A Paperless NHS
The Medical Records Scanning Challenge

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A Paperless NHS: The Medical Records Scanning Challenge

MISL White Paper

Introduction

On 16th January 2013 the Secretary of State for Health, Jeremy Hunt MP made an audacious challenge for the NHS to be “Paperless by 2018”

In his speech Jeremy Hunt stated:

_“The NHS cannot be the last man standing as the rest of the economy embraces the technology revolution.”_

“It is crazy that paramedics cannot access a full medical history of someone they are picking up in an emergency - and that GPs and hospitals still struggle to share digital records.”_

_“Previous attempts to crack this became a top down project akin to building an aircraft carrier. We need to learn those lessons - and in particular avoid the pitfalls of a hugely complex, centrally specified approach.”_

“Only with world class information systems will the NHS deliver world class care.”

The key drivers behind this challenge are to improve care provision and communication through universal transferring of information about patients to the relevant services throughout their healthcare journey. This move will enable GP’s, Hospitals, Ambulance services, community and mental healthcare organisations to work in a coordinated way to improve the nation’s health.

Over a year later the shock waves of Jeremy Hunt’s challenge are still rippling out across the NHS because of the tremendous task that it entails. In this white paper we are going to explore the broader context of the current movement to digitise health records, put it in context and look at different strategies for getting the job done.

Reasons for going paperless

The motivations behind Jeremy Hunt’s challenge were founded on solid benefits. Electronic medical records are safer, more secure and, if organised properly, allow better information sharing and improved clinical care provision.

The reasons for these benefits are many. Paper medical records, although in use since the birth of the NHS have severe limitations. There is only one version of the record and therefore it can only be viewed by one person at a time. If a patient moves from GP based care to a hospital, around to different departments in a hospital, or for treatment at further hospitals, the paper record must move with them.
Paper is also at risk of damage or loss because, as a physical object, a medical record file may be misplaced or stolen when in general circulation. Also the organisation of paperwork within a medical record relies on multiple care workers, clinicians and administrators to correctly file the information in the right order, for the correct patient and in the correct file section.

An electronic patient record is secure (with security down to individual named users) and safe because information is backed up in multiple locations. Any new information is automatically stored for the correct patient and in the correct order. Also, as the record is electronic, it can be accessed in multiple locations simultaneously. Information can be shared across multiple teams, specialties, and even healthcare organisations.

What has happened since January 2013?

Well, in simple terms, quite a lot. Many Acute Hospital Trusts and some Clinical Commissioning Groups have started the process of digital scanning of records. Some are quite far into the process or have almost completed the task.

Of all the Acute Trusts about 40% have either begun the process or are actively procuring suppliers. There have been a wide variety of approaches with varying degrees of success.

Some Trusts have scanned their records in house, some have outsourced and some have done a combination of the two. The key to understanding the relative merits of the different options is to look at the wider information landscape.

The NHS Information Landscape in Acute Trusts

Not too long ago the main (and in some cases the only) electronic system in NHS Acute Trusts was the Patient Administration System (PAS). The PAS was hospital or Trust specific and held the central record or demographics of all patients that attended, or were due to attend, the hospital for treatment (either as an Inpatient or an Outpatient or in A&E).

The PAS also manages the location of each patient’s medical record files and is used to book appointments or procedures.

Pretty quickly more systems were added to the PAS such as:

- Medical imagery management systems to manage X-Ray and other medical images for patients
- Pathology systems to manage the processing of pathology results data
- Bespoke systems to handle specific information challenges within specialties
- A&E management systems
- The ‘Choose and Book’ system for setting up patient appointments
- Business objects (or other tools) for reporting on activity within the Trust’s systems
- Digital dictation systems
- And many more…
Already the information landscape was getting complex. Into the melee then arrived Electronic Patient Record (EPR) systems such as Cerner, Allscripts, Meditech, InterSystems, Epic and others.

EPR systems allow Trusts to have a centralised Electronic patient record that aggregates the information from other, already installed, systems. Depending on the system they also replace some of the legacy systems already in place.

EPR also allows a certain level of automated integration with medical machinery, such as some dialysis machines or anaesthetic management systems, to automatically ingest live feed information into the centralised medical record.

Clinicians can use EPR to record clinical notes. The systems can be used to generate letters to patients, book appointments, schedule procedures and any number of functions to manage the patient information and provide continuity of care.

*The problem is that most EPR systems either don’t manage paper based information (historic or currently generated) or they don’t manage it particularly well. So EPR is certainly the core of the solution for Trusts but it doesn’t solve the problem of what to do with all the paper.*

The Paper Problem

The ‘Elephant in the Room’ (to coin a phrase) with electronic patient records is how to make all the historic patient information available in the EPR system in a usable and effective way.

The case for EDRMS

Because EPR systems don’t handle the paper records (in general) particularly well there is a need for another system to be procured by Trusts to deal with that part of the process. These systems are called Enterprise Document and Records Management Systems or EDRMS. Just like EPR there are many of these to choose from such as Opentext, Kainos, Folding Space, Ascribe, OnBase, WinDIP, C-Cube and others.

EDRMS systems should be able to manage the process for scanning in the medical records (including recording an audit trail for the process) and also would then integrate with the EPR so that scanned documentation can be viewed alongside all the other electronic patient information, in sequence and in context.

These systems might also be able to capture incoming information into the Trust by providing:

- Digital mail room functionality
- Tablet or PC based electronic forms
- The ability to scan from departmental scanners or multi-functional devices
- The ability to attach incoming emails and attachments to medical records
- Incoming fax servers to route faxes to the correct records
- Peer review and commentary functions to refer information to clinical colleagues for review and action
- Policy and procedures management
With these systems therefore the way is open for Trusts to scan in historic and ongoing paperwork into the EPR via the EDRMS integration.

**Scanning of medical records**

Historical medical records contain, in some cases, paperwork from over 30 years of treatment which has been well used, is of varying quality and has sometimes been filed haphazardly over the years.

One of the key benefits to scanning in the historic medical records (aside from the key advantages to having the information in an electronic form) is that a Trust will no longer need to expend resources in moving the paper records about.

Add to this the space that they take up in a Hospital medical records Library that could, after digitisation is complete, be released for alternate usage.

In order to realise those benefits the paperwork will need to be destroyed after it is scanned making the scanned version the “core, official record”. Because of the responsibility Trusts have to maintain patient records for statutory retention periods the have to be sure, from a legal perspective, that the scanned version will stand up in a court of law.

The way to do this is to scan the records to the BS10008:2009 standard for the legal admissibility and evidential weight of scanned documentation. The BS10008 standard is exacting. It details the following key requirements (not an exhaustive list):

- Every piece of paper must be scanned on both sides irrespective of whether there is content on the reverse of a page
- The scanned record must be a true representation of the original both in terms of content (information) represented but also in terms of the sequence of pages in the record. This means that the paper record cannot be reordered to allow for misfiling or to order information chronologically
- Every page must be 100% checked against the original at the point of scanning.
- There must be intensive quality assurance checks of the scanned records both by the scanning team (if outsourced) but also by an independent Trust team
- There must be indicators scanned in the file (in the form of preceding indicator sheets) to advise if following pages are of poor quality, are carbon copies, photocopies etc.
- A complete audit trail must be recorded of the movement of each medical record file through the entire digitisation process.

The result of all the above requirements (and the others in the standard) is that the scanning process is very specialised and resource intensive. Scanning must be done on manual feed scanners and the entire process must be adequately resourced and managed.

Also not to be underestimated is the time it takes for members of a scanning team to be trained and to work up to a high capacity. From a standing start this can take up to 4 months. This needs to be factored in if a Trust is considering repurposing staff from other areas into a scanning function.
Medical Record Scanning Strategies

If you are from a NHS Trust that has not yet started the process of scanning your medical records or selecting an EDRMS vendor to go with your EPR. Or even if you have decided to change your EPR as a first stage in the process there is good news.

*The good news is that there are many Trusts that have been through the process already and therefore there have been many lessons learned.*

There are many ways in which the challenge of scanning in paper records has been approached. With the volumes involved however it is really easy to go down the wrong path for your Trust by being blinded by the scale of the task.

Let’s break that down, taking a smaller Trust as an example.

- If a Trust has 150,000 medical record files relating to 100,000 patients (because many patients will have more than one file)
- If each file has an average 300 pages then that gives a total of 45m pages
- Because each page has to be scanned double sided that means that there would be 90m images generated for that Trust.
- If all those pages were to be scanned in as quickly as possible then it would take a team of 60 experienced workers to scan in all that paperwork in 1 year using 10 scanners and working 2 shifts per day, 5 days a week.

*Put it another way, if you stacked all that paperwork together in a straight line on the ground it would stretch for over 2.7 miles!* 

That’s a lot of paperwork and this is only for a smaller Trust.

**So what is the best way to approach the challenge?**

Well, as ever with these questions, there is no ‘right’ answer. It depends on the specific requirements of the Trust.

In the context of scanning in medical records there needs to be consideration paid to the profile of the historic medical records in circulation and also to the process for scanning paper from day one of the project go live onwards.

Historic records can be viewed in the context of how often they are accessed. Are all the records accessed regularly or are there a group of patients that can be termed as active? If you focus on the active records first would you quickly get to a point where the majority of records that are needed in the Hospital are in a digital form?

If you adopted that approach would there be a benefit in scanning the older records where patients haven’t attended the hospital in (say) over 2 years? Or would it be best to keep them in storage, maybe offsite, and call them back to be scanned if they are needed?
Should the scanning be done in house, by retraining an existing team or getting in an external contractor? Or should the scanning be sent off-site to a specialist firm to be processed and then sent back electronically?

Should the project roll out gradually with most clinical work being carried out by accessing scanned digital records accompanied by some paper records that haven’t yet been scanned (the hybrid approach)? Or should everything be scanned first with huge effort and then no paper records ever entering the clinical process from go live onwards?

Should outpatient records be scanned before the clinic or afterwards?

Should inpatient records be scanned ongoing while the patient is in hospital or collected up and scanned as a group at discharge?

The list of considerations is lengthy.

**A balanced approach**

Regardless of which options get selected, the best advice is to pause and spend the time at the beginning of the process thinking the implications of the project through. For NHS Trusts it is no cliché to say that business critical equals life critical.

Minimising or eliminating clinical risk needs to be the main driver in the decision making process. After that the process needs to be designed with a focus on managing the paper that is generated ongoing efficiently as well as actively reducing the paper that will be generated. For this reason you will need to engage with the EDRMS suppliers early in the process to work out what is possible. Their common functionality will help define your process.

If this is the focus then the spectre of setting up a scanning department that can never be reduced in size can be eliminated.

After the day forward paperwork issue is resolved it is possible to conduct time and motion studies to understand the current flow of paper through your organisation to zero in on the most urgent historic record scanning need. You can then break down the task into focussing on specific areas such as active records first. Better than expending lots of effort at the beginning of the project scanning in the records of patients that will not return to the hospital for treatment for 2 years or, worse than that, are deceased.

Once the best approach has been defined then the rest is relatively easy. Do you have the space to carry out the task on Trust property? Do you have the available team (remembering that there will still likely be the need to move paper records about the Trust and also supply them for the scanning team)?

Answering all these questions, and more, will lead to a decision about whether to outsource or not. It will also define where the scanning can/could take place.

There are good consultants in the industry that provide support in this initial planning stage and some scanning and EDRMS suppliers will also be happy to help.
If you can draw upon the experiences of other Trusts that have already been through this process together with the support of scanning and systems suppliers to undertake a thorough planning process; you should be able to move to a paperless or at least a ‘paper-lite’ environment smoothly.

If there is one message to be taken from this white paper let it be the following: Consult widely with other Trusts, ask for advice and support and take the time to plan the entire process before procuring for services.
MISL Services and Experience

The MISL Offering

MISL Limited is a full service document scanning and document management company. Founded in 1980 we have 34 years’ experience handling and processing documentation for our customers. Over 70% of MISL’s customers by volume are in the public sector and over 60% of our revenue is derived from providing services to NHS customers.

MISL provides a complete service from solution design to onsite or offsite scanning services and EDRMS software. We operate from 2 buildings in Hoddesdon, Hertfordshire and employ over 100 staff solely engaged with document scanning service provision.

Our experienced management team are located at the head office together with our core staff of 40 document preparation, scanning, indexing and QA operators. We operate a storage facility on the same site and are fully certified to the BS15713:2009 standard for the secure destruction of scanned documentation.

MISL is also certified to BS EN ISO 9001:2008 for quality and is registered as a Data Controller under the Data Protection Act 1998.

Our second premises is dedicated to our largest NHS customer, Royal Free Hampstead NHS Foundation Trust. In that premises MISL has a full time team of over 60 staff engaged in scanning all of the medical records for the Trust over a 4 year period including legacy medical records and all paperwork generated by the Trust on a daily basis.

MISL is pleased to be able to offer a range of services to NHS organisations and is currently working with both Acute Trusts and Clinical Commissioning Groups towards digitising their records. The medical record scanning process employed by MISL is based around Kodak scanner hardware and software and is carried out to the BS10008:2009 standard for the legal admissibility and evidential weight of scanned documentation.

MISL’s premises are secure, all staff are vetted and our information security hardware and procedures are state of the art enabling us to be selected for the scanning of sensitive information by NHS organisations, Police Authorities in the UK and global financial organisations.

MISL is at an exciting point in our evolution as we have recently entered into relationships with some EDRMS system suppliers enabling us, for the first time, to provide the complete service in relation to document scanning and access to digital information for our customers.

In addition to the projects currently underway or in train MISL is working with some selected other Trusts with a view to providing scanning services both at the Trusts’ sites and back at our Hoddesdon base.
MISL’s Services

MISL offers a broad range of services for our customers as follows:

- Document management consultancy and advice
- Project planning and technology selection
- High volume document scanning
- Large format document scanning (up to A0)
- Manual indexing of document and file metadata
- Uploading of data to any EDRMS or document management system
- Quality assurance to the BS10008:2009 standard
- Document storage services
- Secure destruction to the BS15713:2009 standard
- EDRMS systems either installed on our customers’ premises or hosed via a secure cloud solution
- High volume microfilm or microfiche scanning
- Automated data extraction and indexing using the Kofax software product suite
- Secure data delivery via AES 256 encrypted external hard drives or direct line connections
- Dedicated, GPS tracked and unmarked delivery vehicles

Whatever your requirements for document management or document scanning MISL has the expertise and capability to deliver a high quality and responsive service.

MISL prides itself on offering the best and most cost effective approach to your scanning needs and as such is happy to discuss your project ideas and their implications for your organisation. MISL's advice is provided without obligation as our main driver is to support you towards the best outcome for your project. At the end of the day; “It’s your documents, but digital”

Get in touch

If you would like to discuss your project or find out more about how we can help then contact should be made in the first instance to Steven Clarke; MISL’s Sales and Marketing Director.

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