

The Spine

What is the Spine?

The Spine is part of the NHS Care Records Service, which is creating an electronic care record for all England's 50 million plus patients.

Each patient's electronic NHS Care Record comprises full local records, held on computer where treatment is provided (such as the GP surgery or hospital) and a summary record of important details both demographic (eg: name, address) and medical (eg, allergies, medication, test results) held on the Spine.

The Spine is a national, central database where summary patient records are stored. When fully implemented, local records will automatically upload important information to the summary patient record on the Spine.

Why have a Spine?

Once the NHS Care Records Service is fully implemented, having each patient's summary record stored on the Spine will mean that wherever and whenever a patient seeks care from the NHS in England, those treating them will have secure access to summary information to assist with diagnosis and care. The summary record will also point clinicians to where full local records are held. This should provide safer, more joined up care.

What will the Spine do?

The Spine will:

- store personal characteristics of patients, such as demographic information
- store summarised clinical information which may be important for the patient's future treatment and care, such as allergies, visits to A&E and adverse reactions to drugs
- ensure the security of systems required to restrict access to the national and local systems
- provide a secondary uses service, using anonymised data for business reports and statistics for research and planning purposes
- interface with all the local IT systems within the National Programme.

How does the Spine work?

The Spine acts like a single, big electronic telephone exchange. It takes 'calls' and puts them through to the right section for 'callers' to get the information they require.

The calls received by the Spine will be requests for patient information and other data. Only authorised NHS staff who are caring for the patient will be able to request and access information on the Spine. To use the system those staff must also have been issued with smartcard and PIN number by their NHS trust.

A messaging system directs requests for patient details to the various parts of the Spine where the information is held. The messaging system then sends back the details to the individual callers.

The Spine also supports two other key services being introduced by the National Programme for IT in the NHS to improve patient care and the working lives of frontline staff – Choose and Book and the Electronic Transmission of Prescriptions.

What are the different parts of the Spine and what do they do?

- **Personal Demographics Service**

The Personal Demographics Service (PDS) is the central and single source for patient demographic information, such as NHS number, name, address and date of birth. It can also contain a much wider range of information to allow for circumstances where a patient may be residing with a relative during recuperation, enabling important correspondence to be sent to the correct address.

- **Personal Spine Information Service**

The Personal Spine Information Service (PSIS) is the central database containing clinical records for each NHS patient. The PSIS record provides an up to date summary of information and key events in a patient's life and care – drug allergies, operations, conditions, medication history – as well as details of contacts with care providers.

When current treatment generates essential information for continuing care, such as discharge information or notes of visit to a walk-in centre, specified summary information is added to the PSIS record. In this way the person-based PSIS record gives information to, and receives it from, many local systems as the patient experiences healthcare.

- **Transaction Messaging Service**

The Transaction Messaging Service is a message transfer service to allow clinical messages from NHS CRS users to be securely routed to the service they are requesting and to manage the response to that request.

Depending on the type of message (eg relating to Choose and Book or the Personal Demographics Service), the Transaction Messaging Service identifies where the message needs to be sent.

- **Secondary Uses Service**

The Secondary Uses Service (SUS) will protect patient confidentiality and will provide timely, anonymous patient data and other information for purposes other than direct clinical care. This includes looking at public health trends,

analysing the effectiveness of treatments and planning the number of beds and staff the NHS needs.

SUS will support a number of national initiatives, the first being Payment by Results, a key government initiative which is changing the way money flows through the NHS.

- **Clinical Spine Application**

The web-based Clinical Spine Application will provide healthcare professionals with access to the NHS CRS to gain controlled access to patient information provided by the PDS and the PSIS.

It enables clinicians and other staff to enter new information relating to a patient's healthcare. CSA will be used by staff who do not have access to local NHS CRS compliant systems to send and receive information to and from the Spine.

- **Spine Directory Service**

Most people turn to a 'directory' to look for something – usually information. The Spine Directory Service is, in that respect, no different.

Within the Spine, it is the main information source to find or check for something.

It comprises the Spine User Directory and Spine Accredited Systems and Services, which ensure that transactions/messages are only processed from authorised users and systems. It is therefore a key component of the security of the Spine.

- **Access Control Framework**

Access to NHS CRS data (held by the Personal Spine Information Service) is controlled by the Access Control Framework which registers and authenticates all users.

It will provide a single log-in and a record of each healthcare professional accessing a patient's NHS Care Record. All information will be provided on a need-to-know basis and based on a user's role and 'legitimate relationship' with the patient.

It will store details of those relationships between healthcare professionals and patients, as well as patient preferences on information sharing (eg: whether certain sensitive information is restricted from routine sharing).

How will the Spine support Choose and Book?

The new electronic booking service, Choose and Book allows GPs and other primary care staff to make initial hospital or clinic outpatient appointments at a convenient time, date and place for the patient.

GPs will access the NHS CRS via the Spine to retrieve and update patient records as part of the booking process.

Choose and Book completely changes the way the traditional paper-based referral system currently works. It will remove the lengthy wait (often weeks) between visiting the GP and receiving an appointment from a hospital.

By the end of 2005, patients in England will be able to choose and book appointments with one of four or five hospitals (or other healthcare providers) commissioned by their primary care trust.

How will the Spine support the Electronic Transmission of Prescriptions (ETP)?

ETP will allow prescriptions generated by GPs to be transferred electronically from their surgeries to pharmacies, improving patient information, saving patients time and giving them more choice in their healthcare.

GPs will send prescriptions to the Spine to make them available for dispensing. At the same time, prescribed medication details are added to patients' electronic records held by the NHS CRS.

The dispenser will obtain the electronic prescription from the spine via the pharmacy's computer system.

Once the pharmacist has dispensed the medicine or appliance in the usual way, a message will be sent back to the Spine, recording what has been dispensed to the patient.

What are National Application Service Providers (NASPs)?

The Spine is being delivered by BT, the National Application Service Provider for the NHS Care Records Service. NASPs are responsible for purchasing and implementing IT systems common to all NHS users nationally.

BT is also the NASP for N3, the new national network of IT infrastructure and broadband connectivity for the NHS. Atos Origin is the NASP for Choose and Book.

What are Local Service Providers (LSPs)?

LSPs are delivering IT systems and services on a local level and ensuring they connect to the Spine. There is one LSP for each of the National Programme's five clusters (geographic groupings of strategic health authorities):

London – Capital Care Alliance (BT)

North East - Accenture

Southern – The Fujitsu Alliance

Eastern - Accenture

North West & West Midlands – CSC Alliance