Every acute trust in the UK will recognise the issues that Worcestershire Acute Hospitals NHS Trust had with paper-based records:

- Up to 7% of records were unavailable (lost, misfiled, or hoarded by staff).
- Backlogs of clinical note filing meant that records weren’t reliably updated.
- Notes weren’t consistently filed in the correct place within the patient record.
- Multi-site sharing of one unified record resulted in delays in record delivery.

Impact on Patient Care

These issues affected patient care across the three Acute hospital sites in the trust and five community Health and Care Trust sites. The knock-on effect for patients included:

- Clinical decisions being made without clinical information.
- Cancelled appointments or patients seen without notes.

T”m called to an emergency surgery for a man just admitted with a ruptured aneurysm. We have to act now, and we do. Previously that meant doing our best without context. This time, having his name, we instantly access his records. With his medical history revealed, we adjust our plan. These things make a difference to quality of care.

It’s like flying a plane with radar instead of without.”

– Dr. Mike McCabe, Consultant Anaesthetist

Other issues

Additionally, there were health and safety, security and cost issues, including:

- Significant human resource spent tracking, storing, moving and chasing records.
- Risk of theft of records left in unsecured places.
- Safety risks in a heavily overcrowded case note library.
- High transport costs.
- No audit capabilities.
- Overspend on the health records service budget.

“Patients receive better treatment when their records are readily available — it’s that simple. For us, the Xerox records management team are our colleagues in patient care. They always put our patients first.”

– Dr. Steve Graystone, Associate Medical Director, Patient Safety
Worcestershire Acute Hospitals NHS Trust
The Journey So Far

In the UK context, the trust was relatively early with its plans to move to electronic health records.

“It felt like we faced a largely uncharted journey,” says Heather Warner, Business Change and Records Lead for the trust. “So we wanted a long-term partner that would share our vision and work with us to implement a two-phase approach to solving our long-term records issues. Xerox had the competence and approach we were looking for to move us towards paperless working.”

Phase 1: Viewing Electronically

The trust distinguishes between electronic viewing and doing. The first part of its journey focused exclusively on viewing. This meant providing digital access to paper records, with little change to existing paper-based clinical data-capture processes.

Today, 100% of specialties (for clinics and admissions) are using scanned records, and more than 326,000 patient case note volumes — more than 81 million pages — have been scanned.

Authorised users have 24x7 access to electronic clinical records at the point of care delivery, and missing and unavailable records are a problem of the past. The time and cost to transport notes has been eliminated; and information security is now protected with IT access controls and audits.

How It Works

Clinicians write notes on paper forms, but these forms carry smart barcodes and are sent for scanning immediately after use in clinic or after ward discharge. Xerox runs four scanning centres for the trust, one in its central filing library and one on each acute hospital site.

Scanning of historical notes takes place in advance of scheduled activity — or on the same day for emergency activity. All of this scanning is on demand, based on triggers from the patient administration system (PAS).

Next Steps for Phase 1

Records are stored as image files in the Kainos Evolve electronic medical records (EMR) system. In the near future all of these images will be processed through optical character recognition, indexed, and bookmarked to identify clinically critical documents (such as operation notes, anaesthetic charts and history sheets). This smart indexing will transform searchability for staff.

Another step-change in usability is already under way with the piloting of the Evolve iPad interface, making mobile working a reality. The trust will soon be giving iPads to every consultant and all anaesthetists. Dr. Mike McCabe, Consultant Anaesthetist, explains the benefits:

“I move around constantly. The PC-based system for scanned notes made a big difference, especially in improving consultation with other specialists; but it

The Trust at a Glance

- Three main sites: Alexandra Hospital in Redditch, Kidderminster Hospital and Treatment Centre, and Worcestershire Royal Hospital in Worcester
- >550,000 people served, coming from Worcestershire, surrounding counties and further afield
- ~2,000 patients seen per day across A&E, emergency and planned admissions, and outpatients

“Every patient story, at every clinician’s fingertips, every time — that is our vision. Xerox shares this vision and is actively helping us get there.”

– Heather Warner, Business Change and Records Lead
still required me to find a free computer and log myself in. The iPad is the real revolution. I can review notes between surgeries in theatre or in corridor meetings with colleagues, in any location, at any time. It saves me hours a week and, more importantly, means that we are giving patients better care.”

Phases 2: Doing Electronically

“Clinicians have learned how to use the technology to view notes,” says Heather Warner. “Now they’re asking to move to the next phase, where they capture clinical notes electronically.”

The trust is in the planning stages for phase 2, which is all about capturing data and managing tasks electronically, rather than using pen, paper and post. This will be done through e-forms and iPad apps. The first process to be digitised will be the referral prioritisation process.

Lessons Learned

It is many years since Worcestershire Acute Hospitals NHS Trust first identified patient records management as a problem in desperate need of a solution. Today the trust has solved its initial challenges, and has new ambitions and objectives to achieve.

Along the way the trust has learned some important lessons.

Lesson 1: Walk Before You Run. Pace the Change

“For us it was the right decision not to try to adopt full electronic working straight away,” says Dr. Steve Graystone, Associate Medical Director, Patient Safety.

Why This Approach?

• The trust knew that change, especially when it involved technology, would be hard for many of its staff. Doing it in small steps offered the best chance of success.

• It would also solve the trust’s most urgent record management issues — space and availability — more quickly.

• And it would let the trust take advantage of new technology developments — always just round the corner — when planning the later phases of the journey.

“No more spending days looking high and low for a set of paper notes not tracked correctly (or sometimes not tracked at all). A quick electronic search for the relevant information will do it now.”

– Anne Matthissen, Senior Medical Secretary

“It’s a huge benefit that notes are accessible across all sites, and I find it a great privilege to be able to answer patient and colleague queries quickly and efficiently. The time I’m saving has also let me take on further duties.”

– Heather Long, Senior Medical Secretary
Lesson 2: Engage, Engage, Engage

“Everybody agrees that buy-in from clinicians is vital,” says Steve Graystone. “But you’ve actually got to get it, not just talk about it.”

How to do this? Heather Warner’s advice is: “Identify clinical leaders early on and tap into their operational knowledge, leadership and enthusiasm; but make sure that pilot areas also include resisters so that change plans are realistic.”

Reflecting on what worked and what didn’t, the trust offers the following guidance.

Advice for Acute Trusts

- Approach this as a business transformation project, not an IT project. Clinical champions need to take the lead.
- Executive-level clinicians must own and communicate the vision well before implementation.
- Don’t just hope the message is getting across; actively engage with clinical leaders and help them cascade the message effectively. Over-communicate and then communicate some more!
- Resistance is revealing, so listen to clinicians who prefer paper — they will often have good reasons. Work with system providers to ensure that the system meets those needs.
- Work closely with groups that are particularly interested in anywhere-anytime access to patients’ historical notes; for example, the anaesthetics team, which is also a large, relatively tech-savvy user group.
- Roll out by speciality and consider a later rollout for those specialties likely to find adoption more challenging, for example those that manage long term conditions.
- But remember that the first set of scanned notes may later be needed for any specialty, so everyone needs to be trained for at least occasional use from day one.
- Ensure that the project’s governance body and work streams all include user representatives.
- Draw up a formal readiness checklist for each speciality and department leader (clinical lead, nurse manager, administrative leader) to complete and sign.
- Design targeted training around the processes that each staff group or department will be using the system for, not based on a menu of system functionality.
- Ensure that everyone is properly trained and competent; no exceptions.
- Seek continual feedback. The trust’s smart indexing and iPad initiatives are a direct result of listening to user frustrations and asking Xerox to help in rolling out improvements to overcome them.

“No folders of notes to lose, and I can audit our practice in a fraction of the time. ICT is helping to make us make better clinicians — and I’ve saved a Brazilian forest.”

– Dr. Mike McCabe,
Consultant Anaesthetist
Lesson 3: Pilot and evaluate fully

“A specialty that may seem easy to pilot — perhaps small in size or with a standalone set of records — may not represent the system’s typical use very well and could hide important issues at evaluation,” says Heather Warner.

Pilot Lessons

- Remember to use a representative sample to test the change impact, benefits realisation and system usability.
- Continue to provide paper notes during the pilot, to avoid clinical risk.

“Had we followed this approach,” says Steve Graystone, “it would have revealed useful knowledge to help plan for go-live.”

Lesson 4: Work with Experts

“Xerox has been a constant support and a safe pair of hands,” says Heather Warner. “They have got us out of tight spots and they really do put our patients first. I’ve worked with a range of Xerox staff from directors to scanning operators, and have trusted them all to represent the trust’s interests.

“If we were to start again, we would still definitely outsource.”

Why Outsource?

- Partners have scanning and electronic records expertise that is not generally found within the in-house health records service.
- Perspectives from an external, non-NHS partner are essential to make the right decisions.
- Service Level Agreements ensure that high standards are maintained, even during challenging times for the trust.

Why Xerox?

- Experience working with the NHS; a culture of putting patients first and engaging with staff.
- Extensive records management and workflow automation capabilities, including quality scanning, smart indexing, forms rationalisation, electronic form design, workflow design and associated system integration.
- Proven three-stage improvement approach:
  - Walk-in-take-over the existing paper-based service, and learn about the customer’s unique requirements.
  - Rationalise and improve the existing process, delivering meaningful, measurable results while still using paper.
  - Digitise in line with customer needs, such as Worcestershire’s ‘viewing, then doing’ approach.

“All the information is available on patients, whenever they are admitted. Case notes can never be lost.

– Lisa Howells, Secretary