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In these difficult financial times, it is more important than ever that the most is made of resources, and that includes making the most of information, information systems and especially informatics professionals: important for the continuing provision of high quality patient services. The possibility of training embargos and budget reductions looms large with consequent reductions in quality. This issue suggests alternatives that need not break the bank.

Katherine Christensen describes the benchmarking club where members can compare their informatics services – facilities are available free of charge.

There are BCS Health events around the country. The Northern Group describes a recent event exploring the latest radiotherapy targeting techniques and the BCS annual showcase, HC2010, is coming up in Birmingham where there will be plenty of opportunities for networking, hearing about and seeing the latest developments and possibly finding that next job. The delegate rates have been restructured to allow BCS members to attend all three days for just £275. If you can’t get to these sorts of events, ASSIST’s developing professional group describe how they hope to use the latest technology and social networking sites to bring the event to you.

At such a time, it is a concern to note that Lorenzo may not be rolled out past release 2. Will this result in hospitals failing yet again to implement the technology that exists and provides support that can improve working practices and would be considered essential in any commercial environment? Let’s hope not.

Matthew Swindells, the new Chair of BCS Health, describes in an interview how he proposes to drive health informatics forward. It appears that BCS Health has a new structure, with new people and renewed enthusiasm to provide leadership for the profession.

Sheila Bullas is Editorial Board Leader of HINOW; secretary of BCS Health Informatics Forum and director of iBECK.

WE WANT YOUR VIEWS

HINOW provides an opportunity for you to exchange views or present your work. You might feel moved to submit an article or write to the editor. We are keen to hear from you. What do you find most interesting about HINOW and what would you like to see in future issues? Contact: justin.richards@hq.bcs.org.uk
BENCHMARKING
A report on the Health Informatics Services Benchmarking Club, which enables HI services to evaluate and benchmark their services.

NURSING ASSEMBLY
Paula Procter reports from Finland on the IMIA Nursing Informatics General Assembly.

LOOKING FORWARD
An overview of ASSIST’S activities and aims for the planning and improvement of healthcare.

BCS HEALTH N IRELAND
BCS Health Northern Ireland was recently launched in Belfast. Paul J McCullagh reports on the event.

RADIOThERAPY TARGETING
Radiotherapy technologies and their usage were discussed at a recent BCS Health Northern meeting.

COUNTDOWN TO HC2010
A preview of this year’s BCS Health Conference, HC2010, which promises to be the biggest and best yet.

PROFESSIONALISM
A look at different aspects of HI professionalism and its support.

EVENTS ROUNDPUP
A roundup of forthcoming events.
The Bowel Screening Information Management System (BSIMS), software developed by Health Solutions Wales, is helping to save the lives of people with bowel cancer – an illness that kills nearly a thousand people in Wales each year.

The BSIMS is a secure web application that supports Bowel Screening Wales in the delivery of the bowel cancer screening programme.

Screening process
The software supports the whole screening process, which began in Wales just over a year ago. To date over 235,000 people aged between 60 and 69 have been screened.

‘BSIMS handles the selection of individuals from the Welsh population who meet the specified eligibility criteria,’ says Stephen Price, Information Technology Development Manager at Health Solutions Wales.

‘Each invitee is sent a home screening kit in the post, which is returned and tested in the Bowel Screening Wales laboratory. The laboratory staff use BSIMS to keep track of the kits, record the results and produce results letters.

‘Participants with a positive screening result are referred for further investigations and are assessed by specialist screening practitioners (SSPs). BSIMS supports this process with a clinic booking module and provides a diary and online assessment form for SSPs.’

Saving lives
Bowel cancer is the third biggest killer of men and women in Wales. Bowel screening detects bowel cancer at an early stage, often when there are no symptoms, and yet when treatment is most effective.

According to the head of the Bowel Screening Wales programme, Hayley Heard, the aim of the programme is to reduce mortality from bowel cancer by 15 per cent in the group of people who are invited for screening by 2020.

The NHS Information Centre supports making public data public
As part of a smarter government commitment to make data more visible to the public, the government has launched a new data website.

Improving public and patient access to data is one of the Information Centre’s core business objectives. The Centre is the main data supplier for the NHS Choices website for patients and routinely provides comparative indicators for inclusion in organisational scorecards.

Empowering the public
Existing data has been made available on the website from across public sector organisations. As a central source of national health data and statistical information, the NHS Information Centre has provided over 400 data entries to the new site. Initially, this includes recorded hospital activity from the Hospital Episode Statistics (HES) www.ic.nhs.uk/statistics-and-data-collections/hospital-care/hospital-activity-hospital-episode-statistics-hes and national care quality indicators from the Centre’s recent Indicators of Quality Improvement (IQI) resource. www.ic.nhs.uk/services/measuring-for-quality-improvement

An Information Centre spokesperson said: ‘We welcome this new government initiative, which highlights the increasingly important role of information in empowering the public to make informed decisions about their health and other public services.’

For more information please visit the new public website at: www.data.gov.uk
A nurse has been suspended following reports that she took photographs of patients having operations and then posted them on a social networking site.

Allegedly the member of staff from Southern General Hospital in Glasgow secretly took the photos on her mobile phone and then posted them on Facebook. The images were spotted on the internet by one of the nurse’s colleagues.

NHS Greater Glasgow and Clyde recently confirmed that a member of staff has been suspended pending an internal investigation.

Margaret Watt, chairwoman of the Scotland Patient’s Association said: ‘The health board has taken the appropriate action by suspending the person. ‘But I would like to think that there is some kind of law where the police are able to take some action because this would be a breach of a patient’s human rights and privacy.’

THE LAST LORENZO?

CSC may only deliver the first two releases of Lorenzo, the electronic patient record system being deployed across the North, Midlands and East of England, under the National Programme for IT in the NHS.

According to sources close to the programme, local service provider CSC will only roll-out the releases that it has already received from software developer, iSoft. Gary Cohen, Executive Chairman and Chief Executive, iSoft said that Release 2 – or ‘clinicals’ – had been released to CSC and that Release 3 would be delivered to the LSP during 2010.

It appears that CSC will roll out Release 2, which includes care plans, ‘To Take Out’ prescribing and emergency care, but may now not deliver modules in further releases that were meant to include inpatient prescribing, theatres, maternity, social care messaging and GP integration.

More flexibility

A joint statement issued by CSC and Connecting for Health, said that discussions around the scope of Lorenzo are continuing following Health Secretary Andy Burnham’s announcement in December that £600m would be axed from the £12.7 billion programme.

The statement said that he (Burnham) ’intends to build on what is already working well in primary, acute and community settings, while giving trusts more flexibility within the framework provided by the local service provider contracts.

Faculty matters

The UK Faculty of Health held its AGM in February when its members agreed with the board to establish the faculty as a limited not-for-profit company. This now gives the faculty independence from its existing sponsor and enhances the faculty’s ability to create innovative think-tank style events focusing on its main aim of encouraging applied research and development for the benefit of UK healthcare.

The faculty is also seeking affiliation with BCS Health. Look out for more events and developments at the faculty’s new web site at: www.ukfhi.org

Congress update

The next Nursing Informatics conference will be held in Canada.

The American Medical Informatics Association (AMIA) has been selected to host NI2012, the 11th triennial Congress on Nursing Informatics. The Congress will be held in Montréal (Québec), Canada on June 23-27, 2012. For more information please visit: www.ni2012.org

Health Scotland

The BCS Health Scotland Conference this year, 22-23 September, will be the biggest and brightest yet.

The event is being staged at the prestigious Glasgow Science Centre where attendees will not only have great views over the Clyde and city, but complimentary entrance to the exciting science exhibits. The futuristic building complements BCS Health Scotland’s innovative and forward looking conference themes, which this year are quality and innovation.

With an even bigger exhibition than last year and again featuring selected exhibits of interest and relevance to the NHS and eHealth in Scotland, those attending can be sure of an exciting conference.

BCS Health Scotland would be pleased to hear of any research or innovative work using information or IT to enhance health quality or increase efficiency. For more information please visit: www.glasgowsciencecentre.org
David Clarke, Chief Executive Officer at the Institute, said: ‘We are delighted that Matthew has agreed to lead one of our most high-profile volunteer groups. Our Specialist Groups and Forums significantly contribute to the reputation that BCS, The Chartered Institute for IT, has for high-quality impartial advice, and the role it plays in enabling the information society. I look forward to working with Matthew and supporting the vital and important work that BCS Health plays in informing the debate around health informatics – a debate that affects the lives of everybody in the UK.’

Matthew said: ‘I am delighted to be taking on this role because I firmly believe in the role the Institute could play in improving the quality and professionalism of the specialist informatics community in the coming years. This is a crucial time for informatics, and for the NHS as a whole. I am looking forward to being a proactive ambassador for all branches of health informatics and BCS Health; promoting its activities and building confidence in the ability of informatics to contribute to improving our health system.’

Matthew’s background
Matthew has worked in several senior management roles inside the NHS, including head of information technology at Guy’s and St Thomas’ hospital, Director of clinical services at Heatherwood and Wexham Park Hospitals when it won the Health Service Journal’s Trust of the Year Award, and as Chief Executive at the Royal Surrey County Hospital.

He joined the Department of Health in 2006, initially as the Senior Policy Advisor to the Secretary of State, and then joined the NHS Management Board as the NHS’s first Chief Information Officer. Matthew is also a visiting Professor of Management at the University of Surrey and Chair of the charitable trustees at Imperial College Healthcare NHS Trust.

What priorities do you have for the BCS post?
I see BCS Health as having two priorities. The first is to help the government and the NHS make better policy decisions around information and IT, to enable the NHS to maximise the benefit that informatics can bring. The second is to raise the information and IT expertise in the NHS, both amongst informatics professionals and the wider NHS staff, who should be using information to support their decision making. We will do this by engaging both at national level with the government and the Department of Health and by supporting NHS locally.

What are you keen to work on particularly?
This is a crucial time for informatics and the NHS as a whole. The challenge is for the NHS to raise the quality of its services, whilst dramatically reducing costs. I find it hard to imagine that the NHS can succeed in doing this without the support of information technology. I will be working to build the skills and confidence of the informatics community to fully contribute to this strategic challenge.
How does your experience in the NHS/government help with this new role?
I have spent 20 years in the NHS trying to improve care for patients and services to communities through better management and the use of technology. There has never been a more important moment for the informatics profession to engage in the strategic direction of their organisations. The NHS leadership has never had a better understanding of the role of information in driving quality and productivity, but, worryingly, confidence in our ability to meet that challenge is very low.

I believe that I can use my knowledge and experience to help BCS Health address the challenge of equipping the informatics profession to drive improvement in the NHS from its core.

What do you make of the current progress being made within the NHS on IT?
One of the NHS’s failures has been that it has focused too much on IT and not enough on information. Good, timely information allows clinicians and managers to make better decisions, allows the public to hold the NHS accountable, and ultimately saves lives and improves care. I’d like us to spend more time talking about how we liberate the information that we have and less time talking about who supplies the boxes to hold the information.

However, you can’t ignore the National Programme for IT. It is one of the most complex informatics challenges anywhere in the world. It does the NHS no favours to claim either that it has been a disaster, when many real gains have been achieved, or that it is a triumph, when so many of the objectives have palpably not been met yet.

I believe that the speed of change in the NHS is so fast and the need for local ownership is so great that a more flexible solution is necessary. The technology is available to support this in a way that it wasn’t when the programme was launched and the National Programme has changed a great deal in the past two years to reflect this.

The National Programme must become ever more ‘fleet of foot’ and position itself as a platform for innovation, rather than the only acceptable way. However, it should also be proud of its successes and continue to strive towards a system that joins up the information needed to support care. Throwing away the vision because it got difficult would be a monumental mistake.

Some of this interview previously appeared on SmartHealthcare.com, Guardian News & Media’s website for informatics professionals.

It does the NHS no favours to claim either that it has been a disaster, when many real gains have been achieved, or that it is a triumph, when so many of the objectives have palpably not been met yet.
The HiBC enables health informatics services to evaluate and benchmark their services with those of other members and, in so doing, identify areas for development or improvement. This is to help them assure the quality of what they do and develop services they know are fit for purpose, both now and in the future.

At the heart of the process is the Benchmarking Information Pack (BIP), which collects the data on which benchmarking is based. Club analysts extract the data, provide reports and share anonymous data amongst members. The BIP was revised in summer 2009 and is available as an online resource through the Club website at: www.hibc.nhs.uk

The HiBC also facilitates specific projects and members have recently looked at such areas as customer satisfaction, infrastructure, cost of ownership, equality and diversity. This pooling of expertise to tackle topics of mutual interest has great potential to benefit all members and the wider NHS.

The HiBC is managed by The Health Informatics Service (THIS) located in West Yorkshire. A governance body provides direction and oversees development for the club, while members help to shape its services as it gathers momentum.

The potential of benchmarking to support developments in service quality and value for money was highlighted by the Department of Health’s Informatics Planning 2010/11 guidance in a call to local health communities (LHCS) that they should:

‘… review the most effective and efficient models for delivery of informatics and technology services to local communities to reduce the total cost of ownership of technology. These models should include the shared health informatics services (HIS) approach to back office technology services. Benchmarking and accreditation of these services will be proactively promoted.’

The advocate
Julie Rayner – Head of IM&T, Suffolk Support Services – is one of the members of the Health Informatics Benchmarking Club and a strong advocate for the benefits of joining.

Julie said: ‘I joined the HiBC in 2009 and am impressed by the professional and encompassing way the club is run. The members themselves are active in deciding target projects for the year and are given the opportunity to participate in existing and new projects and to educate and influence their content and direction.

‘Facilities are provided free of charge to members and preclude the need to procure expensive external benchmarking/survey services. They also provide a bureau service to enable and facilitate the sharing of good practice and the opportunity to talk to other HIS suppliers on the challenges facing all HIS services regardless of the sector of delivery.

‘I included all my senior management team in the completion of BIP and this highlighted to them all the departmental areas where standards were being met, not being met or where they were only partly being met.

‘Completion of the BIP brought these into very clear focus and has enabled us to create an action plan to improve the identified areas whilst maintaining and improving standards in others.

Over 180 NHS organisations have now registered with the HIS Benchmarking Club (HiBC), with individual membership at more than 260. Katherine Christensen, Knowledge Communities Implementation Manager, DH Informatics – Policy and Planning Directorate, explains about the club’s activities and ambitions.
‘Real benefits of using the BIP provided by the club is that it is asking the same standard questions to all HIS providers regardless of sector, it is free to use and the quality analysis is provided to give an overall result and is also split into service type so I could compare my service against other shared services.

By completing the BIP I have already achieved part of the requirement of the IM&T Operating Framework for benchmarking the service and by completing the BIP and by creating and implementing my action plan I am contributing to my Trust’s QIPP and CQC requirements. Other details collated for BIP are also required for the IM&T Investment Survey and I can produce evidence to satisfy audit.

The other HIBC projects also contribute to all these national and local directives and the club is looking to move forward with a national accreditation scheme for HIS services. The club has close links into the national areas HIS services are affected by and are able to proactively influence national thinking.’

**Measures**

The web-enabled Benchmarking Information Pack (BIP) is the main way in which data on health informatics services is collected and made available to the club. The BIP shows a red/ amber/ green (RAG) status for each measure for the organisation submitting data. The online tool also produces spider plots and comparison reports between all organisations who have submitted data.

Critical success factor measures include:

- Who does the head of the service report to?
- Is there a published statement of the strategic direction for the service and the contribution that it will make to local health improvement and health care services?
- Is the most senior informatics post-holder present at board meetings of customer organisations?
- Is there regular dialogue between the most senior informatics post-holder in the service and the chief executive(s) of customer organisations?
- Is the most senior informatics post-holder present at board meetings of customer organisations?

Member organisations of the benchmarking club actively take part in other activities, meetings and site visits, so that they can compare, measure and improve current systems and processes.

1 The Health Information Service provides innovation solutions and accrediting services to clients across the health, social care, social enterprise and Third sectors throughout the UK.

**PROJECT EXAMPLE**

The HI Service Benchmarking Club also facilitates specific projects – members have recently looked at such areas as customer satisfaction, infrastructure, cost of ownership, equality and diversity. The Customer Satisfaction Survey project has been repeated three times and is complete for the moment, the Service Line Costing project is in progress, the Equality and Diversity project is complete and the following projects are coming up this year – Infrastructure, Supporting NPfIT Product Deployment and Professionalism. This pooling of expertise to tackle topics of mutual interest has great potential to benefit all member organisations and the wider NHS.

Julie Rayner, Head of IM&T at Suffolk Support Services, said: ‘Within Suffolk Support Services I have taken the opportunity to utilise three of the projects available, the Equality and Diversity Survey, the Customer Satisfaction Survey and the BIP and have received great local benefit in doing so.’

If you or your organisation is interested in joining the club, all you need to do is register at: [www.hibc.nhs.uk](http://www.hibc.nhs.uk)
This was the last Nursing Informatics General Assembly to be chaired by Robyn Carr from New Zealand. The new chair Heimar Marin from Brazil was welcomed. Robyn has been a transformational chair, in that she has facilitated the development of the special interest group through the skills and abilities of those around her. This has allowed individuals to take on tasks on behalf of the group and report to the assembly. The assembly was very well attended; indeed the room selected proved to be too small for all to be actively involved and this was a problem. There were honorary members, who are the doyennes of nursing informatics, committee members, country representatives, observers who hope to become members and general observers.

Discussions were held under a tiered framework, in that there were those with inside information at the one extreme and those with no or outdated information at the other extreme, resulting in little useful exchange. Given that nursing informatics is at a tipping point in terms
of advancement, it seemed to me that there was little ability for rapid forward impetus if all views needed to be addressed.

Problems with pre-meetings
As the meeting progressed through the agenda, it became clear that there had been a pre-meeting of the officers of the specialist group. Others may have been involved, but I cannot confirm that. I have no problem with pre-meetings as long as they are transparent and are not used to offer ready-made solutions to issues expected to arise. It will be interesting to see how the new chair and officers work in the future. The new officers are listed on the IMIA NI website: [www.imiani.org](http://www.imiani.org)

We updated the definition of nursing informatics, which is now:

*Nursing informatics science and practice integrates nursing (its information and knowledge and their management) with information and communication technologies to promote the health of people, families and communities world wide.*

IMIA-NI definition, adopted July 2009, Helsinki, Finland

We did not find agreement with regard to a task group I led which looked at the possible implications of the IMIA proposal to increase the frequency of the MedInfo conference from every three years to every two years. This is to be raised again at the next General Assembly during MedInfo 2010. The current suggestion is along the lines of a large NI congress every four years with an ‘NI-Lite’ in between, where the special interest group works with a particular country to raise its nursing informatics profile through collaborative workshops and seminars.

Organisers update
We received an update report from the NI2012 organisers and all appears to be progressing satisfactorily.

The Nursing Informatics conference is currently held every three years and is a tough task for any organising country to undertake. I think Finland had even greater difficulties than normal, with the credit crisis just beginning to have an impact. Others have commented on various aspects of the conference ([HINOW](http://www.imiani.org), September 2009). I would like to concentrate on my impression of acquiescence displayed at the conference.

It is widely acknowledged that nursing has not been at the forefront of most nations’ minds when developing new ways of working with information and communications technology. Indeed at the 2000 congress dire warnings were given of what might happen to nursing if we stayed silent, now that there is an international shortage of nurses and a growing concern that the increased education of nurses has not had the impact originally intended.

Room and board
There is a need to move nursing outside ‘room and board’ in terms of costing, and for nursing to stand amongst equals, accepting its core role as the ‘glue’ across the myriad of services patients and their relatives and friends now procure in today’s services for health and social care.

My overall feeling of the papers, posters and general conversations with colleagues was that there was a certain ‘treading of water’ going on. We had reached an impasse and although the technology was getting smaller and the tools getting smarter, nursing wasn’t moving forward in the world of supportive informatics.

A moment of clarity
In the midst of one very low point at the conference, I decided to reconsider my now very clouded view from a different perspective and came away with a much more positive attitude.

There were individual speakers who were demonstrating good practice in clinical nursing, education and research. Maybe the point in 2009 wasn’t so much about finding a nursing role, but more about accepting the role we have and weaving the tools of today in and out of the role; tools that we need to carry out the role for the best treatment for our patients, their relatives and friends. Maybe we had arrived and informatics was no longer a goal, but a living and breathing dimension of nursing nearly ten years into the 21st century?

The importance of conferences such as the Nursing Informatics Congress was certainly validated in my eyes at NI2009. It challenged my thinking and although a little disappointing it has helped me re-charge my belief in nursing informatics and availed me of additional information to use in my teaching and research.

I thank BCS for assisting in the funding of my attendance, as do my students.

For more information please visit the International Medical Informatics Association Nursing Informatics website at: [www.imiani.org](http://www.imiani.org)
In informatics and the NHS as a whole, there is no escaping the pressures from the economic downturn. We are moving into an NHS that needs to become savvier with resources and prove the value and benefit of investments. This is a great opportunity for change, which, if embraced and taken full advantage of, will deliver great benefit to patients and staff alike. With this in mind, the biggest challenge in 2010 is that of ‘quality and productivity’.

Health informatics is a fast evolving profession, critical to the effective delivery, planning and improvement of health and social care, in all its forms – IT, IS, records management, information management and information governance. With this in mind Jenny Jackson and Graeme Morgan, ASSIST Developing Professionals Group (DPG) and informatics graduate management trainees, provide an overview of BCS Health ASSIST’s activities and aims in these areas.

**Real opportunities**

The quality, innovation, productivity and prevention (QIPP) agenda is also a hot topic and central to its success is the effective use of informatics tools and skills. The innovative use of technology and information and the efficient operation of IT and information services provide real opportunities to improve:

- the safety and effectiveness of care;
- the patient experience;
- the working lives of staff;
- the productivity of valuable assets.

ASSIST is keeping pace in this ever changing environment; re-energising and bringing prominence to the informatics forum, demonstrated through the evolution of the DPG and its efforts to infiltrate social networking platforms such as Facebook and Twitter.
Accessibility and modernisation

ASSIST is not only moving with the times, but becoming accessible to a whole new audience. By participating in the social networking revolution, we are able to inform members of any current news and information and give them the opportunity to take an active part in online discussions. The groups allow networking with colleagues and members, who are able to invite others in the health care community to join them, enhancing the visibility of ASSIST. We envisage the social networking groups as being another tool to unite the health informatics community.

Continuing with this modernisation theme, we are working to make ASSIST interactive. The availability of national as well as regional events is a massive selling point for its members, but we understand that individuals are not always able to take time out of busy schedules to attend. In the current economic climate, this time pressure is expected to intensify.

Online interaction

Although most managers appreciate the value of professional development, recruitment freezes and staff shortages can make it difficult for them to release team members for what they perceive as luxuries. And whilst slide shows and presentations are often made available after the event, they sometimes do not offer the additional context and background that was provided on the day. However, we are now in the process of investigating several technologies to facilitate the filming of events in their entirety and then making them available to view online. So if you couldn’t attend or you did, but would like to view the material again in the future, it will be available to you. Interactive ASSIST will not be a substitute for attending events, but an additional benefit to meet the needs of our members.

National conference

DPGs provide valuable support and a fresh perspective and input at national informatics events where ASSIST has been showcased at, such as last November’s E-Health Insider Live ’09. The forthcoming ASSIST National Conference on 29 April will be an integral part of the HC2010 Health Informatics Congress at the ICC, Birmingham. After that, the ASSIST stand at Smart Healthcare Live on 15-16 June 2010 at ExCeL, London will act as a useful opportunity to spread knowledge and understanding of what ASSIST is and what it can do for you.

Our initiatives over the coming months will be fundamentally designed to continue to meet the needs of our members by developing member involvement in national events and a focus on regenerating the regional branches. We will be providing workshops and seminars around issues of mutual interest such as professional development, de-mystifying the NHS and access to care records.

However, we are now in the process of investigating several technologies such as podcasts to facilitate the filming of events in their entirety and then making them available to view online.

Making a difference

We want to connect those working in informatics and provide genuine support to enhance networking opportunities and personal career development. We want to maintain skills, exchange information, intelligence and knowledge and enhance and share examples of good practice. In practical terms this will involve continued development of health informatics as a profession. We need you, your ideas and your input if we are to grow and develop further into a renowned and increasingly recognised community in the health informatics world.

Getting involved

If you are not already a member of ASSIST and would like to join you can download a membership application form from: www.assist.org.uk If you are interested in getting involved with the ASSIST DPG please contact the group at: jenny.jackson2@nhs.net

BCS Health ASSIST is a professional association for those working in and for informatics in healthcare and social care. Its objective is to develop professionalism and professional standards, and to work with other bodies including government to provide a voice for informatics professionals.

ASSIST CONFERENCE

The BCS ASSIST National Conference will be held on Thursday, 29 April 2010 at the ICC, Birmingham. The Conference is a major benefit of ASSIST membership, offering both networking and intelligence-gathering opportunities and has gained excellent feedback from members in previous years.

For more information visit: www.assist.org.uk
Health informatics in Northern Ireland was previously organised as part of the BCS Health Informatics Forum. BCS Health Northern Ireland is the new regional forum for knowledge sharing in health informatics and connected health in Northern Ireland, with participation across the stakeholder groups including: health and social care professionals, HSC informatics and records professionals, government, industry, academia and service users.

The group was launched on behalf of BCS by Jean Roberts, who also relayed conveyed best wishes from Matthew Swindells, Chair BCS Health.

State of play
The population of Northern Ireland is projected to rise from 1.71 million in 2004 to 1.82 million by 2024. Over the next 20 years both demographic and social trends will bring into sharp focus the need for services that are capable of meeting the needs of the increased number of people who will be living alone. Those services may also have to cater for high levels of social deprivation and the implications of sustaining rural communities. There will also be higher levels of disability as people live with chronic illness.

BCS Health Northern Ireland aims to promote the development and use of health informatics and connected health in Northern Ireland to support effective, efficient, evidence-based, health and social care in areas of research, education, practice and in 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 health and related services.

Open+Health
The conference theme was Open+Health. It was the second of the biennial OpenIsland all-island conferences organised by open-n.i and OpenIreland. These are two multi-agency organisations with a shared mission ‘to strategically promote awareness, understanding, development and uptake of free and open source software across both the private and public sectors, as well as enhancing the competitiveness of the indigenous software sector by exploiting the opportunities offered by open source business models’. The conference comprised of invited presentations from:

- Colin Smith and Joseph Molin (World Vista), who addressed improving quality of care using an open source electronic patient record system. Supporting data was presented from a large population within the Veterans Association in North America.
- Peter Murray (Vice President, International Medical Informatics Association), who championed the open source philosophy. In particular, he cited the Open Steps Project, the UK and international priorities for free/libre and open source software (FLOSS) in the health informatics domain.
- Professor Piotr Durka (University of Warsaw), who provided an academic perspective on open source authoring and collaboration for biosignal information collection, storage, retrieval and interoperability using SignalML (developed and distributed under General Public Licence v3). He also cited open source and software licence approaches to brain computer interface research, OpenBCI www.brain.fuw.edu.pl/~durka and BRAIN www.brain-project.org
Dr Howard Johnston, who demonstrated the power of Health Atlas Ireland, which provides geographical interpretation of statistical health data.

Regional perspectives
Local and regional perspectives were at the forefront of discussion.

Gerard Hurl [National Director of ICT in the Health Services Executive in Ireland] discussed the challenge of providing health care in the Republic of Ireland and cited the lack of domain specialists in health informatics as a major obstacle.

Dr Hubert Curran [European Centre for Connected Health, www.eu-cch.org] tackled the huge issue of connected health and its role in promoting well-being as tele-health solutions become more widely available. As a general practitioner, he discussed obstacles for uptake from primary care.

Professor Roy Harper [Consultant Physician and Chair of BCS Health Northern Ireland] provided the case for preventative health care, particularly in his specialist area of diabetes care. He discussed the significantly increased incidence of chronic diseases and conditions, which presents a huge challenge globally. He went on to say: ‘We will have an ageing population, significant rising cost of managing chronic disease and finite resources to provide that care. Hence the development of cost-effective, open and connected health service solutions to meet users’ needs will be core to maintaining and improving the quality of healthcare and the quality of life for the people of Northern Ireland.’ He then went on to cite collaborations with academia and health users as being important to this collaborative approach.

Dr Liming Chen [University of Ulster] provided an academic perspective of assisted living applications and described projects that are already benefiting the local population with partnerships with FOLD telecare and The Cedar Foundation.

Jonathan Wallace [University of Ulster’s Director of Knowledge and Technology Transfer in the Faculty of Computing and Engineering] explained that computer technology will have an increasingly important role to play in healthcare services as Northern Ireland and the world’s population rises and ages over the next 20 years.

The conference was attended by approximately 150 people and brought together key stakeholders in connected health from the health trusts, academia, industry and government to share their knowledge and experience of using open and connected technologies to improve service delivery and health and well-being.

Participants were also invited to take part in a summit workshop (22 Jan at the University of Ulster), which provided an opportunity for decision-makers to address key questions on the future strategy of open and connected health delivery and its evolution across a regional, national, European and global context and move the discussion towards specific recommendations and actions.

For more information about BCS Health Northern Ireland please visit: www.bcs.org/health/ni
Chris Moore began by giving a virtual introduction to the team of four in the North Western Medical Physics Department (NWMP) of The Christie Hospital, and then gave a brief history of how imaging and therapy parted ways for some time following W. C. Roentgen’s popularised discovery of X-rays in 1895. Indeed photography and X-ray parlours gave the public the chance to acquire pictures of themselves inside and out. Radiotherapy treatments were reported on from 1896 onwards.

Cancer cells
Moore moved on to talk about cancer cells, explaining that they were not ‘programmed’ properly, and they did not behave like other cells. One characteristic is that some kinds die much more easily than healthy cells when they are exposed to radiation. Normal cells were likened to prize fighters, they keep getting up again when they have been knocked down and they will recover time and again, whereas repeated blows will kill off the cancer cells. This difference between cancerous and normal cells provides what is termed a ‘therapeutic window’.

Single CAT scans have been used for planning radiotherapy since the late 1970s. Algorithms to determine the radiation dose distribution to be delivered to a tumour require the body surface, the target position and the shape of the tumour to be explicitly defined as graphical constructs. Similarly, organs at risk in the vicinity of the tumour need to be defined as graphical structures. However, despite this exquisite computerised planning detail, it is still common simply to mark the patient’s body surface with indelible ink to indicate to the radiographers where to direct the therapy beams once the patient is in the treatment room.

Image guided radiation therapy (IGRT) has finally taken X-ray imaging directly into the treatment room – but only in the last few years. Various imaging methods have been deployed to get better images
A typical breast cancer patient can have 15 visits during a course of treatment, which has the potential to produce huge amounts of data.

GB of 16 bit raw projection data and 2.14 GB of reconstructed volumetric data each time cone-beam scanning is used. The installed Christie computer systems could not handle this amount of data so the team had to build their own system whilst waiting for viable commercial solutions. At the moment this technique is only used for a small proportion of the thousands of patients seen annually at The Christie, but this will inevitably grow.

The whole point of what follows is to target more accurately the area to receive the radiation and to limit the exposure of the surrounding healthy tissue to unnecessary radiation.

CAT scanning and treatment planning calculations are not done in the treatment room and are not dynamic. They are performed prior to the arrival of the patient in the treatment room itself. However, during treatment, the tumour is constantly in motion – the patient has physiological motion: they breathe, have heartbeats etc. There is no such thing as the patient remaining perfectly still during treatment even with immobilisation devices. All of which makes it hard to set up the patient and aim the treatment beams at the tumour target.

Ideally, imaging should be dynamic and performed during both patient setup and treatment. With X-ray imaging, the therapy radiographers cannot of course be there during treatment even with immobilisation devices. All of which makes it hard to set up the patient and aim the treatment beams at the tumour target.

The clinical needs of an imaging tool, complementary to X-ray imaging, are that it should:

- show 3D body shape and position;
- provide images on demand;
- be radiation-free;
- work before, during and after irradiation;
- be dynamic, even having a real-time capability;
- have millimetre accuracy.

In 1993 Professors Moore and Burton concluded that there was an optical solution.

Optical solution

Dave Burton took the floor and began to tell the meeting about how they went about tackling the problem that Chris Moore had described.

It was agreed that what was needed was something which could measure the shape and position of the patient on the bed. The constraints were:

- there must be no contact;
- it must not interfere with the treatment itself;
- it must be relatively easy to use;
- it must be robust.

The team decided to employ an approach known as ‘structured light’. A highly structured light pattern is projected onto the patient’s body surface and it is viewed off-axis with a digital camera. The patient’s body shape will modulate the structured light as observed by the camera. As the original structure is known and the modulated image can be captured, it is possible to work out the modulating function i.e. the patient’s shape.

The Mark 1 Sensor

The Mark 1 Sensor was based on a laser twin-fibre interferometer. The two professors used a helium-neon optical laser and split the laser beam into a stripy (venetian-blind type) pattern. To overcome the uneven intensity of the light beam – it is brightest in the centre and diminishes at the fringes – they used a piezo actuator, which moves the stripes of light back and forth very fast. They solved the problem of reconstructing all the parts of a 3-D sliced model of a body using a technique called Fourier transform profilometry. An important step in this process is the so-called ‘phase unwrapping’, in which they became world leaders.

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The team tested the sensor on a student and they were able to create a 3D model of the student’s back from the stripy pattern of light. From here, in the mid-90s, they were able to move to testing it on real patients. NWMP then developed a method to dynamically reconstruct the live body surface accurately enough to see the patient breathing and even reveal the heartbeat.

The sensor was used in clinical studies at The Christie, specifically on breast cancer patients, and it lead to some extremely interesting results. At this point they had the fastest, most accurate sensor in use in radiotherapy, but felt that things could still be pushed further. In...
particular they wondered if they could do it in real-time while the patient was being treated, but that would require more coverage and more speed. It would require at least a 270 degrees arc of view with a 40cm³ field and something approaching a video frame-rate (about 25 frames per second) with a start/stop button.

The only way to achieve the 270 degrees arc would be to have more than one camera with overlapping fields of view. In fact they would need three cameras and they would need three sensors. These multiple channels would have to be optically separated and the sensors would have to be networked and operate synchronised and in co-operation, so that each sensor only saw its own stripy pattern. Given the enormous complexity of one sensor, this was going to be a tall order. Three years ago they set out to build such a system.

The multi-sensor images ‘snap together’ into a 3D model. In the clinic, three sensors are in place, one above the patient’s feet, another on the right-hand side and a third one on the left-hand side.

**Guided radiation therapy**

Burton then handed the floor back to Chris for an overview of the use of optical surface sensing for image guided radiation therapy.

Early testing suggests that the triple optical sensor system is accurate to a millimetre or so, which is comparable to the accuracy of patient cone-beam CT scans. The system is now generating up to 270 GB of data per patient for five minutes of use. Since a course of treatment can easily be 15 daily fractions, the challenge to future networking and data storage problems is obvious.

North Western Medical Physics at The Christie is now using custom-built terabyte computers on a special network, but it is necessary to find a way to rationalise the amount of data produced. The Christie currently cannot handle this volume of data over its established NHS PACS network. Government advisors have said that image guided adaptive radiotherapy should become a national standard of care, which of course has huge implications for IT infrastructure.

Funding and support is still needed to continue working with optical sensors before they can become universally available with anything like the performance achieved in the studies by Liverpool John Moores University and The Christie. Inside out, live, and while the patient is being treated, is the goal.

For more information about radiotherapy go to: [www.radiotherapy.in/mssd](http://www.radiotherapy.in/mssd)
The countdown to the start of HC2010, the largest health and social care informatics congress in Europe, has begun. Christine Connelly, CIO for Health and David Behan, Director General of Social Care at the Department of Health, are among a number of high-profile speakers who have agreed to attend this year’s event in April at the International Conference Centre, Birmingham.

This three day event, (27-29 April), has undergone a series of changes to ensure it remains one of the most significant events in the health informatics calendar. This year’s registration process incorporates the latest barcode and mobile technology to automate and streamline the registration process. Delegate rates have also been altered in recognition of constrained budgets and to enable attendees to benefit from their membership of BCS, The Chartered Institute for IT, which owns and runs HC.

Exhibitor presentations are expected to be more closely integrated into the conference and there are plans for a new ‘careers zone’ that offers one-to-one sessions for health informatics employees or other NHS staff looking for a career in the industry.

Mike Sinclair, head of the HC2010 organising committee, says: ‘We are very pleased that the new-look HC2010 is to be complemented by the new registration technology. HC2010 will showcase some of the best and most current technical systems, services and solutions used to support care and treatment in the world today. As well as current best practice and examples of leading-edge technology, the conference will include contributions from policy makers and examples of innovative strategic and tactical practice across the world of health and social care informatics.’

Conference programme
The conference programme comprises 12 streams looking at a wide range of issues relevant to health and social care professionals. There will be a case study on the UK’s first NHS/local authority integrated ICT service (between NHS Herefordshire and Herefordshire Council), as well as interactive workshops about information and its relationship with the delivery of care, hosted by BCS Health.

Speakers from Bristol Royal Hospital for Children will also talk about the lessons learned in developing a knowledge sharing culture across the NHS.

Delegates will be able to contribute their views during an interactive café discussion about informatics as a profession and how it should be recognised for the critical role it plays in the delivery of a modern, safe, high quality and value-for-money health service. This session will be led by Di Millen, Head of Informatics Development Department for Health’s Informatics, Policy and Planning unit.

Additional speakers
Other confirmed speakers include Jim Easton, National Director of Improvement and Efficiency and Professor Heinz Wolff, Founding Director, Brunel Institute for Bioengineering. Also speaking will be Dr Aiden Halligan, Director of Education at University College London Hospital, Professor Michael West, Executive Dean at Aston University, as well as Christine Goodfellow, Director of the Improving Information Sharing and Management Programme at the Department of Health.

Children, Schools and Families. ASSIST (Association for Informatics Professionals in Health and Social Care) will hold its National Conference alongside HC, at the Centre, on 29 April.

New delegate rates
Delegate rates for HC2010 are as follows and each includes the full three days plus the cost of the event’s gala dinner, this year held on the first evening of HC2010.

- Delegates working in the public sector who are not BCS members, will be charged £450¹;
- Delegates who are BCS members will be able to attend for £275;
- The cost to ordinary delegates is £625;
- Student rates are £275 for two or more days, or £175 for one day;
- Non-BCS members could benefit by signing up for BCS membership for as little as £36.

See: www.bcs.org/membership

Mike concludes: ‘Now, more than ever, it is vital for each of us in the informatics community to network with other colleagues and make connections with suppliers. We are aiming for HC2010 to provide a unique opportunity to learn, share, debate and network, all under one roof.’

To view the full programme, or to register, see: www.hcshowcase.org

Delegates should go to the delegate zone section of the site to register.

¹Please note: Delegate rates are subject to a VAT rate of 17.5%.

THE CAREER ZONE
The Career Zone has been designed to offer:

- career support using the Health Informatics (HI) Careers Framework; delegates will be offered the opportunity to have a one-to-one session, aimed at current HI employees or other NHS staff looking for careers in HI;
- tutorials to see the HI Career Framework in action, using case studies;
- the chance to see how the HI framework can assist in recruitment and retention;
- the opportunity to publicise the various career routes into HI aimed at students from sixth form colleges, further education and higher institutions.

THE CAREER ZONE
HC2010
Health informatics (HI) is an emerging area but there have been individuals designing, delivering and running informatics solutions, carrying out research and ensuring that the end-users are positioned to use the systems effectively and efficiently, since the late 1960s. However, only relatively recently have there been significant moves to create a holistic community and put in place the rubric by which the constituencies within the profession[s] can move forward.

There are a number of stakeholder organisations in the HI space, currently with some functional overlaps, including BCS Health, UK Faculty of Health Informatics, UK Health Informatics Society and UK Council of Health Informatics Professions. A collective review involving many of these organisations is looking to rationalise and create clarity across the community.

**Value to the individual**
The multi-dimensional health informatics community contains eight main constituencies (ICT, information management, knowledge management, portfolio/programme/project managers, codes of conduct that recognise effective information handling are infrequently seen in health. Individual professions have specific responsibilities with respect to handling sensitive data or the systems which provide such information to support decision-making. However, there are some practices that should apply generically. **Jean Roberts** looks at different aspects of professionalism and some of the tools currently available to support its development.
Potential employers are increasingly aware that registered HI professionals are recognised by their peers and will carry out personal development in order to stay up-to-date.

do the role they are considering applying for and if not they can see where they need to gain more experience or qualifications to maximise likelihood of success in an application.

Registering with the UK Council for Health Informatics Professions www.ukchip.org strengthens an individual’s position. Each registrant demonstrates their commitment to adhere to a code of conduct and continuing professional development related specifically to the health informatics domain. Increasingly potential employers will be looking for such a commitment, as is the case already in Wales. There will be hybrid professionals who also have professional responsibilities and development opportunities to other professions; such as the knowledge manager to the Chartered Institute of Library and information professionals or BCS as The Chartered Institute for IT. A personal eclectic mix of registrations can strengthen the commitment to professionalism and provide the potential for mobility throughout the specific health domain.

Value to the organisation
The same data that is used to describe typical job roles via the Career Framework can be used by an employer to project their overall resource needs and map existing staff against that profile, to identify areas where the organisation could be lacking in skills and competence. This exercise can initiate a recruitment exercise with a clear brief to reduce the gaps or increase specific resources in a particular developmental growth area. Alternatively, it can indicate a need for re-orientation of teams as demand for informatics to support health changes over time.

Upcoming areas of demand include technical expertise in business information analysis for strategic population profiling, competence to support future connected health (telemedicine-related) projects and complex programme management of multiple projects at local levels. Potential employers are increasingly aware that registered HI professionals are recognised by their peers and will carry out personal development in order to stay up-to-date.

Languages of professionalism
In a complex multi-employer landscape like health, operational public sector health and social care, commercial solution and service provider and academic/research organisations compete for scarce qualified and experienced people. Consistent, comparable ways of describing achievements facilitate a level playing field for both potential employers and employees.

The case for distinctive domain-specific factors within health informatics has been well-made. There is, and will continue to be, movement both in and out of the community in order to meet escalating demands for informaticians. Skills requirements and personal competences must be continually mapped from generic profiles [e.g. Skills framework for the Information Age, BCS IT membership/fellowship criteria and the Skills for Health NHS National (Occupational Standards) to the expression of the NHS Career Framework and UKCHIP’s standards to facilitate comparison and levelling.

UKCHIP
UKCHIP has been established to promote professionalism in health informatics and the certification of those who work in the profession. It operates a voluntary public register of health informatics professionals who meet clearly defined standards of competence and agree to work to a common code of conduct. UKCHIP provides an independent but synergistic domain-specific function to that of BCS Health. BCS Health is a domain-specific entity within BCS, the objectives of which address both the promotion of the academic discipline of IT and the needs of the professional body [furtherance of the IT profession] per se.
The same standard expressions should be used for both NHS and third party HI professionals to ensure parity. Further credentials such as Chartered status (CITP, CEng, CSci) may be achieved later in a career. Pre-accredited academic courses or personal portfolio submissions of experiential evidence can be used to demonstrate continuing fitness to practise.

An individual’s value to a potential employer must be understood and assessed appropriately. An area of current risk is that the contribution of such diverse expressions of competences is not fully understood or consistently interpreted by employers. More work is needed to ensure professionals are considered equally for new posts.

Complexity of applicants

Job applicants come both from within the HI domain and increasingly from other sectors because of developmental decisions or through the downsizing of other institutions. This can lead to applicants responding to recruitment advertisements and competing for positions for which they may be over-qualified. It can be a difficult judgement call.

Some health professionals may develop tangential interest in informatics, hence enhanced informatics components such as formal project management or technical standards may be a necessary addition to their CV. The Career Framework and the upcoming UKCHIP online tools will help discussions at personal development planning meetings with line managers, whether the individual is at the start of their HI career or well into it.

How to plot your professional course

UKCHIP is defining specific standards to be demonstrated by a mix of the above for each of its levels of registration. These will additionally, through online tools support any individual wanting to assess the types of jobs that they may be eligible for.

It is intended that subsequent versions of the tools will also provide guidance to candidates on how their skills might be enhanced through academic educational or commercial training courses.

Using the Career Framework as a road map, users can log their development activities, from presenting, writing and commenting through to attending group meetings, providing work-based assistance to colleagues and keeping up with appropriate web feeds, all of which can ultimately help prepare them for suitable job roles when they appear.

On reflection

In the March 2009 edition of HINOW, I asked whether the health informatics profession was growing up. It has definitely developed, but is still not mature. As the Developing Professionals Group of ASSIST indicates, we all must do more to share experiences, knowledge and work towards a brand identity.

Please watch out for discussions on Linked In [groups such as BCS Health Informatics Forum, UKCHIP and ASSIST], on the eSpace area and through the UK Faculty of Health Informatics, in addition to reading HINOW.

Jean Roberts is a Senior Lecturer in health informatics at the University of Lancashire and is a board member of UKCHIP and the UK Faculty of Health Informatics.

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Enabling the information society
EVENTS

April 2010

BCS Health Northern
22 April 2010
Health Informatics for Patients
Manchester Conference Centre, Days Hotel
www.hinorth.bcs.org.uk

BCS Health
27-29 April 2010
HC2010 Conference
International Conference Centre, Birmingham
www.hcshowcase.org

BCS ASSIST
29 April 2010
BCS ASSIST National Conference
International Conference Centre, Birmingham
www.assist.org.uk

May 2010

PHCSG Summer Conference
24-26 May 2010
Health and Efficiency - Improving Services in an Era of Austerity
Chesford Grange, Warwickshire
www.phcsg.org.uk

ASSIST North West Branch
27 May 2010
Building a Business Case - Tools and Techniques
University of South Manchester
www.assist.org.uk

June 2010

ASSIST North West Branch
Second half of June. Date: tba
Digital Dictation
Venue: tba
www.assist.org.uk

July 2010

Nursing Specialist Group
19-24 July 2010
Summer Institute of Nursing Informatics
University of Maryland School of Nursing, Baltimore, USA
http://nursing.umaryland.edu/calendar/event/2677

September 2010

International Medical Informatics Association (IMIA)
12-15 September 2010
Medinfo 2010
Cape Town
www.medinfo2010.org

BCS Health Scotland
22-23 September 2010
BCS Health Scotland Conference
Glasgow Science Centre
www.glasgowsciencecentre.org

ASSIST North West Branch
Date: tba
Electronic Management of Health Records
Joint meeting with West Midlands Branch
Venue: tba
www.assist.org.uk
THE FUTURE OF INFORMATICS 2010

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- ‘Achieving Quality, Innovation and Productivity’ 12 whole day streams
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  - Christine Connelly, CIO for Health
  - Jim Easton, National Director of Improvement and Efficiency
  - Gwyn Thomas, CIO for Wales
  - David Behan, Director General of Social Care
  - Professor Emeritus Heinz Wolff, Founding Director, Brunel Institute for Bioengineering
- The BCS ASSIST National Conference runs alongside HC2010 on Thursday 29 April

HC2010 EXHIBITION
- A unique opportunity for companies and organisations to interface direct with key decision makers in the NHS
- Companies whose primary focus is the development of healthcare informatics systems and products designed to enhance and improve patient care
- High level of interest in the exhibition with prospective and existing exhibitors viewing HC2010 as the health informatics event of the year, and being prepared to invest to attend
- HC2010 provides a unique opportunity to learn, share, debate and network, all under one roof

TO SEE THE CONFERENCE PROGRAMME & REGISTER AS A DELEGATE ONLINE VISIT THE WEBSITE

TO BOOK STAND SPACE OR TO REGISTER AS AN EXHIBITION VISITOR, VISIT THE WEBSITE

Find out how you can get involved in HC2010 at www.hcshowcase.org

For all enquiries contact Citadel Events 01423 526971