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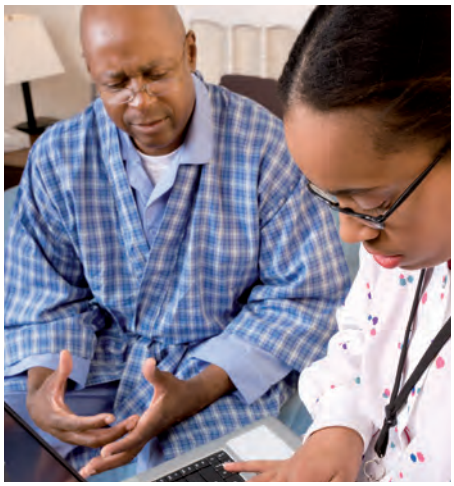

INVESTING IN INFORMATICS

WHY INTELLIGENCE IS ESSENTIAL TO EFFICIENCY

CONTENTS

Supplement editor Daloni Carlisle
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IN-HOUSE OR OUT-OF-HOUSE

Trusts are deciding individually whether to invest in a business intelligence system provided by an out-of-house contractor or to build their own system on the foundations of their existing expertise and technology.
Page 4

ELECTRONIC HEALTH RECORD

Despite hold-ups in giving patients access to their electronic health records people are keen to be able to access services such as booking appointments, ordering repeat prescriptions and getting advice.
Page 7

WORKFORCE

To attract and keep the information workforce it needs the NHS must compete with the private sector and overcome its reluctance to fund training. There are already positive advances, not least the health informatics stream in the graduate management training scheme.
Page 8

SAVINGS

APPETITE FOR EFFICIENCY

Investment in IT and rigorous pursuit of good returns are more important than ever and demand careful selection of information technologies, says Daloni Carlisle

Matthew Swindells: 'business looks for a return on investment in one year'

Talk to any supplier of IT systems in the NHS these days and they will say that health managers are more concerned than ever about showing a quick return on investment. The question of whether IT can release cash savings is becoming much more pressing and with good reason.

It has a lot to do with the financial climate but there are other tensions. The Informatics Planning Guidance for 2010-11 placed more responsibility for NHS IT in the hands of regions and local health economies, asking strategic health authorities to develop informatics strategies that would underpin world class commissioning and the quality, innovation, productivity and prevention – QIPP – drive by the end of March 2010. While informatics and IT are not synonymous, you cannot have one without the other.

The NHS has not always been good at showing its return on investment, says British Computer Society health chair Matthew Swindells, a former chief information officer at the Department of Health, where he led an influential review of health service informatics.

He says: "The NHS writes business plans where the payback is over seven years. People have forgotten what it was all about by that time. In business you look to make a return on investment in one year."

NHS organisations are littered with white elephants: IT systems that are too complicated for anyone but senior analysts to use and do not meet organisational needs.

Essential investment

Even so, Mr Swindells is convinced that investment in IT is not only justified but essential for delivering the savings the NHS needs to make.

"I would almost turn the question round and ask: can you imagine the NHS being able to improve its operating costs by 20 per cent, which is what it is being asked to do, without using technology? I'd challenge anyone to find any other business that has made anything like that productivity gain while considering information technology to be a burden."

Portsmouth Hospitals Trust director of IT Bill Flatman agrees, although for different reasons, that the real question is not whether IT can deliver cash savings.

"Changing the way people work, sometimes facilitated by or requiring IT, is what makes savings," he says. "For example spending money on improving information only makes sense if people know what questions to ask and then make sensible decisions based on that information. My general feeling is that people don't know what information they need but are happy to blame lack of information for their poor decisions."

For Mr Swindells, the real question is this: "Which technology is going make a contribution and why have we been so bad at using it up to now?"

Which technology?

He thinks there are three types: operational technology that allows you to do your job better, such as digital dictation and document management; technologies that help the NHS to change processes, such as digital x-rays and electronic prescribing; and technologies that allow the service to treat the right patient at the right time, such as predictive risk models and utilisation management.

"The alternative to document management, which allows you to move records electronically, is people running around with paper folders. As we change patient pathways so that people are not bound to an institution, document management technology becomes inevitable," he says.

Meanwhile, the national digital imaging system PACS has extracted savings that have paid for it many times over, says Mr Swindells.

"It is such a good piece of technology that radiographers and radiologists have changed how they work because of it."

The benefits of using "right care, right place, right time" technologies are more theoretical in the NHS at present, partly because they are difficult to pinpoint and partly because their use is relatively new. However, Mr Swindells cites evidence from the US which shows that such tools can identify the 30 to 40 per cent of inpatients who would be better treated at home, where their care costs can be halved.

'There are technical projects that can be viewed as pure IT. But the vast majority of projects are about changing the way people work'

He says: "Some parts of the country are using these tools and viewing the financial challenge as an opportunity to rethink the way they deliver care. Others are in denial."

Making this case for investment is easy, he admits. Getting it accepted is less so.

Andy Kinnear is head of the NHS shared service Avon NHS IM&T Consortium and knows this from experience. He is sure IT can deliver real cash savings but adds two points. The first is that he would be hard pushed to provide evidence in pounds and pence; the second is that releasing the cash is often not in his gift.

"There is a whole raft of geeky projects where we can show the cost savings," he says. Asset management, video conferencing and shared printers are all good examples.

Vast savings

Mr Kinnear says: "One of my team has staff in three sites and now runs his weekly team meetings by video, saving £200 a time in travel and lost time. We manage 150 sites and when a computer breaks down I have to send out an engineer. We now have a project to allow an engineer to take over a desktop remotely. That will save a fortune and we will be able to demonstrate it. "

But the more complex projects are less easy to quantify. For example, Avon's health and social care economy has recently embarked on a project to connect all local systems to create a Bristol Health Record that can be used by primary and secondary care as well as social services. The increase in productivity that it will allow forms part of the business plan.

"I cannot give you a headline figure for savings but the benefits are just obvious," he says. "It will save the vast amount of time getting the right notes to the right clinics and will enable us to deliver electronic discharge summaries to GPs."

It will be up to others to release the cash, however. As head of IT he is not the one to redeploy the secretary who no longer needs to chase discharge summaries at the GP practice or quantify how junior doctor productivity has risen because the summaries are generated electronically.

Getting a return

In Portsmouth, Mr Flatman argues that extracting a return on investment from IT projects is "90 per cent about the people".

He says: "There are technical projects that can be viewed as pure IT. But the vast majority of projects are about changing the way people work. It's really about how IT can improve process change."

Take midwives, for example. Notoriously IT phobic, they spend a part of each day transcribing their handwritten notes into the computer system. Portsmouth Hospitals is now rolling out digital pens to help them. The pens are linked to their Blackberries, which in turn are linked to the server, transferring handwritten notes directly to the patient administration system, explains Mr Flatman.

"They can then spend more time visiting patients and less time transcribing their notes. This is about coming up with the technology appropriate for the requirement."

If Mr Kinnear's experience is shared, the message that IT is essential is now getting across.

"IT is not under as much pressure as you might expect," he says. "I feel there is quite an appetite for IT business cases built on the back of efficiency and productivity." ●

EASY WINS

Some IT projects lend themselves to making easy wins in terms of cash savings and digital dictation suppliers have been keen to share their experiences. For example:

- East Kent Hospitals University Foundation Trust stopped using overtime, saving £33,000 a year, by using digital dictation technologies in biomedical sciences. Reporting turnaround has been reduced by 30 per cent. The return on investment on the project, delivered by supplier SRC, was less than one year and the cost of the annual maintenance contract is covered by staff redeployment.
- Homerton University Hospital Foundation Trust improved efficiency by one-fifth with digital dictation technologies from Voice Technologies. It no longer employs agency typists to meet deadlines and has cut spending on consumables like cassettes, paper and ink.

CSC

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DOING MORE WITH LESS

By Dr Paul Shannon FRCA MBA
Medical Director, CSC UK Healthcare
Consultant Anaesthetist, Doncaster and Bassetlaw Hospitals NHS Foundation Trust

CSC will be at HC2010, 27-29 April, ICC Birmingham, on stand 190.

CSC will be showcasing several healthcare solutions, including:

- **Lorenzo Regional Care**
- **SystmOne**
- **Electronic Patient Folder**
- **Clinical Information Portal**
- **Healthcare Self-Service**
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- **Emergency Care Solution**

It doesn't take a crystal ball to predict that health service IT budgets will shrink over the next few years, no matter who wins the forthcoming UK election.

Trusts will have to do more with less and become increasingly adept at making each pound go further. At the same time, the NHS will be juggling increasing demands from patients, the usual demographic issues of an ageing population and, of course, policy imperatives such as QIPP (Quality, Innovation, Productivity and Prevention). Managers know all about these challenges, so why bring them up again? Because, as a clinician, I believe the answers are already out there.

EMBRACING TECHNOLOGY

Technology is the enabler which can help Trusts meet the quality agenda head on and emerge with a smile on their faces. Good IT solutions not only allow trusts to deliver care which meets the required standards, but lets them demonstrate, clearly and easily, that they have done so – efficiently, and cost-effectively.

Take, for example, clinical information portals, which bring all the data about a patient to a single, accessible point – surely that's got to improve continuity of care? Giving clinicians the latest and the fullest picture possible reduces fragmentation, gives the patient a better experience – and ensures that quality and safety are built in.

But it's not just about quality, important though that is; managers have to meet the other bottom line too – the financial one.

IMPROVE CLINICAL EFFICIENCY

Again, good use of innovative IT can provide the answer. Electronic patient record systems, which follow the patient at every point in the healthcare journey, mean a step change in the way we do things. All tests are logged and the results easy to find. Much better use is made of valuable consultation times – in an out-patient clinic, for example, or at the patient's hospital bed-side – because the same questions don't have to be asked over and over again. This saves clinicians time (and therefore money).

Technology can also reduce duplication: how many times is a test repeated because no-one knows it's been done, or the results can't be found? Cutting out this wasteful, unnecessary activity saves cash, reduces pressure on expensive resources, like diagnostics, and is better for the patient too.

Clinical information portals, for example, save time, aid a speedy diagnosis, improve patient safety (by making identification easier, for one thing) and give clinicians more minutes in the day to spend, productively, with patients. We know they can also have a direct cost saving, cutting the number of lab tests performed by up to a fifth and, on average, saving clinicians a whole hour in every full shift. Several studies have shown that between 25% and 40% of all tests sent to the laboratory are unnecessary.[1]

Imagine the impact of those savings if they were implemented trust-wide?

SAVE TIME AND MONEY

Good use of IT can also free up space and reduce the burden on staff. Take electronic patient folder technology. Digitising paper records makes them accessible (and convenient for peripatetic staff), saving time, money and, indeed, the space needed to store them.

Back in the clinic, touch-screen kiosks, which speed up check-in for healthcare appointments, also have the potential to bring savings. These are popular with patients and receptionists and cut check-in delays dramatically. Importantly, they also reduce DNA rates because patients are prompted to update contact details. And they put patients in control – with the useful knock-on of allowing receptionists to spend more time helping those with more complex needs.

These solutions – and others – are available now from CSC, and there will be more in the near future. Yes, it's a challenging time for healthcare and yes, it's going to get tougher. But harnessing the power of IT can make it a lot easier for everyone concerned: patients, clinicians and, yes, the bean-counters too.

For further information:

email us at uk-healthcare@csc.com, visit www.cscalliance.com or visit stand 190 at HC2010

[1] Gopal Rao, Crook, Tillyer, *Pathology tests: is the time for demand management ripe at last?* J Clin Pathol 2003.

TO BUY OR TO BUILD

Trusts are assessing individually whether to opt for bought in business intelligence systems or to create their own solutions, reports Daloni Carlisle

The policy drive is clear and the sales pitch convincing: business intelligence makes sense. More and more trusts are implementing systems that help draw data from their IT systems into one place, turn it into intelligence and allow them to run reports at the touch of a button.

For trusts considering implementing a business intelligence system, one of the biggest questions is whether to do it in-house or call in a contractor.

North Bristol Trust director of IM&T Martin Bell is firmly in the in-house camp.

"Most NHS trusts now have pretty good financial information," he says. "Many have good activity data too. Very few have brought these together. We wanted to create something where managers of all descriptions, including clinical, could access the information themselves and run their own reports."

The trust also wanted to make data available externally, for example to primary care trusts, the strategic health authority and GPs. But when Mr Bell looked at the systems on offer commercially, he felt none really answered his needs.

"The bit you can't buy is that link with your business, the trust knowledge and the expertise around our existing systems. You cannot have external companies owning your data quality agenda."

In short, he felt an in-house team could do better – "and we did".

'We wanted to create something where managers of all descriptions, including clinical, could access the information themselves and run their own reports'

Award winners

Mr Bell recruited two new staff members, including a deputy director to lead on clinical engagement, and they set about building their own business intelligence system. Two years down the line and North Bristol Trust has an award winning business intelligence solution with over 1,000 users – that is one in nine of the trust's 9,000 employees.

It is built around a data warehouse that pulls information from 30 existing IT systems, allowing users to view information from across the trust. The team made it user friendly by building it around standard Microsoft tools available to the NHS through an enterprise-wide agreement. It includes a web based front end, automatic email systems, reports to which users can subscribe and dashboards.

The system is used not just by the top 50 to 60 senior managers for reporting but also by the trust's clinical community. For example, patient level information allows orthopaedic surgeons to track, say, length of stay or infection rates against use of a particular prosthesis; or, when it comes to information sharing, there is a GP dashboard that alerts GPs when vulnerable patients are due to be discharged.

He cites a number of other advantages to the in-house approach. The knowledge developed in building the system has stayed put in the trust — not left along with contractors, he says. There is no ongoing maintenance contract to pay either. Then there is the question of whether the trust could sell the solution elsewhere.

"This is a very clever piece of intellectual property," he says. "We have had a number of rave reviews and have had several people visiting us, including NHS Scotland, who said we were a trust to aspire to."

Yes, he is vulnerable to losing staff – his deputy recently left the trust for a director's post elsewhere in the NHS – but Mr Bell adds: "The technical team are all still here and enjoying themselves. We have built up quite a reputation as leaders in many areas of IM&T and we are attracting people in."

Mr Bell's view is that business intelligence for the health sector is still poorly developed and expensive — starting in the six-figure bracket. Many systems on offer were not designed for the NHS.

He asks: "The tools are often bespoke languages and configurations and the problem then is where does the knowledge transfer take place?"

Needless to say, there are lots of people who disagree. Jon Lawton, head of information at Salford Royal Foundation Trust for the past year and a half, is one of them. Over the past six years, the teaching trust had twice tried – and twice failed – to develop an in-house solution.

‘Both in-house and out-of-house will struggle if you are not clear about what you want the system to do’

“The first time it failed miserably – and this was before my time – because of a lack of understanding of the system and what people wanted from it,” says Mr Lawton. “The second time the data extraction from the patient administration system was just too slow and it did not work.”

So in July 2008 the trust went for an off the shelf product, InView from CACI, which was designed for the NHS as a data warehouse and web reporting system. The trust uses SAP Business Objects to run reports. Crucially, says Mr Lawton, this was properly funded and properly project managed and there were enough dedicated staff to make it work.

“Whatever resource we put in, CACI matched it. In the end it was three each.”

This six-person team still struggled with the patient administration system – a 30-year-old iSoft installation – but solved this using HL7 messaging.

“We have a very clever guy here who knows all about the system,” says Mr Lawton. “CACI provided us with a specification for each data set and we provided them within a week. It was extremely hard work but within three months the extracts were written and the system implemented and deployed.”

The scope of this business intelligence system is nothing like as advanced as North Bristol’s and reports only on trust targets and financial information. Clinical information is being brought in with phase two, which starts this year.

As a result it has far fewer users – 300 compared with North Bristol’s 1,000. Even so, Mr Lawton says, the system has brought many benefits.

“We have timely and accurate data,” he says. “Daily information means it has become really important for managing 18 weeks. All statutory reports now come from this solution and take five minutes where it used to take half a day.”

Knowledge transfer

The biggest win, though, is that everyone has confidence in the data.

“Nobody questions it anymore. If something looks wrong then it probably is.”

He does not feel that there has been a lack of knowledge transfer.

“The team here has definitely skilled up by learning Business Objects,” he says.

A maintenance contract with CACI means his team can get on with business intelligence rather than maintenance.

So who is right? There is no clear answer, says Association of ICT Professionals in Health and Social Care chair Brian Derry.

“Clearly we are in a world where information, particularly on quality and productivity, is more important than ever before,” he says. “But anyone who seeks salvation in an IT system is doomed to disappointment. The real issue lies with clarity of business need and ownership outside the IT department.”

Often, he says, the technical solutions are relatively easy, with lots of options; choice depends on the skills in the IT team.

“Both in-house and out-of-house will struggle if you are not clear about what you want the system to do.”

Trusts, he says, need to think through some issues clearly. Do they want service managers and clinicians to use the system? Then choose appropriate tools.

“Lots of tools are best used by informatics people to answer the questions posed by others but the business case is all about putting dashboards on every PC,” says Mr Derry. “The road to hell is paved with dashboards at the moment.”

Then there are data quality issues as well as questions about the meaning of data.

“If you do not understand the data definitions there will be trouble when people start to delve into the data. Who is going to answer their questions?”

Good implementations involve the right people at the right time, he says, and go through several iterations.

“In my experience the technology is not the limiting factor. It is about how you are going to use the system and how you are going to follow up what you find and being sure that it answers what people ask and nothing else.” ●

ALAMY

PERSONAL VIEW

Patients are interested in access to their health record but even more keen on being able to connect online with services and health information, says Ingrid Torjesen

Last summer it looked as though plans to give patients access to their electronic health record were in tatters when Connecting for Health put the development of HealthSpace on ice.

As summary care records were created, the intention had been to let patients see this information through the HealthSpace portal. In the longer term HealthSpace would become a hub for transactional services, enabling patients to book GP appointments, order repeat prescriptions, access letters and test results, and manage long term conditions.

At the time, the Department of Health claimed development of HealthSpace had been suspended to enable a thorough evaluation of patient experience of existing and potential future services.

The facts suggest a different story – lack of public appetite. By March 2010, with 1.2 million summary records on line, 2,257 people had opened a HealthSpace account and just 752 had viewed their record online.

Patient access

The DH has told *HSJ* that an announcement on future plans for HealthSpace is imminent.

But experience elsewhere shows that patients are keen to access their records and the drive to help them do this has continued through the private sector.

It is now theoretically possible for 60 per cent of UK patients to access their records through the internet using the Patient Access to Electronic Record Systems (PAERS) iPatient viewer, because these records are held by practices using the EMIS system.

A deal on the cards with In Practice Systems could extend this to 80 per cent of patients in England.

iPatient allows patients to view most of the information their GP practice holds on them. However, so far only around 50 practices have fully activated this facility.

PAERS co-director Brian Fisher says: "Currently the rate limiting factor is that practices are not switching the system on, mainly because they don't know about it."

Patients can also undertake transactional services through iPatient, such as booking appointments, ordering repeat prescriptions and communicating with their practice through secure messaging.

Its web 2.0 interface also enables patients to learn more about their health through tailored newsfeeds and discussion forums and to customise the viewer.

ALAMY

'While most patients are unlikely to view their record more than once unless they become ill, they find transactional services very valuable'

So far around 2,000 of the 5,500 EMIS practices have activated transactions and half a million patients have used this facility in the past six months.

Dr Fisher says that while most patients are unlikely to view their record more than once unless they become ill, they find transactional services very valuable.

"It saves them time and their practices time and they also get far more control over their health and the way the NHS looks after them," he explains.

The Conservatives have made a manifesto pledge to give patients online access to their records despite pledging to cut back the National Programme for IT.

A Conservative Party spokesperson sought to play down media speculation that the party plans to involve commercial providers, such as Google and Microsoft, which provide online patient access in the US.

Time wasting bureaucracy

There would certainly be a role for existing records providers.

"Ideally, patients should be able to choose who provides access to their health records, and no patient should be forced (as is de facto the current case) to have one," he explains.

"At the heart of this lies the question 'whose data is it' – the answer is actually that three main groups have a stake in it, taxpayers as the funders of our NHS, frontline professionals as those who create and work from the data, and patients. At present the taxpayer can access the data, professionals can access the data, but patients have to go through layers of time wasting bureaucracy to see their records."

However, he adds that the Conservatives "do not plan for patients to be able to alter data unilaterally".

Competitive future

EMIS chief executive Sean Riddell anticipates that ultimately there will not be only a single supplier of this technology.

"If someone is going to offer a service which saves time and money for the NHS and gives a health benefit at the same time, it doesn't matter if it is EMIS, Google Health, Microsoft HealthVault as long as you have got standards at the heart of those systems, so whichever supplier you want to deliver the front end, the back end of that raw data is standardised," he says.

"In reality we could just then compete for services and components of services."

He predicts that electronic patient records will develop in the same way as iPhone and Facebook, with different suppliers developing products to a set of core standards which could then be accredited for use by the NHS.

In other words, watch this space. ●

SIGNIFICANT DEVELOPMENT

Training, career planning and recognition are all going to be essential to recruiting and holding on to a skilled health informatics workforce for the future, says Alison Moore

The NHS has often struggled to attract and keep the information workforce it needs. Lower pay than in the private sector, uncertain career paths and a reluctance to fund training in health informatics have all contributed to shortages of skilled staff. But could this be changing?

UK Council for Health Informatics Professionals marketing and communications director Mik Horswell thinks it could. Unlike five years ago, he now knows of no NHS organisation suffering acute IT recruitment problems.

"It's a genuine improvement," he says.

The economy has certainly helped. Tribal managing director of health informatics Lisa Franklin says the recession is making the NHS more attractive.

"I certainly lose people to go back into the service. They won't necessarily be doing it for the money," she says.

Part of this may be the shortage of jobs in other sectors but also the recognition of some public sector benefits. It varies around the country, she says, but anecdotally more people are applying for the jobs.

Career pathways

University of Central Lancashire senior lecturer in health informatics Jean Roberts points to some initiatives to improve career pathways and skill sets. A health informatics stream within the NHS graduate management programme attracted 1,000 applicants for 20 places in 2009. Work on a health informatics specialist workforce strategy for England is expected to go out for consultation in May/June.

But chair of the Association for Informatics Professionals in Health and Social Care Brian Derry says that recently the NHS has started to lose people back to the private sector as the economy revives. Recruitment is getting harder, he says, with no let up for the traditional shortage areas of clinical coders and information analysts.

"People are finding it hard to see their career pathway," he adds.

There were few informatics professionals in the recent *HSJ* NHS top leaders list, for example, and the NHS does little to help spot or develop potential chief information officers.

Looking ahead: IT is increasingly at the heart of the NHS

'The informatics stream in the NHS graduate management training scheme has been welcomed by all'

Dr Roberts says uncertainty about the NHS IT programmes is also causing problems: "There are signs of a blight caused by a lack of clarity in where the major national programmes – particularly in England – are going".

This could encourage people not to risk moving jobs.

Mr Horswell believes there will be a hiatus after the election while decisions are made about national programmes – including the detailed records meant to accompany the summary care records.

"If these programmes are significantly cut back it changes the landscape," he says.

One issue is accreditation and regulation for health informatics professionals.

Dr Roberts says: "Those who handle sensitive information about health should be recognised."

UKCHIP is arguing for regulation, saying that managers and health informatics professionals are the two big groups that are not yet accredited.

The informatics stream in the NHS graduate management training scheme has been welcomed by all. The first national intake was last September but for two years a pilot scheme had run involving West Midlands, North West and Yorkshire and the Humber strategic health authorities. Its graduates are now in their first NHS jobs.

Many applicants do not have an informatics degree but do a post-graduate diploma in health informatics and undergo leadership training. The aim is graduates who can quickly progress into senior posts.

"The scheme is not about recruiting people who will stay in middle management informatics roles," says national programme manager Alex Bush.

Perhaps we could finally see the day when managers take informatics out of the IT ghetto and put it at the heart of the NHS and its reform programme. ●

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