What else will burn in the Bonfire of the Faxes?

"Digital services so good that people prefer to use them", claim the Government.

"The NHS should go paperless", says Jeremy Hunt.

But what replaces the fax machine when NHS England builds a 'Bonfire of the faxes'?

It won't be e-mail.

Clinicians are very familiar with email; they know how it works, and how it fails, when sending patient details between organisations. Even within NHS.net, what works in theory doesn't necessarily work with how clinicians treat patients. If "NHSmail" is NHS England's suggestion to clinicians as they ban fax machines, doctors may just use stamps.

Don't subvert the Summary Care Record

A different option, being advocated by pharmacists – not just outfits like Pharmacy2U, but bodies such as the Royal Pharmaceutical Society – is that many different types of organisations should have the ability to edit a patient's Summary Care Record.

Not only would this immediately exclude all patients who don't have a Summary Care Record, it would simultaneously destroy any confidence in the integrity of SCR data, which may then be out of sync with clinical systems – fundamentally undermining the data quality *in both*, and making them untrustworthy for any purpose. As currently designed, multi-party writable SCR is a terrible idea.

What is Slack for the NHS?

If we look at what pharmacists actually need to do, they need to tell the custodian of the patient's medical record (their GP) what they did. Maybe it was a prescription change, maybe it was a recommendation, maybe it's other information. This doesn't require write access to the SCR. It simply requires a reliable mechanism, knowing a patient's NHS number (which they have), to send a message to the GP or relevant care provider, with the confidence that it has been delivered.

The NHS knows who the care provider is, so the pharmacist doesn't actually need to. On delivery, it is up to the care provider to act on that information – or, e.g. to make a clinical decision *not* to act – and to update their records, which then flow through to SCR. So when the pharmacist next looks at the patient's SCR, the relevant information should all be there. This is not therefore a matter of creating a new system, or breaking a process that works, but about using existing systems better.

Properly designed messaging can be better than fax for clinicians.

Messaging 'attached' to patients via their NHS number, not bounced around between clinicians, is not a replacement for Electronic Health Records – but it does addresses how they talk to each other, and can be transparently encrypted at the same time.

Until the Lefroy Act[1] mandated the use of NHS numbers, this wasn't possible. It is now.

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[1] http://services.parliament.uk/bills/2014-15/healthandsocialcaresafetyandquality.html

Better for senders

HSCIC, using the new Spine, should be able to provide a reliable, trusted and secure way for one clinician to send a message 'attached' to the patient record, to be picked up either by that patient's GP, or by the next clinician along a care pathway.

While it will take a significant amount of time for every clinical system to interoperate with every other system – if it ever happens at all – attaching messages (letters, attachments) to the NHS number, checked via SCR or PDS, can be actioned for all patients, pretty much straight away.

A letter that would be sent by fax now would instead be 'attached' as a PDF to the patient's NHS number, and be automatically passed on to that patient's associated GP or care provider.

Pharmacists (and others) could send electronic messages to the patient's GP, without having to know the specific GP that is, and certainly without having to fax anyone.

This is, in effect, **organisation-to-organisation message routing using the NHS number as the delivery key**. Senders don't even need to know the address or details of the recipient; they can simply write the message or provide the attachment and the system uses its knowledge to make sure they go to the right place.

Inherent in sending a fax is the confirmation that it was received by the other end. It is important that this feature is maintained. This is straightforward to do in a messaging system based on patients, but not one based on organisations and/or individual care providers' e-mail addresses.

Better for recipients

Rather than accumulating a stack of paper on the fax machine, the GP system (EMIS, TPP, *et al*. and other systems as well) would simply hold a stack of electronic messages that are already attached automatically to the relevant patient record, because they are all indexed off the NHS number. Because the transfer is entirely electronic, test results and other files could also be attached in this way – and, with a single click, included in the medical record, once standard formats are agreed.

Where patients are being referred between multiple services and organisations, a facility for nominated clinicians to see recent letters with the consent of the patient could allow them to review what had been said previously and, e.g. when and with whom a patient had an appointment.

Summary

While it may be said that the patient is 'the only person in every meeting' with their different clinical / care teams, they shouldn't have to keep everything in their head. And while a patient record will include all of the structured data about what was done, it is often the unstructured data that explains *why* something was done.

Using the patient's NHS number as the key, rather than addressing everything to organisations or individual care providers or clinicians, builds on the existing strengths of the system, without recreating problems of non-clinical e-mail that are a side effect of NHSmail.

Banning faxes is the easy way out; the 'paperless' NHS should produce something that is better for patients, and for its clinical staff.

Essential features:

- Guaranteed delivery to the patient's 'data custodian' (GP or care organisation)
    - clinicians can pass messages to each other, 'anchored' off a patient. This includes:
        - messages – cover letter, analysis, recommendations, etc.
        - attachments – images (e.g. x-rays), PDFs, machine-readable content such as test results, etc.
    - clinicians (and others) don't need to know precisely where the message has to go – no more wrong fax numbers – they just have to know who the patient is.
- Audit trail
    - on receipt (intended org, all) – clinician knows it has been sent (fax sent)
    - on open (intended recipient, all) – clinician can see it has been read (no equiv)
    - possibly on actioned (data custodian) – clinician can see it has been actioned (no equiv)
        - test results can be included in a medical record automatically, but do they show anything that *requires* human interaction?
    - resolves the "did they get it?" problem
- Messages only seen by recipient organisation
    - default is for messages & attachments to be completely confidential
    - can optionally have it open to "registered care providers" and "next organisation to look" (for along care pathways)
    - ALL fully audited, of course!

Other thoughts

This 'works alongside' the mandated NHS number approach in the Lefroy Bill: messaging needs consistent identifiers.

One big issue will be stopping NHS England spamming everybody; individual orgs spamming others can be handled on a case-by-case basis.

N.B. This is a piece of critical national infrastructure...