 NHS walk-in centre pilots being set up across England will provide a complementary service to GP surgeries and A&E departments by offering a service at convenient times. They are particularly suited to those people who find it difficult to get an appointment with their GP or attend A&E departments with a minor problem. Using the same decision support software as NHS Direct centres, walk-in centres will be able to assess and treat patients with minor illnesses and injuries, referring on where it is appropriate to do so. They work closely with local health and social care providers to provide a holistic package of care. Using Patient Group Directions, walk-in centre nurses will be able to supply medicines for common ailments and conditions. New information systems will ensure that continuity of care is not jeopardised by ensuring that - subject to patient consent - information about walk-in centre contacts flows through to the patients’ GPs.
3.11 NHS Direct will provide a one stop gateway to care to give people more choice about accessing the NHS, accessing out-of-hours care or receiving treatment without visiting the GP practice. NHS Direct nurses will advise on care at home, visiting the local pharmacist, making a routine appointment, arranging for an emergency consultation, calling an ambulance or getting social services support. New information systems and networks are the practical means to more closely integrate NHS Direct and existing health and social care services. The new Care Direct service aims to improve access to, and information about, services for older people and disabled people who have no prospect of work.

3.12 The GP practice will become the place where:

- appointments for consultations or operations can be booked directly – giving patients more choice and convenience, with less wasted time through cancelled appointments and improved management of waiting lists

- more diagnosis is carried out using video and tele-links to hospital based specialists – giving patients more equitable access to care, less waiting and travelling and clinicians more appropriate referrals, improved use of resources and better continuing professional development

- test results are ordered and received electronically – giving patients less delay and worry and clinicians less bureaucracy with earlier diagnosis and treatment and improved outcomes.

3.13 Information for Health set key targets for modernising primary care information systems that have now been augmented by additional targets up to 2004 in the NHS Plan. These include:

- the majority of NHS staff to be working in accordance with protocols for all common conditions

- a major increase in GPs working to PMS contracts tied to quality targets

- access by patients to Electronic Patient Records

- 50% of primary and community trusts to have Electronic Patient Record systems

- ensuring that Care Trusts have the information systems necessary to support the delivery of integrated health and social care services.
Hospital care

3.14 Changes similar to those outlined above apply equally to hospitals. On the spot booking systems do not just make a hospital appointment more convenient for patients, they also act as a driver for more fundamental reform. There is still a significant challenge facing NHS Trusts to implement the Electronic Patient Record targets that form the centrepiece of Information for Health.

3.15 Co-ordinated local investment in new systems for booking, automated scheduling, patient administration, electronic records, ordering tests and results (pathology and radiology) or electronic prescribing will bring modern information and communication technology to all staff, from reception through A&E, X-ray or blood tests to clinics and consultations. In the clinics or on the wards the aim is to enable doctors and nurses to request an X-ray or blood test at their desks or at the bedside, receive back the time and date for the investigation, perhaps with a timed portering request registered at the same time. The patients will see that activity and information centres on them and have the confidence that the doctors, nurses and departments have access to the right information at the right time.

IMPLICATIONS FOR CANCER SERVICES

Following Mrs Smith’s routine attendance for breast screening she was diagnosed with breast cancer. When she saw the consultant, the consultant went through the NICE guidelines on breast cancer and cancer drugs with Mrs Smith before printing out copies and a summary of the consultation for her to take home. The following day Mrs Smith realised there were more questions she would like answered and made an appointment to see her GP, Dr Brown. Dr Brown was able to call up Mrs Smith’s medical history, test results and notes from the consultation at the cancer unit. Mrs Smith had been advised to have surgery and armed with the full facts and the same NICE guidelines, Dr Brown was able to answer all outstanding questions. The GP was also able to call up reassuring survival data for women with the same early stage of breast cancer and performance information to show that the local cancer unit had better than the national average results.
Intermediate care

3.16 People want to get on with their lives with the minimum of disruption from illness, injury or disability. Information and communication technology offers critical support to a new range of intermediate services that will provide a bridge between hospital and home and deliver as much service as possible in or close to the convenience of the person’s home.

3.17 Seamless care for individuals and an underpinning care and discharge plan hinges on easy access to electronic records and care plans. There must be the capacity to share information across health and social care and amongst rapid response or hospital-at-home teams that need to work on an integrated basis with GPs, community nurses, physiotherapists and social care staff.

3.18 Telecare and telemonitoring is already making independent living possible in a working pilot for older people in sheltered housing in Tyneside. Other pilots in home distance monitoring of patients with high blood pressure demonstrate enhanced efficiency, improved outcomes and the more active involvement of individuals in their own care.

3.19 Figure 1 is a generalised map of a patient pathway, with appropriate access and pre-booked treatment plans. It is generally applicable to any patient with cancer or any non-cancer patient. Co-ordinating the patient journey is critical and the ability to electronically refer a patient into the system, electronically book the patient from one landmark to the next and electronically chart the patient’s progress is a logical progression of the co-ordination process. Healthcare

IMPLICATIONS FOR CANCER SERVICES

Mrs Smith was confident that she received the best information, support and specialist care to help her and her family cope with cancer, from the time the test revealed an abnormality throughout the subsequent stages of the disease and treatment. Good communication between her and the care professionals was an essential feature of her experience.

Behind the scenes NHSnet linked all organisations providing primary, hospital and intermediate care. Tried and tested information sharing protocols were used by health and social care professionals, and multi-agency care pathways were supported by modern information systems. Mrs Smith was given the best possible chance of a complete cure because her cancer was identified at a very early stage of development and because she received urgent referral and treatment. Her patient experience was improved through pre-scheduled diagnostic investigations, pre-booked appointments, multi-disciplinary working and the delivery of appropriate treatment.
professionals will be able to quickly access information about previous contacts, regardless of whether they are working in general practice, specialist cancer units or in the community. Ensuring that there are appropriate data sets for each point on the patient journey will form an important element of the Electronic Patient Record.

**Figure 1 – A Patient Pathway**

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### Quality of care

**3.20** The NHS Plan sets out the main national priorities. Individuals should have fair access and high standards of care wherever they live. It confirms the importance of the quality framework laid out in “A First Class Service”.

**Figure 2 - The Quality Framework**

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1. **Self-care**
2. **Referral**
3. **Diagnostic investigations**
4. **1st significant treatment**
5. **1st multi-disciplinary meeting**
6. **2nd multi-disciplinary meeting**
7. **Screening/GP consultation**
8. **1st appointment/consultation**
9. **Radiotherapy/Chemotherapy Physiotherapy**
10. **Specialist palliative care (can be anywhere on pathway)**

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### WHAT THE QUALITY FRAMEWORK MEANS FOR PATIENTS

- **Clear Standards of Service**
- **Dependable Local Delivery**
- **Monitored Standards**

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**National Service Frameworks**

**National Institute for Clinical Excellence**

**Patient & Public Involvement**

**Prof. self regulation**

**Clinical Governance**

**Lifelong Learning**

**National Performance Frameworks**

**Commission for Health Improvement**

**National Patient and User Survey**
3.21 At a national level the Department of Health will, with the help of leading clinicians, managers and staff, set national standards in the priority areas. The national standards for key conditions and diseases will be set through National Service Frameworks (NSFs) and the National Institute for Clinical Excellence (NICE). NSFs have already been produced covering mental health and coronary heart disease. The country's first ever comprehensive National Cancer Plan was published in September 2000. An NSF for older people's services will be published later this winter and for diabetes in 2001. These five frameworks between them cover around half of the total NHS spending. In addition, the NSF information strategy programme is developing information strategies to support cancer and other clinical priority areas discussed in the NHS Plan. The Cancer Information Strategy was published in June 2000 and the Mental Health Information Strategy should be available in January 2001. Information strategies to support coronary heart disease, care of older people and diabetes are now in preparation.

3.22 Putting in place the information systems that support National Service Frameworks will assist the delivery of individual care and, by adding information about outcomes, will provide the basis for the routine systematic collection of person-based data to populate indicators of clinical performance, support Clinical Governance and performance management. Coupled with information about populations, this data can also be used to better target resources to address inequalities of health and healthcare service provision.

3.23 Information for Health is an essential part of the quality programme. The modern information systems being put in place will support the NHS and partner agencies in improving care delivery, accessing agreed protocols and guidance, auditing clinical and practice performance against standards and benchmarks, and in reviewing performance through the Performance Assessment Framework. In addition to supporting the delivery of better care by improving the individual's journey through care services, person-based and integrated information systems will support improvement in the quality of care by:

- providing clinical guidelines from NICE, other national and local protocols and guidance and care pathways at the point of care
- reducing the possibility of error through, for example, providing doctors and nurses with easy access to agreed care protocols
- supporting clinicians undertaking appraisal and Clinical Governance
- producing performance management and planning information as a by-product of the information required to support care delivery and linking through to Local Authority data to support the production of Health Improvement Programmes, community plans or local strategic partnerships.
3.24 The NHS plan recognises the value of staff in three main ways:

- the NHS needs more staff - crucially healthcare professionals
- staff need up to date competencies and skills
- NHS organisations need to recognise and reward their contributions in tangible ways.

3.25 This has significant implications for both the information needed and the operational systems support - for streamlining recruitment, facilitating more flexible working and for ensuring that the right resources to deliver care are available when and where needed.

3.26 There is a major behavioural, culture change and organisational development challenge in redesigning care services around the individual, and establishing a “network NHS”. Everyone - individuals, multi-disciplinary teams and care organisations - will need to think through the way that they work. Information
is central to the process of redesigning care systems centred around the individual. Ensuring the quality of care involves being able to identify areas of weakness for individuals and teams, and to access and complete appropriate learning programmes.

3.27 New technologies will not only support clinical practice and care management but also the actual education and training process through the development of knowledge management and e-learning capabilities. New Human Resource systems will develop personal learning records and an integral training management system to ensure progress towards continuous performance improvement for all staff. They will track when improvements are shown to be needed, and support the linkage of personal development plans and training to the delivery of the best possible care. Better HR information will also support workforce planning and help to get the numbers of new healthcare professionals in training right. Medical schools and training places for healthcare professionals will need to be supported by better access to shared e-learning resources. Paragraphs 5.13 to 5.18 provide further details about the implications for the education and training of staff.

3.28 The National electronic Library for Health (NeLH) is being established as an authoritative source of current healthcare knowledge to improve clinical practice and enable the most appropriate treatment to be provided based on accredited clinical evidence. NeLH will complement existing library and information services and offer an increasing range of e-resources and skills to support their use.

e-commerce

3.29 Organisations throughout the world are exploiting the new wave of opportunities presented by e-commerce to revolutionise their own activities, and their interactions with their supplier base. Such opportunities exist for the NHS and its extensive supplier base, covering potentially almost £10 billion of NHS revenue spent each year on goods and services. Exploiting the benefits of e-commerce is a key part of e-government and the NHS Purchasing and Supply Agency is currently undertaking research and development work to provide a strategic framework for e-commerce in the NHS. The aim is to realise benefits not only from improving processes and greater purchasing leverage, but also from consolidating, making more transparent, and exploiting, information throughout the supply networks that serve the NHS.
How will information and IT fit together?

4.1 There are many ways in which information and IT can be used to support the implementation of the NHS Plan. Figure 3 presents a generic model developed to illustrate the translation between policy and practice and how different types of users can access the information they need to make decisions. They can do this through a variety of electronic media or delivery channels. But access to information services, records and applications that are of good quality has to be supported by the development of a national infrastructure and appropriate standards. To support the implementation of the infrastructure and services, there are some important enabling and management issues to be addressed.

Figure 3 - The Information Core
4.2 The NHS Plan and e-government require information, applications and services to be delivered in new ways and through modern systems. The key to such change lies in full workplace access to information, electronic records and a variety of other applications wherever this is required - on the desktop, in the surgery, in the outpatients clinic, at the bedside and on the move. This in turn relies on secure and robust electronic media to facilitate:

- the rapid and safe sharing of information
- access to individual patient and client records for emergency care
- access to the latest knowledge, evidence-base and clinical guidelines for improved decision making and professional development
- the improved use of up-to-date and high quality aggregate information in managing and monitoring performance and planning future services
- modern and streamlined procedures for all staff, to ensure better services to individuals and to increase the internal efficiency of care organisations
- faster communications with colleagues and patients.

Information services

4.3 The NHS must be a major provider of information services in support of care services, working with carefully selected partners to provide a range of information to patients, clinicians and others. It must embrace multi-channel communications and ensure that the strength of a revitalised NHS brand is recognised not only nationally but also internationally. Patients and the public will demand far greater information about how they can look after their own health and about their local services. NHS Direct Online, with information on healthy living and personal healthcare, is currently receiving up to 1 million hits a week from over 17,500 visitor sessions. The public and NHS staff will be able to access information on local care services and how best to use them through nhs.uk and evidence-based information and clinical guidelines through the National electronic Library for Health (NeLH).
**NHS Direct Online** – comprehensive online information on healthy living, illnesses, conditions and treatments with interactive healthcare guide and monthly feature. October featured depression and in a key collaboration with the Centre for Evidence Based Mental Health at Oxford University they presented the first ever guide to depression, interactive tools for recognising the symptoms, evidence based treatment summaries and audio/video material. ‘Find your local pharmacist’ online service available from 18 December 2000 to help people requiring out of hours or Christmas holiday services. Information on dentists and opticians to be published by April 2001. Proposals are being developed for email enquiry service to improve interactivity and responsiveness.

**NHS Direct Information Points** - 150 touch screen information points are now in place, providing public access to the information provided on NHS Direct Online. Over 500 information points will be in place by 2004.

**nhs.uk** – initial NHS organisational directory in place. Robust technical infrastructure and bandwidth also in place that easily coped with 8,000 hits in one hour when NHS Plan published. News section, Chief Executive briefing service and “Your Guide to the NHS” for patients (replacing the Patients’ Charter) to be live in early 2001. Online public information on local healthcare services, healthcare priorities and performance to be published by April 2001.

**NeLH** – launched pilot core service in November to include evidence-based sources (Cochrane, Clinical Evidence and Bandolier) with links to other quality resources (BNF, electronic library for social care and NHS Direct Online). A key service will provide the research evidence behind the health news stories. Specialised web sites – Virtual Branch Libraries – will focus on mental health, cancer and primary care. The pilot will also test usage and access management services.

**NHS Digital** – a programme of pilot projects will explore the potential of digital TV in health and test a range of relevant applications. The new television technology opens up new possibilities for rapid access to health advice and information to enhance NHS Direct services, for supporting patient groups, such as those concerned with chronic conditions and for targeting health promotion initiatives to schools or the workplace.
Electronic records

4.4 Wherever a patient is treated, there is a record of that treatment. These are “organisational records” and at present they are, in the main, paper records. New technology gives us opportunities for making those records safer and available for other health professionals. These organisational records will become the Electronic Patient Records (EPRs), and a subset of them will contribute to a lifelong record of a patient’s health and healthcare – the Electronic Health Record (EHR).

4.5 Electronic records are crucial to the full development of a patient centred service. They are a major step forward in delivering the type of service people expect from a modern NHS and ensure that:

- patients have access to reliable information to improve their knowledge and involvement in their own treatment and care

- healthcare professionals have routine and rapid access to relevant clinical guidelines, evidence-base and an individual’s medical history and current condition to enable them to provide the highest quality care when and where it is needed

- health managers and planners have ready access to aggregate information to improve analysis and decision-making.

4.6 The original Information for Health targets for full Electronic Patient Records and an Electronic Health Record for use in 24-hour emergency care by March 2005 remain unchanged. However, with the new requirement for electronic appointment booking and specific requirement to provide personal access to electronic records more quickly than was envisaged in 1998, we are improving the support to help achieve these targets and added applications. By March 2001 the National Patient Access Team will publish a national Strategic Outline Case setting out the preferred approach for implementing electronic booking systems up to 2005.

4.7 From October 2000 a change was made to the General Practitioner’s terms of service to legitimise the use of Electronic Patient Records in general practice. There will be national guidance on integrating primary and community EPRs and their architecture and content by September 2001, along with a national approach for implementing the emergency care Electronic Health Record following an assessment of the interim outcomes from current pilots in NHS sites. The use of a modern set of clinical terms underpins many aspects of the development of health information systems. Such a set must meet the needs of all clinical professionals in both primary and secondary care. The development of SNOMED® Clinical Terms is being vigorously supported to achieve this, together with a programme of testing to ensure it can be implemented.
4.8 The NHS Plan referred to the opportunity to provide smart cards for patients to allow easier access to health records. The technical study to consider the potential applications of smart cards and the likely costs and benefits has been completed. A separate study, to examine the wider cultural issues associated with the use of smart cards, is due to be completed in March 2001. Together the results of these studies will inform our future policy on the development of smart card technology in healthcare.

Up to 2002 the national electronic record development and implementation programme is exploring a number of issues associated with the collection, and sharing of electronic records, including the provision of patient access to information.

In June 2001 the work of the demonstrator sites will be assessed with a view to making policy statements by September 2001 in areas such as the development of the 24 hour emergency EHR, standards for primary/community EPRs etc.

Subject to successful development and testing for implementability, after 1 April 2003 any computerised information system being developed to support any clinical information system, such as EPRs and EHRs, should use the NHS preferred clinical terminology, SNOMED® Clinical Terms. Users/suppliers are advised not to develop new Read Code based systems from April 2003.

The role of the patient held smart card in providing access to health records will be the subject of two short studies due to report by March 2001.

National/Local applications

4.9 National and local applications must focus on turning policy potential into operational practice. They are as much about developing national systems, e.g. manpower and payroll systems, as embedding national applications in local systems - e.g. PRODIGY for decision support to improve prescribing. The NHS Wide Clearing Service provides the opportunity to deliver national dataflows to support the information requirements of the Performance Assessment Framework, and to minimise the need for separate dataflows. The key is to ensure developments are made and tested at the appropriate level with the lessons, results and benefits shared by everyone.

4.10 We have a key project underway to procure and implement a new national payroll and human resources system across the whole NHS. This will give the NHS...
enhanced HR functionality, integrated with the payroll. This will provide support for improved workforce planning, recruitment, better rostering and more flexible working, personal and professional development, and staff performance management.

4.11 The aim is to provide the NHS with a powerful and flexible system that will underpin the new staff-focused initiatives such as the Human Resource Performance Framework. It will reduce the current fragmentation of systems by delivering a single common solution to cover the NHS in England, and is an example of the more standardised approach that we wish to pursue.

- All NHS Direct sites and NHS walk-in centres will be using the NHS Clinical Assessment Systems by summer 2001.
- NHS Strategic Tracing Service is now live; online tracing is being implemented and will be available across the country by March 2001.
- A contract for the national integrated Human Resources and Payroll system will be awarded in 2001.
5

Developing the essential infrastructure

• Setting standards
• Getting connected
• Ensuring security and confidentiality
• Education and training

5.1 The delivery of applications and knowledge, wherever these are required, depends on a robust and reliable information and IT infrastructure. We have already made good progress, but the objectives of the NHS Plan, the aims of delivering electronic services to the public and technological advances highlight the need for an infrastructure which is robust, flexible, secure and standardised.

Setting Standards

5.2 In line with the NHS Plan, and in response to feedback from the NHS and the supplier community, we are introducing a far more robust approach to standardisation. An infrastructure based on universal Internet technology, government-wide standards and those developed specifically to meet the needs of the NHS will give all staff the means to access the right information in the right place at the right time.

5.3 This cannot happen by chance. We have set up an NHS Information Standards Board, responsible for agreeing the standards to be used. Three sub-groups will address clinical information standards, standards for management information and a range of technical standards. Many of the technical standards are already being agreed across the public sector as part of e-government, and we will adopt these standards for the NHS.

5.4 It is important that standards, once agreed, are used across the NHS, and we will introduce measures to ensure this. The NHS Information Standards Boards will have a key role. For example the Technical Standards Board has formally adopted the Government Interoperability Framework standards, together with the BS7799 Code of Practice for information security for application in the NHS. We will
now be producing a migration plan to cover areas such as the introduction of the SMTP standard for e-mail and use of the XML standard for messaging. Agreeing to implement these standards will be a requirement of the corporate agreements between health communities and Regional Offices, and hence a condition of funding for IM & T investment.

Getting Connected

5.5 We are already well advanced in connecting GPs to the NHSnet – to date some 80% of GP practices have been connected. Over time connectivity will be extended to include other healthcare organisations such as NHS walk-in centres and GP out-of-hours co-operatives. We will ensure that all staff within the NHS have access to application and information services by March 2003. We have also been taking steps to improve the performance and reliability of the network. For example, considerable improvements have been made over recent months to the network infrastructure and to the messaging service, and further enhancements are planned, including:

- improving actual performance and resilience by raising service levels for message delivery and service availability, improved service reporting, anti “spamming” protection for all users, restriction of periods available for planned downtime, removal of delayed delivery messages
- enhancing support services by providing a comprehensive integrated second-line support service for GP practices, covering the Message Handling Service, local email systems and NHSnet, and improved support service reporting
- providing better address book services, including an interim web-based national directory service accessible to everyone who has access to NHSnet.

5.6 However, the requirements for access and sharing of information are far broader than just within the NHS. Local Authority Social Services, the voluntary sector and patients are among the partners with whom the NHS is working. Technological advances also have opened a range of possibilities for communication and networking to support new ways of providing health services.

5.7 The existing networking service contracts expire around 2003. As part of the re-procurement we are exploring the extent to which we will want to standardise the provision of core data and voice networking services. This includes provision for increased network bandwidth to support new requirements such as imaging, and other elements of infrastructure such as common products and managed services.
Ensuring Security and Confidentiality

5.8 Patients and the public must be assured that their information is held securely and shared according to appropriate legal, ethical and technical processes. Current initiatives will, however, lead to more sharing of information and this therefore increases the responsibility of professionals to protect the data they hold and access, and to preserve the confidentiality of this information.

5.9 Each organisation should now have a Caldicott guardian to oversee information flows, and it is important that this role is given due prominence. We have now agreed that the Caldicott principles will be extended to social care and are looking to achieve this by September 2001.

5.10 The main provisions of the Data Protection Act 1998 came into force in March 2000. The Act now covers all manual and electronic records. We are currently working on a major study into patient consent, and will publish the results of this study in April 2001.

5.11 Security of information is critical. We have adopted the BS7799 national standard for security in the NHS. This Code of Practice presents a range of information security management policies and practices, and is already widely used by UK businesses and other public sector bodies. NHS organisations will need to complete a gap analysis comparing existing practice against the national standard and produce their responses by June 2001, with a compliance audit of security arrangements to be completed by December 2001. We will also give consideration to how best to apply common national standards for security within social care providers.

5.12 Together with this information strategy update we are publishing an initial national cryptography support services strategy (available at http://www.doh.gov.uk/nhsxipu/strategy/crypto/index.htm). This will lead to the procurement and implementation of a full Public-Key Infrastructure that will be available for use across the NHS by April 2002. Interim guidance on securing information flows is also now available.

Education and Training

5.13 Implementing the NHS Plan and “Working Together with Health Information” will bring about many changes in the education and training requirements of staff. Professional training will have more emphasis on supporting the redesigned care system and also on working with information and applying IT.
5.14 The fundamental role of information and IT signals a need for new skills – to agree best practice standards, collect and analyse data, and procure, develop and apply high quality information systems to support patient-centred care. Increasingly information-rich and IT literate patients will seek a change in their relationships with care staff. Clinical education is beginning to be underpinned by web-based learning technologies and can be enabled by new Human Resource systems. To maximise the benefits available to the NHS directly, and for new staff in the future, we must share the technologies and enable better access to systems between education centres and NHS organisations. Further integration between sectors and the development of e-learning will support lifelong learning to keep practitioner skills up to date.

5.15 Work is underway to build health information management and information technology into curricula for all healthcare professionals, including the new curriculum for nurses. It is vital that a valued part of the basic skills for clinical staff is the ability to use IT to manage information effectively. Significant progress has been made; most courses include health informatics modules, IT training and use of the Internet for knowledge management. A multi-professional standard for clinical education called “Learning to Manage Health Information” has been agreed with all of the mainstream professional and regulatory bodies. Together with Department of Health colleagues, the NHS Information Authority programme “Ways of Working with Information” team will help to facilitate the further implementation of this standard. The standard applies equally to trainees and existing staff. The Academy of Medical Royal Colleges has recently held a conference to determine how best to implement Learning to Manage Health Information and the European Computer Driving Licence (ECDL).

5.16 ECDL is the international standard which will be used to help improve basic computer skills of all NHS staff. ECDL has been favourably evaluated and plans for its roll out are being developed. ECDL is complementary to section 5 of Learning to Manage Health Information and will also feature in Individual Learning Accounts for non-professional health occupations. The Department of Health (HR Directorate) has initiated a pilot programme together with the University for Industry (Ufi) to provide access to Learn direct training materials, including ECDL support materials, for non-professional staff in 13 NHS organisations. A key issue with ECDL is to manage its implementation in parallel with the development of local systems, and making use of relevant modules for different staff groups. Health informatics staff need to develop their professional skills too. The existing target is that 50% should either have, be studying for, or registered for, appropriate qualifications by March 2001.
5.17 The NHS Information Authority “Ways of Working with Information” programme will help NHS staff use and implement information management systems by:

- introducing programmes to develop the right skills in the right timescales for local communities and in the longer-term help to change the culture so that IM & T becomes a natural tool for healthcare professionals to use
- providing the right help through a network of regionally based Education and Development Advisers (EDAs) who will support local communities and LIS training co-ordinators in the development and implementation of their ETD plans
- setting up networks of information champions in each region who will be able to offer their expertise and experience to help develop LISs
- ensuring that every national programme is supported by appropriate, relevant and practical pre and post implementation products and services for use by local communities, starting with NSFs, procurement and information standards.

5.18 An important culture change initiative is commencing early in 2001 to help local health communities identify and deliver the information required for Clinical Governance. This will be facilitated through a partnership between the Information Policy Unit, Clinical Governance Support Team and the Ways of Working Programme. In addition an Academic Forum has been established to identify and work on key research issues and help to develop health informatics capabilities.
6

Supporting implementation

• Partnership
• Improving procurement and the market
• Exploiting the NHS knowledge base

6.1 NHS Plan taskforces are in place to support implementation of the NHS Plan. Information management and IT underpins much of the work of these taskforces at a national level and work is in hand to deliver what they require.

6.2 For information and IT the emphasis remains on achieving local implementation of the national information strategy in support of the NHS Plan. The key roles will be:

- **National Information Policy Board** - together with chairs of information partnership fora and members from key DH policy divisions, the National Information Policy Board (NIPB) ensures that the IM & T aspects of NHS Plan taskforces are met. It oversees and advises on plans for the development and implementation of the strategy. An executive team of the NIPB, with membership from the Information Policy Unit, NHS Information Authority, Regional Heads of Information and DH Communications Directorate, will take corporate responsibility for supporting the implementation programme, corporate communications and the evaluation and sharing of good practice.

- **Information Policy Unit** - leading policy and strategic work on information supporting national policy development, in particular implementation of the NHS Plan. Co-ordination of policy development within the NHS Plan Taskforces and within other policy branches of the Department of Health. Responsible for the overall co-ordination and commissioning of the work programme of the NHS Information Authority and for ensuring that Regional Offices and local health communities have performance agreements in place with robust performance management arrangements.
Regional Offices - ensuring national proposals are locally workable, highlight areas where further support would be beneficial in implementation, and communicate proposals to the field. Provide implementation support to NHS organisations locally, and manage performance in delivering the national strategy. Agree three-year performance agreements with local health communities for their Local Implementation Strategies. A range of performance measures will be developed to ensure the implementation of these agreements. One key requirement of such agreements will be the adoption of national standards.

NHS Information Authority - delivering and managing the national products and services that supports Information for Health and specifically those components which can only or best be done at a national level. The products and services delivered will support patient care, operational services, strategic initiatives and development and innovation.

6.3 The NHS Plan sets out a completely new way of delivering healthcare. At a local level success is totally dependent on change management. There must be an active managerial role in resolving the problems and providing the resource to successfully apply information and IT in healthcare. In this climate the NHS must take every opportunity to share best practice and demonstrate real innovation.

Partnership

6.4 To deliver a health service designed around the patient, local health and social care organisations need to work in partnership. The work on Local Implementation Strategies has established co-operative working amongst local teams who are now working on implementing the information strategy supported by corporate agreements and nationally agreed criteria, including targets and costed investment plans. Regional Offices are reviewing progress against the LIS traffic light system but in the longer term the information and IT national targets will form a key part of the overall national priorities. This means that local performance across the whole health community in implementing the information standards and infrastructure will be assessed and counted towards the ‘green’, ‘yellow’ or ‘red’ classification set out in the NHS Plan.

6.5 In addition to partnerships within the NHS and local health communities, we will develop new ways of working with other public services to ensure joined up service delivery to the citizen, with the private sector to develop an improved range of service delivery channels and with private healthcare providers to treat more NHS patients.
6.6 Delivering the objectives in the NHS Plan and Information for Health requires much improved relationships with the private sector. For too long the NHS has not been seen by suppliers as good to do business with. By making our objectives and targets clear, and backing this with substantial and sustained resources, we are sending a clear message that we want to work with the leading ICT suppliers. Both the provision and support of the national infrastructure services, and the development of a range of managed services through consortia working with local health communities, require a strong strategic relationship between the NHS and its private partners to be developed. At present the Computer Software and Services Association represents suppliers’ interests on the National Information Policy Board. However, it is clear that we need to strengthen the means for involving a wider range of ICT product and service providers.

6.7 We need to create an environment of innovation by encouraging new ideas, sharing good practice and managing the risks. The purpose of innovating through information and IT is to transform the business processes. For the NHS this translates to new clinical practices and information flows and processes. The step change required by the NHS Plan, the expectations of patients and the public, and the pace of technological change demand a new approach to innovation. Standardisation and mandation will be required for key services and in key areas but innovation must be encouraged too. The best ideas can then be shared, adopted and taken forward for the whole NHS.

6.8 Nationally we have already commissioned projects looking at applications for digital TV, and for the electronic transfer of prescriptions, and we are looking at potential uses of smart cards. We are aware of new services around the provision of personal health records and e-pharmacy services, and many other local initiatives. NHS knowledge and library services are actively investigating partnerships with The British Library, the Higher Education community and The People’s Network of public libraries to improve access to knowledge for NHS staff and the public alike. The aim of such projects is to test new technologies, concepts and ways of working.

6.9 Adopting innovation means adopting new ways of working. We will provide the opportunity for NHS and other public and private sector organisations to develop new ideas rapidly, in an assured NHS information systems environment that offers the opportunity of rapid deployment of successful innovation and hence rapid realisation of benefits. In these partnerships between private and public sector we will be adopting the incubator approach described by the Cabinet Office in their report “Electronic Government Services for the 21st Century.”
Improving procurement and the market

6.10 We are taking forward the conclusions of the NHS IM&T procurement review published in May 2000. In new and developing areas – such as appointment booking services, the electronic transfer of prescriptions or e-pharmacy services - our approach will be to develop understanding of requirements and the practical implementation issues through incubator programmes and by piloting through local projects. The learning from these will shape the requirements for later development and subsequent national implementation. For example we are developing a Strategic Outline Case for electronic booking systems building on the learning from pilots. This will help determine the preferred national solution.

6.11 Within more mature areas – such as hospital electronic patient record systems, where significant change management is required at a local level - the strategy will be to move forwards through local initiatives. We will focus on the common requirements and solutions that are evident from region-wide and national assessments, and will also seek to reduce the number and length of different procurement exercises. By undertaking joint procurements, we will create framework arrangements that can be used by sets of Trusts or, preferably, health communities, who may be at earlier stages in the implementation cycle. The work of the South West regional acute EPR procurement is an example of such an approach. It is clear that, with proper arrangements for project support, the benefits of consortia working are becoming accepted. Typically, a prime contractor will be responsible for overall delivery, working with a range of system and service suppliers. Based on such practical experience, we will support the development of specifications and evaluations to enable lists of such systems and service suppliers to be maintained nationally. In these more mature areas, projects must conform to agreed national and international standards to ensure that the selected products and services can interwork and be quickly implemented throughout the NHS.

6.12 In more established areas where there is a range of sophisticated products and services, we will use standard catalogues for products - such as hardware, core office systems software etc - and implement common national solutions in areas such as financial services, payroll and human resource management. The NHS Purchasing and Supply Agency are working with the Office of Government Commerce to develop the NHS-Cat catalogue. This will be a key resource to help the quick and efficient procurement of commodity items, while the national payroll/HR project is working to procure and implement a national payroll service for the NHS.
6.13 In all areas we are ensuring that we learn from the procurement experiences across government in line with the recommendations of the report “Successful IT – Modernising Government in Action”, a review of major government IT projects. This involves the development of Strategic Outline Cases for major investments as well as adopting a process of independent gateway reviews for key projects.

**Exploiting the NHS knowledge base**

6.14 The NHS is a brand name that is recognised internationally. The quantity, quality, and hence value of the information and knowledge assets associated with that brand, should be carefully used for the benefit of the patients of the NHS and also across wider global healthcare markets. Patients and staff will benefit from an open and inclusive knowledge base and learning network. There will need to be a transparency in developing the content for NHS branded information and systems to clearly demonstrate our objectivity. While there are major opportunities in exploiting NHS knowledge resources, we will need to ensure that the values of the brand are not put at risk through inappropriate partnerships.
7 Delivering the information core

- Connecting NHS staff
- Delivering information – Information Services
- Delivering information – Electronic Records and Booking
- Delivering information – National Applications
- Local planning and preparation

7.1 Much clearer communication with the service and the public is needed on expectations, targets and outcomes. This also calls for more focused control over an information and IT work programme that is managed according to agreed priorities. This final section contains details of the key targets to be achieved over the next four years, in order to meet the commitments contained in the NHS Plan in relation to information systems. These should be seen as “latest dates” and local plans should aim to meet these targets as soon as possible.

7.2 The targets do not undermine the value of the existing or proposed Local Implementation Strategies (LISs) work that health communities are already undertaking. The overall direction of travel provided by Information for Health is reinforced by the NHS Plan. The new emphasis is on realigning priorities and increasing the pace of delivery to ensure we have, for example, electronic booking of appointments, NHS staff connected to NHSnet and patients able to access their own medical records more quickly than envisaged in 1998.

7.3 The process of updating LISs and their associated implementation plans will need to reflect these targets and ensure that where there is scope for local options, the LIS supports the local health and healthcare service priorities as set out in the local Health Improvement Programme. LISs and related local investment plans will need to be re-calibrated to address the amended timetable and take into account the additional resources being made available. LIS communities are required to provide these updates by 31 March 2001. They will be subject to a process of local and national evaluation as with the full LIS.
7.4 From the evaluation of full LIS's in summer 2000, there are two common areas for improvement, namely the need for much greater involvement of clinical staff in the planning and implementation process, and more innovative thinking around the development of cross-cutting health informatics services. Improvements in both these areas are expected, and will be closely monitored as part of the 2001 LIS evaluation process.

7.5 The performance agreement between Regional Offices and local health communities will ensure that local plans are realistic and sufficiently detailed to allow progress to be monitored against all targets during the implementation period.

**Stage 1: Connecting NHS staff**

7.6 The aim of these accelerated targets is to provide initial desktop access for all relevant NHS Trust staff to NHSnet and the Internet. The working definition for desktop access is based around the provision of a core set of NHS tools:

- E-mail
- web browser
- directory services including NHS National Address Book and user authentication services.

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<tr>
<th>National Percentages by Date</th>
<th>31/03/01</th>
<th>31/03/02</th>
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<th>31/03/04</th>
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<tr>
<td>Target for all NHS Staff</td>
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<tr>
<td>Desktop access to basic e-mail, browsing and directory services for <strong>all</strong> clinical and support staff in NHS Trusts</td>
<td>25</td>
<td>100</td>
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<tr>
<td>Provide remaining NHS staff with access to the above</td>
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<td>100</td>
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<tr>
<td>Submit Address Books and produce interim centrally managed NHS Address Book</td>
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<td>100</td>
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<tr>
<td>Access to X500 conformant NHS Address Book directory for all connected staff</td>
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7.7 To enable implementation the following central actions will be completed:

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<tr>
<th>Date</th>
<th>Action</th>
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<tr>
<td>November 2000</td>
<td>Formal adoption of e-GIF conformant standards including those for E-mail, browser software.</td>
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<tr>
<td>March 2001</td>
<td>Publish migration plan for existing systems - e.g. E-mail messaging - to move to new standards.</td>
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<tr>
<td>June 2001</td>
<td>Publish policy on use of proprietary office systems software and their conformance to e-GIF standards and NHS requirements. Simultaneously guidance on procurement arrangements will be published.</td>
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<tr>
<td>March 2003</td>
<td>Complete migration to new standards for all NHS users.</td>
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7.8 These basic tools will enable NHS staff to use:

- NHS-wide and local web servers to access guidance, procedures, protocols and other services e.g. through NeLH and e-recruitment, e-learning and updating their own personal records
- E-mail systems to communicate with other NHS staff and non-NHS organisations e.g. Local Authority Social Services.

7.9 Access must be provided conveniently within the normal place of work. It is not possible to dictate centrally what this means; it will be different for different groups of staff. Only local organisations can decide on the exact requirements for their staff and many are well down the road of doing so. A medical secretary will almost certainly require a dedicated desktop PC including other facilities, especially word processing. A junior doctor is likely to need access in a number of locations such as wards, clinics and offices, depending on his/her “range”. A community nurse may need a hand-held device with mobile links. In all cases the geographical distribution of service provision will be a key factor and local plans will be reflected in LISs.

7.10 Local communities and individual organisations may prioritise the implementation by different staff groups, but LIS plans for the 2001 review must address the overall target of having network access for all NHS staff by 31 March 2003. These implementation arrangements must include plans to ensure all staff have adequate training.
7.11 The following specific targets remain for general practice:

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<tr>
<td>GP Practices with NHSnet Connection</td>
<td></td>
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<tr>
<td>GP Practices with LANs connected to NHSnet e.g. desktop access</td>
<td></td>
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</tr>
</tbody>
</table>

7.12 Decisions on the targets for the connection of other primary care practitioners and social care professionals will be made based on the Strategic Outline Case for the re-procurement of NHS networking services to be completed by March 2001. For example, to meet the aim of having routine electronic prescribing in the community by 2004 will require access to networking services for pharmacists.

7.13 In addition, comprehensive arrangements for sharing information between NHS and Local Authority Social Services will need to be completely operational by March 2005. The following products to be delivered by 31 January 2001 will facilitate cross sector working:

- a toolkit to develop local protocols for sharing information (live on DH website from 6 November 2000)
- NHSnet Code of Connection to include Social Services
- national cryptography support services strategy.
Stage 2A: Delivering Information - Information Services

7.14 The developments on NHS Direct Online, nhs.uk and the National electronic Library for Health have already been outlined in the box on page 24.

<table>
<thead>
<tr>
<th>National Percentages by Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>31/03/01</td>
</tr>
<tr>
<td>Online public information on availability of NHS services (1)</td>
</tr>
</tbody>
</table>

Notes:

(1) The initial service to support the provision of information to the public is based on a core set of information (http://www.doh.gov.uk/nhsexipu/whatnew/eguide.html) that will be extended over time to meet other NHS Plan commitments.

Stage 2B: Delivering Information - Electronic Records and Booking

7.15 The original Information for Health targets for full Electronic Patient Records and 24 hour emergency Electronic Health Records remain unchanged. There are new requirements for providing booked appointments for patients. The priorities for basic connectivity detailed above are an essential platform to achieve these targets.
### National Percentages by Date

<table>
<thead>
<tr>
<th></th>
<th>31/03/01</th>
<th>31/03/02</th>
<th>31/03/03</th>
<th>31/03/04</th>
<th>31/03/05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute EPR Level 3 (1)</td>
<td>10</td>
<td>35</td>
<td>75</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Integrated Primary and Community EPR (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Care EHR (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>All bookings from GPs to outpatients or from outpatients to daycase or inpatients to be made electronically (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Electronic transfer of all biochemistry, haematology and microbiology test results (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60 (7)</td>
</tr>
<tr>
<td>Electronic transfer of all radiology reports and discharge summaries between hospital and GPs (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>All NHS Pathology laboratories to be connected to NHSnet (6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>All Pathology results sent to GPs to contain NHS Number</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

### Notes:

1. **Acute EPR Level 3** - this target will be described in a clearer way along the lines of: “X number of acute trusts in each region must have introduced an EPR system capable of the following functionality - A, B, C - by the given deadline”. The NHSIA have published consultation documents on the definition of EPR level 3 in November 2000; they are available at: [http://www.nhsia.nhs.uk/erdip/](http://www.nhsia.nhs.uk/erdip/)

2. **Integrated primary and community EPR** - policy decisions on architecture and content will be published by the Information Policy Unit in September 2001 following an assessment of the interim outcomes of the ERDIP demonstrators.

3. **Emergency care EHR** - there will be a national solution for the emergency care EHR. A policy statement on this will be published by the Information Policy Unit in September 2001 following an assessment of the interim outcomes of the relevant ERDIP demonstrators.

4. **A national Strategic Outline Case** - to be published by the National Patient Access Team in March 2001 - will identify how this is to be achieved and detailed implementation guidance for the NHS will follow.
An impact assessment of HL7 version 3 and its applicability to clinical communications across the NHS will be undertaken by the NHS IIA, with a report published in March 2001.

Connection to NHSnet for basic access - e-mail and web browsing.

60% by 31 March 2002, 100% by 31 December 2002

Stage 2C: Delivering Information - National Applications

7.16 Providing access to the first generation of national applications for all connected staff will include:

<table>
<thead>
<tr>
<th>National Percentages by Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>31/03/01</td>
</tr>
<tr>
<td>All electronic communications about patients to include their NHS Number verified by NSTS (1)</td>
</tr>
<tr>
<td>Online access to national codes for GPs and consultants</td>
</tr>
<tr>
<td>National NHS payroll and integrated HR system (2)</td>
</tr>
<tr>
<td>All outpatient datasets to be transmitted through NWCS (3)</td>
</tr>
</tbody>
</table>

Notes:

(1) This applies to all authorised NHS staff dealing face-to-face with patients or their records, care plans diagnostic tests and reporting of tests.

(2) The implementation of an integrated HR and payroll system will be highly dependent on the effective completion of basic connectivity and robust authentication procedures described earlier.

(3) The aim is that all providers should submit outpatient attendance datasets via the NWCS from 1 October 2001. Additional datasets to be transferred through NWCS will be considered, with waiting lists as a priority.
Stage 3: Local planning and preparation

7.17 In addition to the ‘hard deliverables’ concerned with completing “network NHS” there are processes and preparatory work to be completed:

<table>
<thead>
<tr>
<th>National Percentages by Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>31/03/01</td>
</tr>
<tr>
<td>LIS update (1)</td>
</tr>
<tr>
<td>Integration of information strategies to support NSF topics into LIS development within 6 months of the publication of the relevant strategy (2)</td>
</tr>
<tr>
<td>Application of Working in Partnership toolkit (3)</td>
</tr>
<tr>
<td>Production of local education, training and development strategies</td>
</tr>
</tbody>
</table>

Notes:

(1) Detailed guidance on scope of update is being issued by the Information Policy Unit in conjunction with this document.

(2) The LIS update must include plans to support the implementation of the Cancer Information Strategy and the NHS Cancer Plan. The target dates for publication of the remaining information strategies are mental health – January 2001; coronary heart disease and older people – March 2001; and Diabetes – with the National Service Framework.

(3) Each LIS community will demonstrate how it is developing collaborative working through use of the toolkit, online version available at http://www.doh.gov.uk/nhsexipu/pspp/partner.htm