Martin Bellamy outlines his HC2009 speech

Web 2.0 woven into health info future

Transatlantic lessons on electronic records

Is health informatics really growing up?
Jean Roberts asks whether health informatics is growing up in her article on p14. This is a question asked frequently over the years, only to be dashed by another setback. Looking back, we have made a great deal of progress and some of the articles in this issue of HINOW demonstrate that boundaries are being pushed forward at the leading edge. There is currently a buzz that has been absent in recent years, a real feeling that a step change can be made.

Health informatics featured among the winners of the latest BCS awards for innovation, professionalism and best practice. The winners include a potentially life-saving mobile patient care reporting system and an innovative chemotherapy planning application. See pages 20 and 22.

Many other examples of innovation, professionalism and best practice will be in evidence at HC2009 on 28-30 April. After several years of uncertainty, there is now more optimism amongst vendors and potential NHS purchasers. And HC is the best place to hear about solutions and see them in action.

Publishing of HINOW is a little later than usual this time so that we could include an interview with Martin Bellamy, head of NHS Connecting for Health (NHS CFH) – see page 8. He will be speaking at HC2009, along with Christine Connelly, NHS chief information officer, Department of Health, and many other members of the NHS CFH team.

The Primary Health Care Specialist Group and ASSIST also have conferences coming up, and the submission date is nearing for papers for the international medical informatics conference (Medinfo) to be held in South Africa in 2010 – p17.

We are also delighted to report on a number of activities by the BCS Health Informatics Forum (BCSHIF) and those of its specialist and member groups. We welcome the appointment of Paul Woolman as chair of Scottish group and wish him every success. See page 23.

January 2009 saw the formation of ProRec-UK under the aegis of the BCS Health Informatics Forum and affiliated with the European Health Records Institute (EuroRec) – p16. A recent BCS Thought Leadership Debate looked at how web 2.0 tools could be harnessed for the future of health information – p12.

The expertise of BCSHIF members is often called upon when it comes to consultations. The latest is a report on the Coroners and Justice Bill currently going through parliament (see p4). As currently drafted, the bill effectively ignores data subject consent, and people/organisations not complying with an information sharing order may be fined or sent to prison. The BCS has expressed its concern.
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Eight data breaches in NHS

The Information Commissioner’s Office (ICO) brought eight enforcement actions against NHS organisations for breaching the Data Protection Act (DPA) from November 2008 to February 2009.

In one case, a computer was stolen from an inadequately secure building in Hastings and Rother Primary Care Trust (PCT) containing sensitive personal information on patients. The ICO has required the PCT to sign a formal undertaking to process personal information in line with the DPA, ensure staff are adequately trained, and encrypt all office equipment and mobile devices used to store and transmit personal information.

Mick Gorrill, assistant information commissioner at the ICO, said: ‘I am increasingly concerned about the way some NHS organisations are failing to securely hold people’s health and personal information.’

DH renews Choose and Book

The Department of Health has renewed Atos Healthcare’s contract for two years to continue managing Choose and Book. The original five-year contract was signed in 2003.

Now, over 50 per cent of all referrals are made using Choose and Book.

That said, BMA research suggests doctors’ attitudes vary from not being willing to revert to paper-based referrals to finding it completely unworkable. The BMA report recommendations include: greater collaboration between primary and secondary care; clinicians being integral to any decision to increase the use of Choose and Book; robust local communications; and managers ensuring appropriate support and resources.

BCS responds to the Coroners and Justice Bill

The Coroners and Justice Bill, currently going through Parliament, aims to deliver a more effective, transparent and responsive justice and coroner service for victims, witnesses, bereaved families and the wider public.

A small part of this Bill – clauses 152-154 and Schedule 18 – proposes major changes to the rights of people and organisations within the UK to maintain the confidentiality of the data about them.

The Bill proposes very significant changes to the Data Protection Act and the role of the Information Commissioner, and enables any government minister to lay an information sharing order before Parliament, where it is subject to minimal scrutiny before approval. It effectively ignores the process of data subject consent, and people/organisations not complying with an information sharing order may be fined or sent to prison.

An information sharing order also overrides (almost) any existing legislation that may prevent its implementation, and may permit further onward sharing of the information it deals with.

The BCS is especially concerned about the current proposals, and its eTrustworthy Government Group (on which BCS Health Informatics Forum is represented) has prepared the official BCS response to the Bill – see www.bcs.org/cjbill

The Bill has had its second reading in the House of Commons, and ended its committee stage on 5 March. Health is likely to be one of the sectors most profoundly affected by its proposals, especially the current proposals to encourage the responsible sharing of electronic health records in order to provider safer, more appropriate care.

The full text of the Bill as it was after its second reading can be found at: www.publications.parliament.uk/pa/cm200809/cm bills/009/09005.i-v.html

If you agree with the BCS response, please write to your MP and/or the Minister of Justice and say so.
PAC focuses on care records

The care records service came in for close scrutiny in the House of Commons’ Public Accounts Committee (PAC) report ‘The National Programme for IT in the NHS: Progress since 2006’ published in January.

The report pointed out that the care records service is at least four years behind schedule. The latest forecasts by the Department of Health (DH) put completion at 2014-15, but that may no longer be realistic, as it was estimated before Fujitsu pulled out of the South of England contract in May 2008. That has left just two local service providers – BT and CSC – covering the whole of England.

The PAC warned the DH to be careful that implementation is not put under strain through its plan to allow Trusts, which have not yet implemented a new care records system, to choose between those of BT and CSC. It recommended the DH assess whether it would be wise for Trusts in the South to adopt BT and CSC’s systems in terms of success of their implementation to date, and whether the extra workload would negatively affect the suppliers’ existing commitments.

The report stated: ‘Unless the position on care records system deployments improves appreciably in the very near future (i.e. within the next six months), the Department should assess the financial case for allowing Trusts to put forward applications for central funding for alternative systems compatible with the objectives of the Programme.’

Recent progress in deploying the new care records systems was described in the report as ‘very disappointing, with just six deployments in total during the first five months of 2008–09’.

As little clinical functionality has been deployed to date, the expectations of clinical staff have not been met. To secure their support, it is essential to deploy systems that offer good clinical functionality and clear benefits. The DH should repeat its surveys of NHS staff at least every year.

Patients and doctors have concerns about data security, according to the PAC. To help provide assurance, the DH and the NHS should set out clearly disciplinary sanctions for when staff breach security procedures, and report on enforcement.

The PAC report suggests making more accurate estimates of the cost of the programme as the accuracy of current figures – £12.7 billion, including £3.6 billion of local costs – is uncertain.

Scotland invests in e-health

Scotland is to receive e-health investment totalling £1.6 million, according to Scottish health secretary Nicola Sturgeon.

Sturgeon unveiled details of projects in February, including:

- touch screens in the homes of patients with chronic conditions in Lothian, allowing them to be monitored from home;
- online scanning allowing patients in Orkney to be diagnosed remotely, avoiding lengthy trips to hospital;
- new software in Glasgow transmitting patients’ records to consulting rooms.

Sixteen eHealth projects will share the £1.6 million funding, which includes £564,000 from the Atos Origin Alliance – an innovation fund.

Guidance out on PROMs

The Department of Health has published guidance to support the NHS to collect patient feedback on the success of operations. Lord Darzi first set out proposals for the routine collection of patient reported outcome measures (PROMs) in his report ‘High Quality Care for All’ in June last year. It is a method for collecting information on the clinical quality of care as reported by patients themselves before and after an operation. The data is then used to calculate a numerical value for the improvement to their health. From April 2009, all licensed providers of hip replacements, knee replacements, groin hernia surgery and varicose vein surgery will be expected to invite patients to complete a pre-operative PROMs questionnaire. The information will be on the NHS Choices website.

London continues with Cerner

The NHS in London is to continue to implement Cerner Millennium in acute trusts as part of the roll-out of electronic care records.

Following a progress review by the London Acute Programme Board in October, the NHS London Programme for IT has worked with BT and Cerner on improvements to resolve issues at the four acute trusts currently live with Cerner Millennium.

The Royal Free Hampstead NHS Trust has reportedly said that, despite good progress, it will not be possible to judge until March whether the upgrades to the software it uses are successful.

Heart disease risk tool upgraded

The release of QRISK2 software is aimed, according to its developers, at allowing GPs to more accurately estimate which patients are most at risk of developing heart disease over the next 10 years.

To do so, QRISK2 uses a new cardiovascular disease (CVD) equation and a database of anonymous data taken from the health records of more than four million patients in the UK.

The QRISK2 software is the result of research by QRResearch, a not-for-profit partnership between The University of Nottingham and primary care system supplier EMIS.

The partnership says that three independent studies have confirmed that the QRISK2 formula provides a more accurate and fairer assessment of CVD risk than the widely-used Framingham risk equation.

Emergency choices extended

The Department of Health has approved an alternative system for 999 operators called NHS Pathways for use in ambulance control rooms. It allows staff to make immediate referrals to urgent care services for patients who don’t need an ambulance. The system has been used in the north east of England for over two years. NHS Pathways can also help more accurate assessment of calls to make sure ambulances respond even more quickly to those who need them most.
HC2009 reshaped for future

BCS Health Informatics Forum will be overseeing the whole of the Healthcare Computing event this year for the first time with Citadel Events contracted to manage commercial participation. Rosemary Hepburn explains what’s planned for this year.

In its 26th year, HC is taking a fresh approach to the increasingly complex demands of information in healthcare.

At this year’s event called ‘Shaping The Future’, held on 28-30 April, HC2009 delegates will have the opportunity to learn from thought-provoking and highly informative presentations and debates on current hot topics, including policy and strategy developments, transforming health services, supporting healthy living, telehealth and interactive care and emerging technologies.

It is aimed at all those with an interest in information and information systems in healthcare to inform, educate and promote best practice with the emphasis on information and IT enabling the delivery of healthcare. Both proven solutions and the latest innovations will be on show.

NHS Connecting for Health
NHS Connecting for Health (NHS CFH) will have a strongly featured presence at HC2009.

In addition to a stand in the commercial areas, NHS CFH will have key speakers at the conference (including its head Martin Bellamy) and will be staging presentations and demonstrations on the key national programmes.

This includes presentations on supporting NHS delivery and improving patient care, mainstreaming informatics, leadership and professionalism.

An integrated event
HC has previously been staged as two separate events – a conference and an exhibition. This year’s event, HC2009, again in the popular spa town of Harrogate, focuses firmly on an integrated and interactive showcase for all those with an interest in information in healthcare and in health-related IT developments and applications of best practice.

Presenters, drawn from leaders of best practice from the NHS, NHS CFH, commercial and academic organisations and others, have the opportunity to present their material in the most appropriate manner: talks, debates and discussions, as well as the more conventional paper and poster presentations supported by publication in the event proceedings.

See p8 for an overview of this year’s conference programme.

Two theatres are being provided for commercial presentations and the demonstration of systems to larger groups than can be accommodated on stands.

The social programme provides networking opportunities for all. The first evening quiz with buffet, so popular in recent years, will be run again. On the second evening a formal dinner will be followed by entertainment and a disco.

Tickets for the social programme are included, as appropriate, in two-day (either quiz or dinner) and three-day (quiz and dinner) delegate packages and can be purchased separately by others. Organisations can reserve tables for 10 people in advance when group booking.

Ian Ryder, BCS deputy CEO, says: ‘We are very excited about this year’s BCS-run HC2009, which we know will maintain the showcase’s position as Europe’s leading event for health informatics professionals and all those with an interest in information and healthcare.

‘The BCS Health Informatics Forum

is not only the driving force behind the showcase, but has also built an enviable reputation as an impartial viewpoint on issues of importance to health informatics professionals. It has become part of the HI landscape, a source of valued information to government and other organisations, commenting on consultation documents, taking part in briefings, offering advice and contributing to important debates on how technology can be harnessed to provide the best care in a health environment.’

Delegate rates
By registering as paying delegates, visitors will have full access to the three days of the presentations, debates, tutorials, the commercial showcase and the social programme. The delegate rates remain the same or slightly reduced from last year.

Enhanced commercial offering
With a new range of value added packages assembled by Commercial Showcase organisers Citadel Events, commercial participants in HC2009 have a range of options to help them make an impact. The package forstands of up to 25m2 includes:

- one full delegate place, including access to the social programme;
- opportunity for 10 further delegate places at 50 per cent of published BCS prices;
- a 20-minute presentation in the commercial demonstration theatres.

FURTHER INFO

Anybody interested in attending HC2009 either as a delegate or as a commercial participant will find a wealth of information, the conference programme, and all contact details at:

www.hcshowcase.org

Further information is also available from Rosemary Hepburn, Citadel Events, 07710 990081
The UK’s Largest Healthcare Informatics showcase event

Now in its 26th year, HC comes of age with a fresh, new format. HC2009 promises a step change in the British Computer Society’s showcase event, specifically designed this year to ‘Shape the Future’ of Healthcare Informatics in a cohesive, yet hard-hitting single event.

Conference themes
Stimulating, thought provoking themes with presentations and demonstrations on the hot topics. Visit www.hcshowcase.org - conference programme

Keynote Speakers
Christine Connelly - Chief Information Officer for Health, Martin Bellamy - NHS Connecting for Health, Mike Farrar - Chief Executive, NHS North West Strategic Health Authority

Want to attend as a Delegate?
Rates are held for 2009 and there is a reduction on the one day rate. For online registration visit www.hcshowcase.org - delegate registration

Commercial Showcase
Leading edge commercial companies with a primary focus on the development of HI systems and products, designed to enhance and improve patient care, will be exhibiting. Companies wishing to book stands should visit www.hcshowcase.org - commercial participation packages

Find out how you can get involved in HC2009 at www.hcshowcase.org

HC2009 is the UK’s most important networking event for all those interested in information and healthcare

Harrogate International Conference Centre
28-30 April 2009

For Delegate registration contact the Conference Secretariat on 0845 370 8182 or register online at www.hcshowcase.org

For Commercial Participation packages contact Citadel Events 01423 526971
Bellamy to cover the foundations upward

Martin Bellamy, head of NHS Connecting for Health (NHS CFH) and director of programme and systems delivery, Department of Health, is giving a one-hour keynote address on day two of the HC2009 conference. He gave Helen Wilcox a flavour of some of the themes of his presentation, covering the IT foundations already in place to priorities for the next 12 months.

‘My starting point is the modernisation and service improvement agenda and the fundamental role of IT systems as an enabler of that modernisation,’ said Bellamy.

‘I have been here for six months now and what has impressed me greatly is the level of engagement and commitment in the Trusts for that agenda. There is no sense of the IT systems being forced on them; these real leaders of the NHS are driving the IT opportunities forward.

‘I’ve been really encouraged to see the ambitions of the NHS and the drive and pace that exists for rolling out the systems. People in the NHS understand that IT is what will enable delivery of the Darzi vision.’

Bellamy plans to draw on examples of how the systems which have already been delivered in the NHS are helping real people.

One such example is the North West Strategic Health Authority, which has implemented the Map of Medicine. Its contribution to patients can be shown in the case, for instance, of a person who is losing their sight and requires rapid treatment. From the trigger point, the first diagnosis, the patient should be treated within four weeks. In practice this often takes longer. The Map of Medicine helps by showing who should be doing what, when interventions should happen, and how the workflow should function, making a significant difference in ensuring rapid and therefore successful treatment.

‘We often focus on the aspects of the National Programme that are behind schedule,’ said Bellamy. ‘But we need to remind people of our progress. As I’ve travelled around the NHS, I have heard many people talking about what things were like before the National Programme. IT was fragmented. Trusts were served by smaller suppliers, which meant ambitions for modernisation were often thwarted. While we still have a long way to go, we have many of the foundations in place for making that modernisation happen.

‘Across the NHS there is widespread support for local decision making, but some things have to be done once and done centrally – N3, the Spine, NHS email systems, PACs, C&B, Electronic Prescriptions – they were all complex programmes which have been delivered successfully and centrally. Not enough credit is given to their achievements. These programmes show what can be done.’

Bellamy made clear that the priorities for CFH over the next 12 months will be the deployment of the care record systems in the acute sector. The N3 and Spine are already in place, and the challenge is to get the systems into large, acute hospitals. The widely publicised problems with the
Cerner implementation in the Royal Free Hampstead NHS Trust and the publishing of the Public Accounts Committee Report in January highlighted the delays in implementing these systems. ‘The top priority for the next 12 months is to demonstrate that acute systems – Cerner and Lorenzo – can be deployed over the next year in large, complex hospital trusts and provide value to patients and clinicians,’ said Bellamy. ‘We need to be able to show examples of the systems working normally. To achieve this challenging objective, we need to work closely with suppliers and the NHS hospitals which are the earlier adopters. Collaboration has always been a big theme in my career – achieving a working partnership is fundamental to success. The scale of the challenge is massive and we need excellent team work – pulling together – to get it done.’

Beyond 12 months
‘I also expect to talk about our aspirations beyond the next 12 months – how to put many of the basic building blocks to work. In a year’s time I believe we will be realising benefits and deploying new systems as a matter of routine. We will be working with NHS organisations in a systematic way so that any deployment of systems is fully prepared for. People will understand the timescales, what people need to be involved, what the training requirements are in organisations. We will have learnt lessons from earlier deployments so that every deployment is not being done as if for the first time. We will have established a rhythm of delivery.

‘In parallel with our focus on delivering the care record system, we will also be supporting the delivery of Lord Darzi’s roadmap – making sure we are achieving what was promised. Connecting for Health is providing enablers which will enable the objectives of Lord Darzi’s work to happen. So that the aim of creating personalised care is supported by, for example, Lorenzo’s ability to provide individual care records.’

**HEAR HIM SPEAK**

If you’d like to hear more of Martin Bellamy’s views on service delivery and NHS CFH’s future projects, you can hear him speak at 9.30am on 29 April in Harrogate.

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**Keynote speakers at the HC2009 conference will be:**

**Christine Connelly, chief information officer for health**
She is focusing on developing and delivering the Department of Health’s overall information strategy and integrating leadership across the NHS and associated bodies, including NHS Connecting for Health and the Information Centre.

**Martin Bellamy, director of programme and system delivery**
Martin is head of NHS Connecting for Health and focuses on enhancing partnerships with and within the NHS.

**Mike Farrar, chief executive, NHS North West Strategic Health Authority**
He is recognised for innovative work, including ‘touchstone tests’ related to recent reforms, commissioning for outcomes, world class commissioning and payment by results.

**Among the many other speakers and topics will be:**

*Developing a benefits management approach for the NHS*
Graham Evans, CIO NHS North East

*eHealth at the Network Edge*
John Crawford, IBM

*Making it personal in adult social care*
**Putting People First Team & NHS CFH**

*Using data to create informed decision making in managing chronic kidney disease*
G P Hollier et al, Univ. of York

*Financing healthcare*
Roger Tester, finance manager (Capital) at Barts and the London NHS Trust

*PRIMIS+ - Practical steps to improve data quality*
Dr Dai Evans, PRIMIS+

*The NHS Haemophilia Service and the work of MDSAS*
Dr Rob Hollingsworth et al, BCS Health Informatics Northern Group

*Why we need professionalism and leadership in the service*
John Rayner, The HIS

*NHS IM&T Investment Survey – Demonstration of benchmarking tools*
Pete Dunn and David Hadley, IM&T Survey Project Team

*New models of delivery*
Dr Shamini Gnani, senior clinical adviser, Department of Primary Care and Social Medicine, Imperial College London

*PhD Forum Panel will include:*
Professor Alex Gray, Cardiff University
Dr Barry Eaglestone, Sheffield University
Dr Paul McCullagh, Ulster University

*The full conference programme can be found at:*
www.hcshowcase.org/pages/conference/conference-programme.html
Secure sharing of documents and images

IHE-UK, a member of the BCS Health Informatics Forum, works on secure sharing of clinical documents and images. Nick Brown, chairman of IHE-UK steering committee, explains more about the organisation and invites you to drop by its stand at HC2009.

Integrating the Healthcare Enterprise (IHE) is an international not-for-profit organisation that enables healthcare IT system users and healthcare IT system suppliers to work together to achieve smooth healthcare workflow through:

- careful definition of specific healthcare delivery tasks;
- specification of essential task information to be exchanged using some provision of existing international standards;
- specification of essential task processes;
- annual testing of supplier software for conformance with the data exchange and process specifications.

IHE-UK is an affiliate of IHE-Europe which is a part of the International IHE organisation.

Optimal patient care requires efficient access to relevant clinical documents. IHE cross enterprise document sharing (XDS) is an internationally agreed method of sharing stored electronic documents through the use of an ebXML documents registry.

IHE XDS supports access to a wide range of documents including HL7 CDA documents, pdf, rtf and DICOM images. It can support the use of documents that may include a coded section allowing an easy progression to automatic information search while supporting existing clinical practice. It can be used to provide access to documents in electronic form that are stored within existing systems. There are plans to extend the specification to provide information about documents in hard copy form.

XDS is an IHE integration profile that supports a number of different use cases of clinical document sharing: A group of enterprises (hospitals, hospital departments, community centres etc.) agree to share documents of a given type (reports, discharge summaries, results etc.) and given format (pdf, CDA, plain text, rtf, DICOM image etc.). When a patient visits one of the participating enterprises and a document that falls within a category for sharing is produced, then a copy of it is stored either in a local or a centralised document repository. In either case an entry is made in a single centralised registry.

A clinician can use an application to search the registry by patient identity, date etc. He/she can then review selected documents. A notification may be sent to relevant clinicians that a document is available for review. XDS also supports applications that can perform automatic analysis of the content of documents that include coded information so as to generate reports of trends in measured values, for example.

Security is supported in XDS by means of a sensitivity index stored for each document included in the registry. A set of patient ‘sensitivity’ levels has recently been included in an international standard. One of five levels can be selected as a way of expressing a patient’s feelings about who should have access to the documents and images being created for their care.

The five sensitivity levels range from the most sensitive level 5, which is intended to limit access to only one or two people who they trust, to level 1 which is intended to allow access to anyone who is trusted by any organisation to be granted access even just for administrative purposes. Level 3, which is expected to be the most commonly used level, limits access to those with direct responsibility for the delivery of healthcare during the current episode.

For full details, see section 6 of part 4 of the British Standard version of the CEN standard 13606 (BS EN 13606-4:2007). This two page section also includes a set of healthcare professional functional role classes. A table shows which classes of professional are intended to have access to documents and images for each sensitivity level.

This standard will be available for inspection on the IHE-UK stand D13 at HC2009 together with other IHE information. Experts will be available on stand D13 to discuss your needs. Your help is needed in planning the best use of IHE facilities in the UK.

Further online information: www.ihe.net
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Web 2.0 woven into health information’s future

As use of web 2.0 tools becomes all pervasive, how can health and social care services embrace the technological, sociological and cultural changes to form part of the future of healthcare information? Helen Wilcox reports on a BCS Thought Leadership Debate, which considered that question.

Social networking and other collaborative tools are bringing patients together to discuss their health and healthcare. It’s a move towards citizen-centred information, which is in line with the government’s philosophy. Web 2.0 can help meet certain areas of the vision for the future of health information and open up new opportunities, but it brings challenges too.

This was the thrust of discussion at the Thought Leadership Debate on 20 January. Participants included professional bodies, academics, healthcare professionals, health informatics professionals and suppliers, representing the public and private sectors.

The event kicked off with two presentations after which delegates discussed the issues in smaller groups under the Chatham House Rule. Glyn Hayes, past chair of the BCS Health Informatics Forum, chaired the event, which was held at The Royal Society of Medicine.

Current web 2.0 uses in health
From anti-smoking campaigns on YouTube through to support communities for Alzheimer sufferers, patients, volunteer groups and the public are already harnessing the potential of web 2.0 tools.

The term web 2.0, coined in 2004 by publisher, O’Reilly, is about using the tools of the web to make the internet a more collaborative place. They include blogs, wikis, Wikipedia, podcasts, mash-ups and social networking sites. Web 2.0 can put patients in control. It’s about the individual and what you can do on the computer, and about virtual communities making use of the internet.

There are numerous examples of web 2.0 tools being used in the health sphere. For example, HealthMap is a ‘mash-up’ where different authors and RSS feeds are combined with Google Earth, aggregating information to examine outbreaks of different conditions.

In social communities, such as Second Life, virtual patients can visit Health Info Island, where they can obtain real information from real medics on their condition.

What is the future of healthcare information?
The government’s philosophy is to make information more patient-centric. Users are increasingly helping shape health and social care services.

One suggestion of what users are likely to require is a health service which provides safe, effective, up-to-date, 21st century care, in a Martini way – to suit them anytime, anywhere, anywhere. Better still, patients would hope not be at risk of preventable harm. Plus, where possible, the health service will prevent them from getting ill in the first place.

To move forward on health information, first the privacy debate needs settling. Citizens must be able to trust the NHS to keep their data private and safe,
and to provide the information that they need and want.

The consent approach to privacy may in fact be making life too complicated, and the privacy debate may be overstated, given that many younger people appear to have a different attitude towards sharing personal information, happily posting large amounts of it on social networking sites.

On the other hand, emerging sciences such as genetics, genomics and bio-informatics raise new privacy challenges. For example, someone sharing information about their own inherited diseases and genome could cause privacy issues for relatives who may not have consented to sharing and who may thus be disadvantaged, for example by being refused loans.

For privacy, and indeed all health information matters, there needs to be more effective two-way communication between the citizen and the health service. The health service and health informatics practitioners must communicate better what they are doing and why.

Communication helps with the task of educating citizens. Good education and professionalism are needed for clinicians and HI professionals to ensure an effective future for health information.

Healthcare information has to have usable standards, and useful terminologies. Some data standards need to be patient or user driven but ‘user’ is a tricky word to define.

Similar health information problems are being encountered all over the world. It makes sense to solve them once we’ll, rather than different countries working on them independently, especially in an age of globalisation.

That said, localisation also has its place. In England, for instance, the infrastructure for the National Programme for IT had to be run centrally, while localisation could help responsiveness.

Equally, the NHS has to be prepared to partner with commercial developments. It cannot afford to ignore services arising commercially – such as Google Health and Microsoft HealthVault – where citizens can create their own personal health record.

The challenge is to harness commercial contributions without compromise to clinical outcomes and patient confidentiality.

Working with suppliers and citizens, clinicians and health informatics professionals need to lead the marketplace for software, collaborating to make it work.

Having worked out where health information should be aiming for in the future, the outcomes must be defined and then reached via small steps. Realism and pragmatism must rule. For example integrated care pathways should not be combined with the medical record until the necessary basic foundations are in place, such as standardising terminology, and getting professionals to define meanings.

How can web 2.0 technologies contribute?

In the above future scenario, web 2.0 firstly has a clear role in empowering patients, who can use these tools to access online services, information and communities at a time and place to suit them.

Patients can use the tools to create the social communities that they want, giving guidance and peer group support in their own language. On chronic illness, published research shows that there are benefits from social interaction, blogs, wikis and social spaces.

Social networking communities offer patients the chance to express their feelings, which is considered an important part of the healing process. Men, who can be reticent to talk about health problems in person, are often more open to going on social networking sites, and using them to communicate and get support.

Web 2.0 could be used for direct communication between patients and the NHS. The tools can help disseminate knowledge and provide education for patients and healthcare professionals via peer and volunteer groups, and via the NHS if it embraces them.

Patients and clinicians need to be encouraged to explore what they are not accessing. There is often a misconception that the use of the internet to find information is confined to the young, but pensioners are using the internet more to look up health information than the 18-24 year old group, according to an IBM study. However, web 2.0 tools may not help reach the socially disadvantaged who don’t have computer access.

Social networking could potentially complicate privacy issues, as it involves individuals sharing data. On the other hand, it could help solve the privacy consent issue as individuals will control their own information in social networking sites.

Web 2.0 is ideal for bringing together geographically dispersed communities, facilitating global collaboration. When developing standards, for example, folksonomies and social networking tools could be used to unite a community and design standards online.

Web 2.0 is also suited towards a step-by-step approach to reaching outcomes. For instance, in the past, by old-fashioned networking means, a support group connecting families with rare disorders gradually became a national organisation, which now supplies material to doctors’ surgeries.

Challenges of web 2.0

There are various issues that need resolving around using web 2.0 tools.

A fundamental question is whether the NHS should be involved at all. One advantage would be that the NHS could provide a trusted source of assured information, helping raise trust in web 2.0 offerings.

On the other hand, most people are generally good at sensing which sources on the internet are reliable, and there are many good groups in the voluntary sector.

In considering whether to become involved with web 2.0 tools, the NHS needs to measure the value of, for instance, doctors spending time contributing to social networking groups.

If the NHS does decide to embrace web 2.0, it would have to decide which part would run the services and pay clinicians to provide information online. NHS Choices is one option.

Another issue to resolve is how to prepare clinicians for the new model. As patients communicate more, the colliding and different models held by patients and healthcare professionals will be exposed and exacerbated by new technologies. Patient-reported outcomes will become more important. There is a need to look at standards/accreditation of information presentation and so on.

In conclusion, web 2.0 appears to offer various benefits, but how the NHS and HI profession should be involved and use them is not so clear cut. Given the potential of these tools, however, it is worth considering how they could fit into the future of healthcare and of health information.

See the full TLD report at www.bcs.org/tld/hif09
Is health informatics really growing up?

The various initiatives in the health informatics arena, from brand identity to education, are continually making progress. Jean Roberts looks at how health informatics has been changing.

This last year since HC2008 has seen various milestones passed in the health informatics domain.

The English Health Informatics Review Action Plan might still be under consideration but even with everything else going on globally, the then US President-Elect Barack Obama found time in January this year to recognise a significant HI-related target:

‘To improve the quality of our healthcare while lowering its cost, we will make the immediate investments necessary to ensure that within five years, all of America’s medical records are computerised. This will cut waste, eliminate red tape, and reduce the need to repeat expensive medical tests. But it won’t just save billions of dollars and thousands of jobs – it will save lives by reducing the deadly but preventable medical errors that pervade our healthcare system.

The analogy used by the UK Council of Health Informatics Professions (UKCHIP) of health informatics being the ‘pit team’ behind care delivery is becoming much more widely recognised. Also ongoing, the international debate over the core competences and body of knowledge continues, based around the Otley Framework (which can be found at www.chirad.org.uk/projects.htm) facilitated by the BCS Health Informatics Forum (BCSHIF).

Consensus is hard to achieve when all the International Medical Informatics Association national members are coming from different standpoints, but 2009 should see a further convergence in views.

The flagship HC event, which is more than 25 years old, has also changed – in the new era of collaborative self-determination, it is my view that we could not have got to where we are without the grounding and experience we have had to date. The extended role of the vendor community, the home countries, other professions and international colleagues add considerably to the richness of the event, the dialogue and a longer term legacy from HC.

BCSHIF is currently looking hard at itself, from a position of historic strength. There are opportunities to form strategic partnerships such as BCSHIF participation with the Integrating the Healthcare Enterprise and by ProRec-UK.
To create a higher profile across the home countries and within the BCS, changes are imminent.

Innovation in education
In terms of attempting to meet the e-skills UK target for very large numbers of health informaticians, the educational establishments are racking up a gear – my own University of Central Lancashire for instance is exploring further innovative ways of delivering foundation degree provision, and there is great interest in the call for provision of mainstreaming health informatics NHS management traineeships in parallel to traditional (management, finance and human resource) disciplines.

The academic agenda now runs from ad hoc continuing professional development opportunities through foundation degrees right up to masters and doctorates with more and more competent professionals wanting to accredit their experiential learning through formal academic routes and national vocational quality schemes.

The brand identity of informatics in support of health (and increasingly social care and lifestyle management) is becoming clearer.

There is still much to do but progress has been made. The extended participation of operational practitioners in and related to health informatics in communities of practice and e-networks (some of them web 2.0 enabled) – such as the UK HI Faculty, Professionalising HI (PHI) and eSpace – is welcomed, as is the current research into sharing domain information and research guidance supported by the UK HI Faculty.

Health informatics within (NHS) services is in a state of flux but whilst some HI shared services wane, others wax and the NHS benchmarking initiatives provide a vehicle for promoting their services, shared experiences, quality assurance and negotiating power.

Challenges below the horizon
But what of the challenges hovering just below the horizon? Some are predictable, some not. The impact of the Government IT Profession (GITP) public sector pronouncements may (or may not) affect the health domain and inform health informatics actions of the next 12 months. GITP has been reviewing itself internally for the last couple of years but could arise, like over-arching European directives, to frame our thinking and actions during the next year. Consultations on legislation, like that on the Coroners and Justice Bill, will continue to exercise practitioners and the public on aspects such as sharing and re-using data for research purposes regardless of subject consent.

The integrity and image of health informatics as a profession will be challenged this year, but will hopefully weather the storm of initiatives, perceptions, media questions and funding reviews that could hit us in 2009. Increasing the depth of the professional HI community who participate, challenge, comment and communicate with colleagues about the deployment of informatics in support of health will be beneficial to the service and crucially to the public.

Watch this space.

Jean Roberts is a senior lecturer in the School of Public Health and Clinical Sciences at University of Central Lancashire and she is active in BCSHIF, UK HI Faculty and UK Council for Health Informatics Professions.
Newly formed ProRec-UK to represent UK on standards

In order to facilitate interoperability and pan-European record sharing, the European Health Records Institute is developing European health record standards, which will become a requirement for vendors in the EU. To give the UK a voice in this, ProRec-UK has been set up. Ian Herbert, vice chair, BCS Health Informatics Forum, and director, ProRec-UK, explains.

January 2009 saw the formation of ProRec-UK as a not-for-profit company under the aegis of the BCS Health Informatics Forum. This is the latest of a number of similar organisations established over the last few years across the European Community as affiliates of the European Health Records Institute, less formally known as EuroRec.

In keeping with the other ProRec centres, the objectives of ProRec-UK are:

- the promotion of the use of good quality interoperable health records in the UK;
- the development and promotion of guidance and educational activities to promote best practice in the development, implementation, accreditation and use of efficient, safe, interoperable, and secure health records in the UK;
- liaison with relevant bodies at a European level and to represent the UK in the federation of ProRec centres – The European Health Records Institute;
- the accreditation of health record systems against relevant standards and good practice guidance;
- collaboration with official bodies, societies, professional associations, suppliers of health record systems, industry bodies and other stakeholders on matters relating to the above.

The central objective of EuroRec is to encourage convergence to common high quality EHR standards across Europe to facilitate interoperability and enable the sharing of relevant health data as citizens move between EU member states. Increasingly, compliance with EuroRec standards will become a requirement for vendors who wish to sell their systems in the EU and ProRec-UK will provide an opportunity for UK-based vendors and users of EHR systems to influence these important developments.

As part of a previous project (Q-REC) EuroRec has developed a multilingual repository of functional requirements for EHR systems, a set of good practice guidelines and tools to assist the vendors and procurers of EHR systems. This work has been used in the system procurement process, notably in Belgium and Ireland. One of our early tasks is to confirm that these are suitable for use in the UK, and to suggest enhancements where they are not. Over the next few months we plan to:

- finalise administrative infrastructure;
- identify EHR suppliers in the UK who have an interest in EuroRec tools;
- launch a membership recruitment campaign;
- promote ProRec-UK objectives.

ProRec-UK is a member of EHR-Q-TN. This is a pan-European project organised by EuroRec that provides ProRec centres across Europe with modest funding from the European Commission to publicise the aims of EuroRec, and to generate the support amongst users, health service management and IT staff, system suppliers and academics suppliers that is a prerequisite for success. The project will run for two years from January 2009.

The initial directors, half of whom will be replaced or up for re-election at the next AGM in September this year, are drawn from:

- the supplier community:
  - Roger Wallhouse, Healthsys;
  - Ewan Davis, Woodcote Consulting, also BCS;
  - Dr Glyn Hayes, BCS;
  - Ian Herbert, S I Herbert & Associates, also BCS;

- academia:
  - Professor Graham Wright, CHIRAD;
  - Dipak Kalra, University College, London;
  - Stephen Kay, University of Salford.

- government and professional bodies:
  - Richard Foggie, BIR;
  - Paul Woolman, Scottish Government eHealth Directorate.

ProRec-UK aims to cover all four UK home countries: England, Scotland, Wales and Northern Ireland. We believe this is an important step forward in establishing the UK infrastructure necessary to enable digital health information to play its proper role in personal healthcare.

EuroRec website: www.eurorec.org
Submissions for Medinfo 2010

Papers for Medinfo 2010 must be submitted by 30 September 2009. The theme is ‘Partnerships for effective e-health solutions’. Dr Peter Murray, IMIA vice president for working groups and special interest groups, describes the event and how to participate.

Every three years, the international health and biomedical informatics community gathers for Medinfo. This premier international health informatics event brings together not only world leaders in this field but anyone with an interest, to share knowledge and experiences. The next and 13th World Congress on Medical Informatics – Medinfo 2010 – will be held in Cape Town, South Africa, on 13-16 September 2010.

This will be the first time Medinfo has been held in Africa. The theme for Medinfo 2010 is ‘Partnerships for effective e-health solutions’ – with a particular focus on how innovative collaborations can promote sustainable solutions to health challenges.

Medinfo is held under the auspices of the International Medical Informatics Association (IMIA), the world body for health and biomedical informatics. The local organising committee, chaired by Lyn Hanmer, is responsible for most of the delivery aspects of the event. This committee works in combination with the International Scientific Programme, the IMIA Office and other committees, all chaired by and comprising internationally recognised health informatics experts.

The UK has a strong tradition of involvement in Medinfo events (Medinfo was held in London in 2001), and it is hoped that many UK health informaticians will continue this tradition by active involvement in submitting presentations, as well as attending in 2010. Scientific papers and posters, panels, workshops, and tutorials can all be submitted, as well as other forms of session.

A wide range of health and biomedical informatics subjects can be addressed in submissions, including, but not restricted to, electronic health records, e-health infrastructures, education and building health informatics capacity, emerging technologies, knowledge management, organisational, economic workflow and policy issues, standards, and national and international health IT efforts and implementations.

Full details of types of submission and subject themes are on the Medinfo 2010 website, and the closing date for all of these is 30 September 2009.

An innovation for Medinfo 2010 is the Medinfo Scientific Mentor Scheme, which aims to provide additional support to early career researchers or non-native English speakers. This scheme allows authors to submit their papers for early review by members of an international panel of health informatics experts who will provide feedback. Participants in the scheme will then have an opportunity to revise their paper prior to final submission. To participate in this scheme initial submission of papers is by 1 July 2009; papers then proceed through the normal scientific review process.

Medinfo events offer great opportunities to share experiences with like-minded colleagues, learn about what is happening in your own areas of interest in other parts of the world, and maybe even discover new areas of interest.

In addition to the main Medinfo event, the IMIA Board and General Assembly meet, many of IMIA’s working and special interest groups hold activities and other supporting organisations often hold events in conjunction with the main programme. The social aspects of the events are as important as the scientific activities, and Medinfo 2010 in South Africa provides a great opportunity to explore a diverse country.

Full information on the call for participation, and other aspects of the event, are on the Medinfo 2010 conference website: www.medinfo2010.org

IMIA website: www.imia.org

DEADLINES

1 July 2009
Deadline for early submissions, for those who wish to participate in the Scientific Mentor Scheme:

1 August 2009
Feedback from mentors for Scientific Mentor participants

30 September 2009
Deadline for paper submissions

28 February 2010
Acceptance of abstract
Lessons to share on electronic records

The US is about to embark on a national programme to reform healthcare using IT. John Robinson, GP and clinical advisor to PRIMIS, reports on presentations about the programme at the AMIA conference, and lessons the UK and US could learn from each other.

Let me take you on a journey through time. We are now sitting in the back of an auditorium at a health informatics conference. The speaker is outlining the new strategic national plan for health IT. A new charismatic leader has just been elected and part of his manifesto is to sort out health. It is recognised that the quality of healthcare in this country is at best mediocre and lags behind almost everyone in Europe. It is recognised too that if the healthcare system is to survive and improve, then IT is going to play an important part.

The plan includes building a national infrastructure to enable sharing and interchange of personal health data. It is important that information about a patient should be available wherever they access care. In time this will supply data for secondary uses such as public health. The use of IT should reduce medical errors through providing better decision support and cut down on duplication of investigations because results can’t be found.

You might think we had gone back 10 years to the election of Tony Blair and the introduction of the National Programme for IT in the NHS. You would be wrong. In fact we had only put our time machines back five hours. This was the conference of the American Medical Informatics Association (AMIA 2008) in Washington DC. At the time of writing, Obama has just been elected. The country is elated and full of hope, but recognises its healthcare system needs a lot of reform with IT the key to much of it.

The degree of computerisation is quite different in the US. Some 17 per cent of clinicians are using some sort of electronic medical record but only 4 per cent are totally reliant on it. These are almost exclusively in secondary care. The systems
they are using are not what we, in primary care, would recognise as fully structured coded records. The clinical records are almost always entered as free text, replicating the paper versions. They are designed, it would seem, to support billing.

Because the records are not coded, the challenge of sharing and interchanging them is much greater. Several papers presented looked at these issues using such things as natural language processing (NLP) to extract data from free text. One paper looked at length at how to find medication in free text and another how to find out if a medication had been stopped, by searching for words like ‘stopped’ and ‘ended’. From the point of view of a ‘died in the wool’ user of Read codes, this seemed to be an exercise in doing things the hard way.

AMIA is a large event with numerous papers being presented from the multitude of university biomedical informatics departments. Amongst these were several looking at personal health records. Patients tend to have fragmented healthcare, visiting multiple different providers. They have taken the initiative and it is common practice for them to collect their records on a pen drive. Microsoft and Google are both offering places for patients to store their records. Google talked about how it is developing application programming interfaces to import data directly from the hospital IT systems into an individual patient’s space. The business model it has developed offers a free service but derives income from the links people search on to find out more about their condition.

Another interesting site is ‘Patients like me’ which allows patients to share details of their condition with a community of similar patients. As they do this more and more, they are finding the need for a shared language to explain their symptoms and have developed what they call a folksonomy, a taxonomy of patient defined terms. Some of this may help physicians to communicate better and understand their patients and their symptoms more effectively.

Primary care is said to be in crisis, much as it was in the UK before the new contract here. Research has shown that mortality is inversely related to the number of primary care physicians in an area. Building robust primary care is seen as an important goal in improving the quality of healthcare.

A late breaking session discussed patient centred medical homes, a new model of primary care, in which the patients register with a centre and receive continuity of care from a personal physician. IT is core to the model and would be used to identify patients with chronic disease and call them for review. The challenge is to get insurance companies to change from the current payment model to a capitation based model, with fees paid for specific services and some performance based pay. All in all it sounded very like British general practice.

As the US embarks on its national programme, have they learned any lessons from the UK? The Office of the National Co-ordinator is leading the project and talks of collaboration and encouragement, not coercion. They seem to have recognised the importance of carrying the users with them, a lesson which was slow to be learned in the UK.

What lessons should we learn from the US? Secondary care here is in the process of adopting electronic health records and they are looking to those in use in the USA, with little structured coded data entered. Achieving semantic interoperability between un-coded data from secondary care and structured coded primary care data in order to achieve a genuine summary care record is likely to remain a pipe dream and an exercise in doing things the hard way.

In the UK we are in a unique position of having high quality coded electronic medical records in 99 per cent of primary care, an ideal platform to build a shared care record from. Let us hope that we can learn from the difficulties the USA is having in trying to share data across unstructured records and not destroy our advantage by introducing them here in secondary care.

Research has shown that mortality is inversely related to the number of primary care physicians in an area.

PRIMIS+ is a free service to primary care organisations to help them improve patient care through the effective use of their clinical computer systems. This service is delivered as part of The NHS Information Centre for health and social care’s services. PRIMIS+ is based in the Division of Primary Care at The University of Nottingham and is managed by The NHS Information Centre for health and social care.

PRIMIS: www.primis.nhs.uk/index.php/about-us
Paramedics and ambulance personnel delivering treatment may be engaged in a race against time to stabilise patients and deliver them to hospital fast enough for electronic info to speed up emergency treatment.

Paramedics have started recording patient information electronically, instead of using pen and paper. The ongoing roll-out of the new service in a large part of England earned CSC a BCS Industry Award in the mobile technology category. Helen Wilcox reports.

Electronic info to speed up emergency treatment
care to be delivered with a real chance of success. If the paramedics are able to quickly and easily access patient information electronically on their way to an emergency site, and supply information on the patient’s condition back to the hospital on their return journey, this could make a difference to treatment and outcomes.

This is the aim of CSC’s Emergency Care Solution (Siren ePCR), which is based on rugged laptops, carried by hand or in ambulances. Siren can collate and deliver known patient information directly to the paramedics. In some cases, that information will mean a better opportunity to treat patients on site, reducing the need for a trip to hospital.

When a trip to hospital is needed, paramedics can use Siren ePCR to send patient information, such as blood pressure and ECG statistics, ahead by secure communications (GPS) to the accident and emergency unit using wireless technology. Details of any treatments provided at the scene can then be transferred to the patient’s GP or hospital record. Siren ePCR also provides access to the national drugs database.

‘This is a big step forward, as paramedics previously used an A4 sheet of paper for reporting, which was not very secure,’ said Paul Bastow, who was employed as clinical lead for the project and who was a paramedic earlier in his career. ‘Accurate information aids decisions and clinical treatment. It’s a big benefit for patients, as the record is created straightaway by their side.’

The only Ambulance Trust in the UK which had already been using electronic reporting was the Lancashire fire service: this application was implemented by Bastow in his former role, working on patient report forms. This system is about to be replaced with Siren ePCR.

The solution is being rolled out at six Ambulance Trusts in the North, Midlands and East of England, as part of CSC’s contract to deliver an integrated healthcare solution under the NHS National Programme for IT (NPfIT).

Four of these Trusts are already using release 4 of the software, which sends information to the emergency location receiving the patient and to their GP. Release 5 – due next year – will enable paramedics to access the Spine and the patient’s summary care record.

Siren ePCR will be rolled out at the two remaining Trusts over the next year and at that point there will be over 3,000 ambulances and up to 20,000 staff using ePCR in the North, Midlands and East regions. Those regions cover 60 per cent of England, which has a total of 12 Ambulance Trusts.

‘The Siren ePCR software is an off-the-shelf product that has been used in two places in North America – and as part of a trial in two places in the UK,’ said Bastow. ‘When we issued an invitation to tender for pieces of software, Medusa applied and its solution [Siren] was one of the most mature ePCRs.’

**Stakeholder engagement**

As the move from paper based to electronic recording was a substantial change in working practices, CSC prioritised stakeholder engagement to ensure that the ambulance services felt they owned the project and that they had the necessary skills and tools to deploy it across their organisations at a time and pace that suited them.

One of CSC’s alliance partners took on the role of talking to the Ambulance Trusts about the business benefits of electronic records. A dedicated training team within CSC ran the training programme and provided the accompanying documentation.

Bastow said: ‘Ambulance Trusts are often better at training than anyone else with their own specific training set-up. We therefore tend to use the train-the-trainer approach, typically training ten super users, who then train their colleagues.’

Another client engagement move was to set up an expert reference group made up of lead clinicians from the six Ambulance Trusts. It meets on a six weekly basis, workshop style.

‘For everything we do to the product, we get suggestions from the group,’ said Bastow. ‘They are very engaged in the look and feel of the product. They give the front end user point of view, which gets fed into the design. There are core requirements that we have to deliver but these have to be interpreted. Because the Trusts are giving their suggestions, we get their buy-in.’

Around 150 people at CSC have been involved in the service. Bastow stressed that it was very much a team effort that won CSC the BCS award.

‘Just a few of us went to get the trophy, so it’s good that all can share in the glory by it sitting in our Leeds office,’ he said. ‘We look on it with pride.’

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**RECORD SECURITY**

Siren ePCR employs the advanced encryption standard (AES), a 256-bit encryption to protect sensitive patient data, and which is the standard used for top-secret government files. The secure socket layer (SSL) and transport layer security (TLS) channels, used for transmission of data from the tablet to the application server, further enhance the security of information. These types of precautions protect patient information if unauthorised persons were to access a tablet (or intercept a transmission).

Single sign-on (SSO) is a module added to the Siren web application. SSO is compatible with the NHS’s centralised user directory. The result is accessibility to multiple systems with only one set of sign-on information. With access, users can view patient care reports, add and remove users, and complete many other administrative tasks.

By using a horizontally scaled system, data traffic is distributed over a number of servers, so the system will only crash if there is failure at a number of points. This horizontal scalability design improves stability of the system, whereas traditional, vertically scaled systems with one server are vulnerable because they have a single point of failure.

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**FURTHER READING**

The BCS IT Industry Awards recognise innovation, professionalism and best practice. In 2008, the winners were announced in December at the Grosvenor House Hotel. There were a total of 23 awards, seven of which recognised individual excellence.

A full list of winners and medallists in 2008 can be found at: [www.bcs.org/winners08](http://www.bcs.org/winners08).

Details of next year’s awards are about to be released as we go to press.

Full details will be at: [www.bcs.org/industryawards](http://www.bcs.org/industryawards)
Chemotherapy planning tool scoops award

A tool that tackles the problem of chemotherapy capacity planning landed Concentra two BCS Industry Awards in the social and business-to-business categories. The tool, which employs advanced modelling techniques, is used for service improvement and planning, and can simulate scenarios in chemotherapy units. Helen Wilcox reports.

The effective delivery of chemotherapy is a key component in treating cancer speedily. A 2004 government review found imbalances in what drugs were available, and that the adoption of new drugs was slower in the UK than in the rest of Europe.

One of the barriers to consistent use of chemotherapy is the complexity of its delivery. Cancer drugs are complicated to prepare, difficult to administer, and come in many hundreds of treatment ‘regimens’ – combinations of different drugs in different doses. This makes it difficult for hospitals to monitor which drugs are being used and to plan for the introduction of new ones.

To try and make the use of cancer medicine more uniform, a capacity planning application was built by the Pharmaceutical Oncology Initiative Partnership (POIP) to aid the 33 ‘cancer networks’ – the local and regional delivery teams charged with responsibility for coordinating the delivery of care and the introduction of new cancer drugs.

This application, called C-PORT (Chemotherapy Planning Oncology Resource Tool), applies advanced modelling techniques to tackle the problem of chemotherapy capacity planning, which has never been done before. It makes use of leading-edge techniques in simulation (Monte Carlo technique, for instance), enabling it to forecast how each individual patient will experience care, how long they wait, who they see, and when. It also creates in simulated form real life events that influence treatment such as equipment breakdowns, phone calls, meetings and absenteeism.

Clinicians and managers can use C-PORT to help work out the impact of a proposed change in clinical practice before it is implemented. It can simulate most scenarios in a unit, so can be used for anything from understanding the impact of changes in numbers and types of patient to mapping the impact of adding new regimens and treatments to changing the way the unit is organised or altering the level of resource available. The tool is helping managers better process budget requests and business plans, test contingency plans (e.g. an Asian flu outbreak), compare the expected variability of drug usage and resources within and between units and networks, and to test and fine-tune the implementation of best practice.

To develop the tool, POIP worked with 26 NHS Cancer Networks in England, and the IT sector. POIP is a partnership between 12 pharmaceutical companies, which are members of the Association of British Pharmaceutical Industry, plus the Department of Health/Cancer Action Team and the NHS/Cancer Services Collaborative Improvement Partnership. The final team were supported by consultants A.T. Kearney and analytics and software development company Concentra.

Software details

The custom-made C-Port was built on Microsoft .net with complex simulation logic written in the T-SQL programming language on top of a Microsoft SQL Server 2005 database. The web application runs under Windows 2003 Server with Internet Information Services 6.0.

C-PORT is entirely web-based, so users only require access to a web-browser to use it; it is centrally hosted and supported on a national scale by documentation, training, user groups and a dedicated helpdesk resource.

The tool has been introduced in over 160 hospitals across the UK. The outcomes include: patients having shorter waiting times on their chemotherapy treatment days, plus improved access to new therapies; the government getting better visibility on resources and patient mix at national level and a better understanding of variations in drug usage and clinical practices; the NHS moving towards a more standardised way of evaluating the impact of new drugs, planning resources, business planning and changing working practices; and pharmaceutical companies benefiting from a new approach to cooperation with the NHS and a more consistent uptake of new cancer beating drugs.

Further details can be found at:
www.concentra.co.uk/casestudies/CPORTCasestudy.pdf
New blood to help Health Informatics Scotland ramp up

Health Informatics Scotland is planning to ramp up its activities this year under the leadership of recently appointed chair Paul Woolman. He’s keen to recruit new committee members to help drive the group forward.

For more information and to find out how to join the group, go to: www.scotshi.bcs.org.uk

PAUL WOOLMAN

Paul is currently the enterprise information architect for the Scottish Government eHealth Directorate. He chairs the British Computer Society Health Informatics Scotland and the UK Faculty of Health Informatics and he is a BCS Fellow.

As an informatics standards specialist, he managed the Terminology Service, Data Standards Service and several project teams within NHS National Information Services in Scotland from 2001-2008. In recent years he has worked on national procurements for several clinical systems.

Before that Paul had a research and development career as a clinical scientist, chartered engineer and honorary clinical senior lecturer at Glasgow University.

Paul has over 60 publications and conference presentations in fields including health informatics during more than 25 years’ experience. He is a clinical scientist by background and has developed many bespoke clinical information system developments in a hospital setting for different specialties.

For 15 years he has been involved in developing international standards in health informatics. He is now a qualified management coach and has six years’ experience of mentoring and coaching. Based in Scotland he travels extensively. In addition to his informatics work Paul has led two school boards and held a non-executive position on an arts charity.

Website blurb doesn’t always paint a photographic representation. Take for example the Health Informatics Scotland Specialist Group. The website says this:

‘The British Computer Society, Health Informatics - Scotland (BCS HIS) is a multi-professional group that aims to promote the development and use of health informatics in Scotland to support effective, evidence based, efficient health and social care in areas of research, education, practice, and management decision making. This is intended to benefit the health of individuals, communities, and populations that receive health and social care services and the staff and organisations that deliver those services.’

The reality is the group has been a small band of motivated, good hearted people putting on typically one conference a year. It is hard to get busy NHS people to volunteer time and energy for something that until now has not been particularly encouraged within their busy departments. I contrast the NHS with Scottish government which makes BCS membership compulsory for IT staff.

All of that is changing in Scotland. There is a renewed endeavour to build BCS as the professional body for health informatics staff and a resurgence of statements in the e-health programmes around capability, capacity and professionalism.

Along with that (and the new knowledge and skills framework) comes a willingness to give NHS staff time for professional development. BCS HIS will capitalise on this renewed energy and is ramping up its activities to fill the void. If we don’t, then someone else will.

This year we are planning three events, including a think-tank and a big conference on patient accessible records. We are also planning to put significant effort into recruiting senior NHS staff onto the committee and helping develop our professional body. So anyone from Scotland interested? Join us now.
The Northern Specialist Group heard a presentation on ‘connecting up healthcare – a view from the NHS Technology Office’ by its chief technology officer Dr Paul Jones on 22 January. The group’s chair Professor Bernard Richards reports on the meeting, based on Tom Sharpe’s notes as rapporteur.

Dr Paul Jones’ appointment followed that of the chief information officer for the NHS in September 2008. A function was created called ‘Technology and Standards’, which led to the creation of the Technology Office for the NHS.

Paul’s first slide showed a phlebotomist working in Salford and using a mobile clinical assistant (a type of mini-laptop) developed by Motion Computing. It is the first computer of its type designed specifically for use on the ward.

It was developed following a meeting between Richard Granger, the former chief executive of NHS Connecting for Health, and representatives of Intel. The two items he wanted Intel to help develop were a ward-specific computer and a device for collecting health data in the home.

One challenge was to provide an eight-hour battery life. This was addressed by allowing a battery which was nearly flat to be swapped with a fully-charged one from a base station without loss of data.

An unforeseen problem that surfaced in testing was that health professionals used any convenient pointed object to operate the touch screen – including scalpels and syringes – thus destroying the screen within a couple of days. The solution to this problem was to make the screen respond only to an active stylus. Although the prototypes were expensive, prices are expected to fall when such devices are in common use.

The National Programme for IT (NPfIT)

Paul showed figures which gave a measure of the size of the NHS, including: 305 Trusts in 10 strategic health authorities; more than 8,000 GP surgeries; over 10,000 pharmacies; more than 400,000 nurses; nearly 50 million patients; and 360 million plus prescriptions per year.

Paul said that it is a common misconception that using a supercomputer would be the best way to handle all this complexity. There does have to be a high-level architecture and within that there will be both national and local systems.

There has to be a single place to go to find a patient’s unique NHS number. Facilities for providing data for research are also centralised.

Some of the things that were done in the early days of NPfIT were over-centralised, but Paul claimed that this is no longer true.

There is also integration via the transaction messaging system (TMS) with many local systems including both new and legacy systems. Multiple vendors are producing applications – in the north of England examples of these are Lorenzo (iSOFT) and TPP. The full picture is very complex, as demonstrated by a slide containing roughly a hundred program modules.

The Electronic Prescription Service provides an example of interoperability. Release 2 of this is designed to support a paperless transaction from GP practice to patient to dispensing pharmacist. The link to the Prescription Pricing Authority
carries some £6 billion worth of prescription details. There are six main GP systems within the NHS, and some sixteen different systems within pharmacies.

With suitable security measures in place, prescriptions generated in the GP systems cause messages to be sent across TMS to the Spine, and then onwards to the dispensing pharmacist. The National Integration Centre has been set up to deliver this kind of interoperability. It has assured 15 national releases, 350 versions of 61 products outside the local service provider (LSP) contracts, released 121 Clinical Authority to Release certificates to suppliers outside the main LSP contracts, and assured 79 separate systems under the LSP contracts.

In summary, NPfIT uses a variety of bespoke and commercial off-the-shelf (COTS) products to deliver requirements. There are systems with more transactions (e.g. Google) and there are systems with greater data volumes (e.g. Ordnance Survey), but NHS systems combine both together. The processing power in the Spine would place it in the top 100 of the world’s supercomputers.

In business terms, the original vision for NPfIT in 2002 consisted of the ‘Greek Temple’ model with three columns corresponding to the provision of a prescription service, a booking service and a life-long health record service, together with a base corresponding to the national electronic infrastructure (N3 and Spine). This has now grown to an edifice with perhaps 11 columns – adding patient choice, digital imaging, secondary-user services (SUS), email, GP-to-GP record transfer, Quality Management Analysis System (QMAS), NHS Numbers for Babies and Bowel Cancer Screening. All of these systems are up and running. In addition, commissioning, payment-by-results, and plurality of provision are supported.

### Other programs

Other programs are delivered by other bodies, like the Staff Salaries System commissioned by the Department of Health’s Workforce Directorate. They also commissioned MTAS, the system for processing applications for junior doctor posts which suffered from adverse publicity in 2008. Paul suggested that there may be advantages in keeping everything under one organisational roof.

In a typical week (figures from May 2007), 1,250 new users registered for access to the NHS Care Record Service and 50,000 unique users accessed the main NCPRS database. A total of 650,000 prescriptions were transmitted electronically, 6.5m patient digital images were captured and stored, and 7m queries recorded on the Patient Demographics Service (PDS).

Electronic bookings made via Choose and Book (C&B) totalled 90,000. About 50 per cent of GP-referred first outpatient bookings to the acute sector are now made this way.

### NPfIT myths

Paul suggested that there are several myths associated with NPfIT. The National Audit Office confirms that it is not over budget in terms of its core contracts, these remaining at just over a forecast outturn cost of £6bn. NPfIT is not a single programme so press statements of the form ‘The programme is delayed’ cannot be totally accurate.

Some projects (like N3 and PACS) have come in early and under budget, but it is true that some projects are well behind schedule. There has been plenty of clinical engagement, as Paul himself can testify. There have been policy changes since the contracts were made, but this is hardly surprising and the architecture referred to earlier is designed to support change. Paul argued that QMAS has improved patient care, and PACS has reduced diagnostic waiting times and shown payback (in one typical example) within six months. Electronic prescriptions have reduced prescribing errors, C&B has reduced ‘did not attend’ occurrences, and the PDS has reduced the number of patient letters sent by hospitals to the wrong address. The often chaotic condition of paper records makes it difficult to believe that things were better before NPfIT.
Patient safety is event theme

‘Patient safety - who cares?’ is the title of the BCS Primary Health Care Specialist Group (PHCSG) Summer Conference. Jill Riley, administrator for the group, describes its planned coverage and format.

The annual PHCSG Summer Conference event will be held over two days on 30 June and 1 July at Chesford Grange in Warwickshire. The event usually attracts between 200 / 250 people from a cross section of society including GPs, other practice staff, nurses and allied health professionals, ICT staff, PCT staff, system suppliers and researchers.

The keynote speakers will be Dr Leo Fogarty, clinical safety officer, summary care record, NHS CFH; Martin Ellis, head of clinical risk management, BT Health and Dr Michael Bainbridge, clinical architect, NHS CFH. Other speakers include:

- Dr Michael Stein, chief medical officer, Map of Medicine;
- Cheryl Cowley, clinical and business transformation manager, NHS CFH;
- Dr Nigel Masters, GP, Highfield Surgery Bucks;
- Arif Govani, healthcare online business manager, Microsoft UK;
- Dr Libby Morris, RCGP Scotland;
- Kate Warriner, primary care IM&T manager, Liverpool PCT.

Programme topics include:

- clinical risk management;
- clinical safety testing of the care record, and information governance;
- the future of NHS IT: life after NPfIT in primary care;
- patient confidentiality – the current legal position;
- practice accreditation;
- data extraction from primary care systems (GPES);
- updates on GP2GP and EPS;
- NHS Resources Centre – free training for staff;
- care pathways – peril or profit?
- use of clinical indications;
- medication safety alerts;
- RCGP guide – making IT work for you.

The event is supported by an exhibition. The aim is to involve exhibitors so that delegates can find information on solutions to patient safety issues raised within the conference programme.

BCS health informatics members get reduced rates at this conference. Online booking will shortly be available at www.phcsog.org

If you are interested in knowing more, exhibiting or sponsorship please contact the Group’s administrator, Jill Riley on +44(0)1905 727461 or visit www.phcsog.org
The ASSIST National Conference 2009 will be held on 4 June at the National Exhibition Centre, Birmingham. Detailed planning for the conference is well under way.

The conference is aimed at CIOs, directors, heads and managers of IT and information services, clinicians in informatics roles, knowledge managers, IT specialists, informatics specialists, professional bodies’ representatives, local service providers, academics and colleagues with an interest in health informatics and making information work in the NHS.

The government is committed to providing a first class, modernised NHS for all. This requires the best possible use of information and associated technology.

The work and commitment of the health informatics professional is fundamental to this goal and to the future of the NHS. We encourage all health informatics professionals to attend as well as others with an interest in this field.

The conference is free to ASSIST members. Booking arrangements will be published shortly.

To join ASSIST or find out more event information go to:
www.assist.org.uk

ASSIST Yorkshire & Northern Branch
May (day tbc)
Lean ways of working and Branch AGM
Leeds
Details from: Carole.Archer@leedsth.nhs.uk

June

BCS Health Informatics Forum
16 June, afternoon
Topic to be confirmed
5 Southampton Street, London
www.bcshif.org

ASSIST National Conference 2009
4 June
NEC, Birmingham
www.bcs.org/assist

PHCSG Summer Conference
29 June - 1 July
Patient safety – who cares?
Chesford Grange, Warwickshire
www.phcsg.org

ASSIST Yorkshire & Northern Branch
June (day tbc)
Pseudonymization and what it will mean to you
Details from: Carole.Archer@leedsth.nhs.uk

September

ASSIST Yorkshire & Northern Branch
September (date tbc), full day event
Going Green
Launch to the 2009/10 season with a suppliers’ marketplace, and case study presentations
The John Charles Centre for Sport, Leeds
Details from: Carole.Archer@leedsth.nhs.uk

ASSIST London and South East Branch
29 September
Measurement for quality
Central London
www.bcs.org/assist/events

October

BCS Health Informatics Forum
13 October, afternoon
Topic to be confirmed
5 Southampton Street, London
www.bcshif.org