

## The future of national medical IT

This report is on behalf of the iSOFT User Group (iSUG), which represents primary care users of iSOFT software. iSUG is independent of iSOFT.

**iSUG is strongly in favour of a ‘wired NHS’**, with information about patients being sent smoothly and seamlessly between computers used by different levels of clinicians and support staff in primary care, secondary care and administration throughout the UK.

However, **poor IT implementation can increase administrative and clinical work rather than assist it**, and by wasting money, resources and precious clinical time can detract from the care given to patients.

The current CfH design for NHS IT has significant problems: in part this is because it has been designed and imposed top-down, with minimal input from primary care. This is unfortunate, because **the UK leads the world in medical IT, and within the UK primary care is easily the best utiliser of medical IT.**

### ***Current problems***

- **Primary care systems don’t communicate with each other easily.** The NHS should have implemented connectivity standards in the late eighties, but failed to do so.
- **Secondary care systems don’t necessarily communicate with each other either.**
- There is **little connectivity between primary care computers and secondary care computers.**
- **Although the Spine has the potential to rectify some of these defects** by providing a framework to attach a central repository of basic information about patients, or provide pointers to where information is stored, with so many people able to access this information **there is grave doubt about the degree of confidentiality of information uploaded to the Spine.** The main problem isn’t of hacking but of prurience. Large numbers of NHS workers will be in a position to access information that they have no legitimate reason to view. Indeed, CfH has recognised these dangers and has treated celebrities’ and politicians’ records differently, to reduce the chances of others gaining access inappropriately. Doing this is tacit admission that ‘ordinary’ Spine records aren’t held securely enough.
- **In designing the security systems, little or no account was initially taken of the ways in which normal primary care works.** Many practice back-office staff regularly work two or more computers at the same time – for example, a receptionist who in parallel is also scanning documents on a nearby computer. How is this going to work when the CfH security model insists that each worker logs on with a smartcard at the computer they are currently working at? Current NHS computer systems take twenty seconds at least to log in; if this method of working is imposed (without bringing down login times to sub-second levels) it will bring primary care grinding to a halt within a morning.  
In other words, **CfH security is draconian when users and patients don’t need it, and lax when they do.**

- **CfH's cumbersome procedures place a totally unnecessary load on primary care physicians.** For example, connecting to the Spine to check patient demographic details, to make C&B referrals, or to issue the new-style prescriptions with bar codes may only have an overhead of ten seconds each, but the frequency with which these operations are done throughout the working day means a *huge* amount of clinicians' time is wasted each week. **I cannot think of a single CfH-directed venture which saves time: I can immediately think of many which waste significant amounts.** (By comparison, IT software and procedures I have introduced within my own practice using various commercially-produced software applications have saved time and effort, reduced stress and cut overall costs.)
- **We may have a national system of recording information, but no-one has yet created agreed medicolegal, professionally appropriate protocols for working with it.** (The RCGP published "Shared Record Professional Guidance" in August 2009 but this is at the level of principles and the current shared systems were devised before this guidance was published.)  
The biggest practical problem concerns the way errors are treated. For example, a patient living in Bedfordshire goes on a business trip to Stockport, where she is seen as an emergency by a nurse practitioner and diagnosed with asthma. Then she goes to Rotherham where a consultant decides it is LVF (a similarly-presenting disease, but requiring drugs that are contraindicated in an asthmatic). Then she returns to her usual GP in Bedford. Now — who has the duty/responsibility to change the erroneous record of the original diagnosis? The consultant? The GP? The nurse practitioner? (And what if the nurse practitioner has now returned to Indonesia, so her password is no longer available?)

### ***The way forward***

- **A wired NHS is an excellent principle**, allowing joined-up care to be performed much more easily. **Joined-up IT care with good programming is:**
  - **Cheaper** — because information can be found quickly: it neither gets lost nor is unnecessarily duplicated. Automatic processing of information is also quicker and more complete. **Intelligent use of well-programmed and fully integrated IT can reduce staff costs drastically.**
  - **Less stressful on the clinicians** (because the IT takes over the routine work, leaving them more time for thinking).
  - **Quicker** for patient, clinician and administrative staff, because tests are not duplicated, results don't get lost, and inter-clinician communications are speedy.
  - **Leads to better quality medicine.**
  - **Safer.** Clinical systems provide warnings and advice. All primary care software warns of interactions between drugs being prescribed — whereas electronic prescribing is not widely used in hospitals, so these automatic warnings cannot be given.
  - **Leads to fewer mistakes and therefore fewer complaints.**
- **Progress should be made by evolution, not imposition.**
- The most important function of CfH should be **to create nationally agreed NHS IT standards and the basic Spine**, so that we can store *and communicate* patient information between clinicians and administrators at all levels without hitches and

incompatibilities between systems.

- **A monolithic system doesn't work**, because it doesn't create the competition necessary to stimulate progress. It is notable that the primary care systems have flourished because there has always been competition between primary care IT suppliers.
- **Attention must be paid to the wishes, needs and experiences of the users**, so that the IT is fit for purpose – indeed, so that it adds to 'the clinical experience', rather than detracting from it. Designing systems centrally and imposing them without reference to clinicians and administrators who use it isn't sensible.

### ***What should be the future goals?***

Rather than being prescriptive I will instead outline the needs of clinicians and administrators for future informatics.

- **The biggest current need related to patient safety isn't a centrally stored complete medical record, but a unified medication view, accessible from anywhere within the NHS: this database should also include adverse reactions and the reasons why medication has been discontinued.** By contrast, having separate systems in primary and secondary care inevitably means that these databases get out of sync with each other. It is vital that primary care is aware of secondary/community care prescribing and vice versa.
- **The next most important feature needed is the establishment of quick, easy ways for primary and secondary care systems to talk to each other.** In this way, letters about the patient can be delivered directly into the patient's record. A recent investigation showed 97% of discharge summaries failed to arrive at a GP practice outside the two-day recommended standard.
- **Secondary care needs to increase its clinical use of computer systems.** Currently the main use of medical IT systems within secondary care is to support the *administrative* functions of the hospital, not its clinical functions. X-ray and imaging facilities are successfully being introduced, but the full benefits of hospital clinical records have yet to be realised. Clinical hospital IT is currently about thirty years behind primary care IT. Most prescribing in hospitals takes place away from the computer: no wonder there are so many accidents, interactions, misplaced prescriptions and delays.
- **'Choose and Book' is a good idea which has been implemented atrociously**, not only at the level of system design and coding, but in the appallingly disjointed manner in which it has been introduced.
- **What the NHS sorely needs is the ability to move information about patients around quickly to where it is needed.** This will increase efficiency and improve patient care. The exact mechanisms for doing this will vary depending on the type of information concerned – e.g. there is no need for GPs to receive detailed operation notes, or minute-by-minute records of BP and pulse in intensive care. **Each area of healthcare has its own need for information which is specific to that area and it therefore makes sense to have specialist systems to capture this data.**

- **Most systems need only be relatively local** as 80% of patients will follow defined pathways and so systems can be set up to work most effectively and fastest along those pathways. Outside of the pathways things may be slightly slower or more complex (such as requesting notes from a hospital where a patient was previously treated).
- **There are huge dangers in having a centralised, national repository for all patient information.** If this database goes down — or, more likely, the connections to it get severed — then the practice/clinic/hospital is effectively ‘blind’. *This already happens quite frequently — for software, network and hardware reasons.* **It makes sense to have local NHS IT information stored locally, communicating with the central storage systems regularly,** but less frequently.  
 In this way not only can the local server can act as a local backup, but it relieves the central database of holding enormous quantities of detailed or specialised information which doesn’t need sharing routinely: in turn this reduces the bandwidth needed to convey huge amounts of detailed and unnecessary information to the central repository.  
**The future for NHS computing may well be a network of specialised local computers, communicating with each other through well-established protocols and standards, able to send specialised or more detailed information if necessary on request, with a relatively ‘thin’ Spine connecting them together and perhaps holding reference demographic information** – i.e. the Spine becomes little more than a central index on which to look up the patient’s interactions with hospitals, clinics and primary care services, and to guide requests for more detailed information to the correct place. The public is also likely to feel more comfortable with systems hosted by suppliers and controlled by local practices and trusts.
- **The current centralised and centrally-directed systems stifle competition and development.** The NHS is a fast-moving organisation and its IT systems need to change rapidly, as its needs change.
- **Most importantly, Connecting for Health should change to become an interoperability standards organization, laying out communication protocols and high level specifications; and in charge only of the central Spine.** The users, the software houses and the market can then determine the exact implementation of local IT.

**Dr John Lockley**  
**Chair**  
**iSOFT User Group**  
**8<sup>th</sup> March 2010**