

# CSO bulletin

Healthcare science news from the Chief Scientific Officer

Issue 7, August 2010

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## Your new-look CSO Bulletin

Welcome to the new-look Chief Scientific Officer's Bulletin. This Bulletin keeps you up to date with news and events covering the scientific services of the NHS and beyond.

As the NHS prepares for significant change, there has never been a more important time for scientists across the NHS and associated organisations to come together and push their work to the fore and to engage in discussions.

Healthcare scientists play a critical role in the NHS. The 50,000 healthcare science workforce is involved in 80% of all clinical decisions and is critical in achieving better patient outcomes and experience. They carry out almost a billion diagnostic tests and clinical interventions each year.

As the Government sets out and starts to deliver its priorities for the NHS; a patient led NHS, delivering better health outcomes, a more autonomous and accountable system, improved public health through a new public health delivery system, and a focus on reforming long term care, then the role of scientists and scientific services will become increasingly important.

This is particularly true as the health service faces the challenge of an ageing population and the need to help patients manage the growing level of long-term conditions.

With the Government's key mission being to focus the NHS on the outcomes for patients, the attention will turn to how patient outcomes can be measured and demonstrated. This, combined with vital analytical skills and the innate drive to innovate will put scientists in a stronger position than they have been for some years.

Alongside the professional leadership provided by Professor Sue Hill, as Chief Scientific Officer, and the programmes of work to support scientists and science with the Department of Health, the CSO Bulletin aims to make sure you have the news and information to make the most of the opportunities that this change will bring.

Be first with the news by signing up to the CSO Bulletin's circulation list. We also want to hear from you if you have feedback or ideas for items you would like to see in the Bulletin.

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Professor Sue Hill, OBE  
Chief Scientific Officer  
(CSO)

## View from Sue

We are entering a new era for the NHS as Andrew Lansley, the new Secretary of State, lays out the Government's five new priorities for the health service to tackle the challenges of modern healthcare within the financial strictures the country is facing.

- A patient-led NHS
- Delivering better health outcomes
- A more autonomous and accountable system
- Improved public health
- A focus on reforming long-term care

July's White Paper 'Liberating the NHS' has set out clearly how these changes will be delivered. Additional documents on an outcomes framework for the NHS, increasing democratic legitimacy, commissioning and regulating providers add further detail to this vision. The White Paper consultation period runs through until 11 October.

I know the Secretary of State understands the value, importance and unique role that healthcare scientists play, not just through his extensive engagement with the NHS but also because his father Tom is a healthcare scientist and a former President of the IBMS.

This was why, in Andrew Lansley's speeches as Secretary of State, he specifically talks about 'doctors, nurses **and scientists** as good as anywhere in the world'.

The challenge for us all now is how we use our skills to help the NHS through this process of change. As scientists our ability to innovate, our strong analytical skills and a clear focus on outcomes for patients will help us to identify the opportunities in our local areas and to help ensure that these deliver real improvements for patients and for the service.

Through our work, we are at the forefront of the rapid advances in science and technology and need to rethink the way we work, particularly with the increasing challenge of treating the growing level of long-term conditions in an ageing population. We need to find 21st Century solutions to 21st Century healthcare needs rather than trying to hang on to old structures and practices that have been overtaken by events.

Through my work at the Department of Health I am making sure that the potential and power of healthcare science is recognised and woven in throughout the Government's health policy. Certainly the 80-plus stories in *Extraordinary You* emphasise the enormous talent, innovation and commitment that is helping to transform lives in the front line of the NHS.

The challenge for all of us is to recognise the difference we can all make as individuals in the services where we work and to put science at the heart of a 21st Century NHS of which we all can be proud.

[More information](#)

## Extraordinary Us

**A new book is available that illustrates the importance of healthcare science to the NHS by telling the stories of more than 80 individual scientists.**

*Extraordinary You* shows the breadth of work carried out by healthcare scientists from those providing front line care to patients, such as clinical perfusionists and ultrasonics experts, through bioengineers who turn novel research into new treatments and on to those healthcare scientists who have taken up senior management roles.

Each scientist (such as Clinical Perfusionist Stephen Robins, illustrated) talks about their work, how they have made it to their current position and is pictured in their working environment.

The aim of the book is to inform and educate people about how much of healthcare depends on the work of scientists, to celebrate the success, innovation and skill of the UK's healthcare science community and to inspire more people to look to a career in healthcare science.

Professor Sue Hill, the Chief Scientific Officer, explained: "This book will be a revelation to many people.

"It contains stories of the little-known but unique scientific and technological workforce in the NHS and the unique and astonishing breadth and depth of their talents and skills.

"As healthcare scientists we do not just contribute to patient care, but also provide an enormous contribution to cutting-edge science and, through this innovation and invention, to the nation's wealth."



**Stephen Robins**

Sue said she hoped that *Extraordinary You* would be a tremendous resource for healthcare scientists to go out, explain the enormous variety of work being carried out and to inspire a new generation of people to look to a career in healthcare science.

"Having seen how these stories have been brought to life, I'd like to encourage more people to take up the promotion of science and to understand the contribution that this can make to the public's understanding.

"Many themes emerge from the stories in this book: the diversity of talents within the workforce, the value of their particular skills to the wider NHS and also the importance of great science teaching.

"So many people mentioned inspirational teaching as the reason they became involved with science. I hope that this book itself will inspire and will encourage fellow scientists to go out and inspire others through sharing the importance and value of their work."

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## Technology used to improve care for patients needing maxillofacial prosthetics

A team from Nottingham have won the CSO's award for Leadership at the 2010 Advancing Healthcare Awards for their use of the latest engineering manufacturing techniques to help people having facial reconstruction following major surgery.

Consultant Healthcare Scientist Jason Watson and his consultant surgeon colleague Andrew Sidebottom from Nottingham University Hospitals NHS Trust have pioneered the use of Rapid Prototyping and Rapid Manufacture techniques to create individually-tailored facial prosthetics. RP and RM technologies use three-dimensional printing techniques to create ready-to-use solid objects from a digital design, building the object up through laying down layers of material to form a three-dimensional shape.

This technology is now frequently used in aircraft and car production to quickly trial new parts direct from computer designs, cutting out the traditional lengthy process of making hand-made prototype parts.

Jason and Andrew saw the potential of using these technologies in healthcare by using CT (Computerised Tomography) imaging to make a three dimensional map of the structures of a patient's face before surgery. They then used this map and RP/RM techniques to produce a prosthetic which precisely matches the patients face, helping to replace areas removed during surgery.

The judges felt that this showed true leadership in being the first maxillofacial lab in the UK to introduce this technology and then to develop the software to make it work in the clinical setting to the direct benefit of patients. This required complex partnership working, determination and vision which has saved time and resources, and brought real benefit to patients who are in extremely difficult situations.

\*Entries are now being sought for the 8 categories in the 2011 Advancing Healthcare Awards, including the CSO's Award for Leadership. The closing date is Friday 12 November 2010.

[More information](#)

## Presenting the opportunities

Also in spring, healthcare scientists from across South Yorkshire came together for an event to explain the career opportunities in healthcare science at CORE in Barnsley.

Speakers covering the range of disciplines from Biomedical Science to Medical Physics came together to explain what had inspired them into their chosen profession and how the young people at the event could follow in their footsteps.

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## Healthcare science as part of the Big Bang!

Healthcare science took centre stage as part of the Big Bang science fair with the 'Body Talk Zone' forming one of the four main sections of the event.

More than 22,000 people attended the three-day event in Manchester, which is designed to promote science, technology and mathematics to young people. The event offered attendees the chance to try a range of hands-on science and engineering activities and to learn more about the career opportunities in this area, including an NHS stand that provided detail about working in healthcare science.

The fair also saw the announcement of the winners of the 2010 National Science and Engineering Competition. Joint winners in the Junior Science category, Rachel Rawlinson and Aysha Waheed of Sydenham High School, turned their attentions to the challenges of human physiology with a research project to search for 'the ultimate deodorant'.



**Pupils queue up to 'guess the chocolate' at the IPPEM stand at the Big Bang**

The Big Bang also held a series of regional events which have helped to bring in entries to this year's National Science and Engineering Competition – with entries open until 31 October. Winners will be announced at next year's Big Bang to be held at ExCel, London from 10-12 March 2011.

[More information](#)

## Kids stuff? Try your hand at the Healthcare Science Quiz

The Royal College of Pathologists, in partnership with Science4u, put together a 30-question online healthcare science quiz as part of the 2010 Schools Science Conference, which ran during National Science and Engineering week in March.

More than 200 students and their teachers came along to the day-long conference hosted at the RCPATH Education Centre in London.

The day was split into four sessions including an interactive session where students discovered practical applications covering disciplines from audiology to andrology and perfusion to physiotherapy and a session presented by a joint team from the ACB, IBMS and RCPATH looking at point-of-care testing.

Don Henderson, Chairman of the Organising Committee, said: "As a Fellow of the College it was rewarding to see the Education Centre and meeting rooms filled by so many lively, excited students learning about and experiencing the healthcare sciences. Hopefully some of these students will become the Fellows of the future."

To try your hand at the Healthcare Science Quiz, go to the event website at [www.science4u.info/ssc2010/index.html](http://www.science4u.info/ssc2010/index.html) where you'll also be able to look at the 'Virtual Laboratory' web pages as well as finding out more about the Conference.

[More Out and about](#)

## Honours for scientists

Two scientists have been honoured with MBEs for 'Services to Healthcare' in the Queen's Birthday Honours list.

The awards go to Consultant Clinician Biochemist Stephen Halloran, of the Royal Surrey County Hospital, who describes his work as "the sharp end of making life better for people" and Audiologist Dr John Stevens, who has recently retired from the Royal Hallamshire Hospital in Sheffield.

Congratulations to Stephen and John for their achievements.



Stephen Halloran

## The Centre for Workforce Intelligence (CfWI)

CfWI is a new body that will provide a single, authoritative resource on workforce development planning for all parts of the NHS and social care system. It will provide accessible workforce intelligence, research and advice to support planners, clinicians and commissioners to meet the quality and productivity challenge.

The Centre is central to the strategy for strengthening the workforce planning and development system.

[Contact](#)

## CSO Fellowship grants

Fifteen scientists working as far afield as Surrey and Newcastle have received more than £2.2 million of research funding in the latest round of the CSO/ NIHR Healthcare Science Research Fellowships competition

The 7 doctoral and 8 post-doctoral awards cover research areas as diverse as muscle dysfunction, diagnosis of fungal disease and developing a new camera for brain imaging.

Chief Scientific Officer Professor Sue Hill said "I was particularly delighted with the quality of applications to the scheme this year. The scientists who received awards are of the highest calibre and work in NHS healthcare science departments where the research they undertake will translate to improved patient care.

"I am also pleased to see the scheme forging partnerships between Higher Education Institutes in England which I am sure will flourish.

"Having had the opportunity to meet the 2008 recipients at my conference last year I was impressed with the knowledge, skill and enthusiasm the research fellows bring to the NHS and I look forward to following the progress of all of the fellows as their research develops."

[More information](#)

## NHS Confederation 2010: Healthcare Science – driving the future of the NHS

The growing role of healthcare scientists in the future of the NHS was put on managers' agendas with a session at this year's NHS Confederation Conference.



The session '*How advances in science and technology will help to transform the delivery of efficient healthcare in the future*' saw Chief Scientific Officer Sue Hill and leading scientists from across the UK talk to science broadcaster Vivienne Parry about the impact that science will have on NHS delivery over the next couple of years.

The panel members brought together Ian Cumming, (Chief Executive of NHS West Midlands), Dr Keith Ison (Head of Medical Physics at Guy's and St Thomas' NHS Foundation Trust), Dr Ian Barnes (National Clinical Director for Pathology) and Angela Douglas (Clinical Cytogenetics Liverpool Women's Hospital). They discussed how new technology and advances in science, in particular within diagnostics, pathology and genetics, are improving the quality of care and patient experience.

The session was warmly received by the audience of NHS Chief Executives and other senior managers, with one audience member saying "it's great to listen to people with real enthusiasm for their subject."

## East London teenagers help improve Audiology services

Teenagers in east London are helping to improve the quality of audiology services for patients across the country in a pilot project run by the National Deaf Children's Society, supported by the Chief Scientific Officer.

The *Over to You* project will see deaf young people and their parents work with Audiologists and volunteers to build a better understanding of audiology in the people using the services while helping the services to recognise the specific needs of children and young people.

*Over to You* Project Manager Valerie Copenhagen explained: "We want to improve the experience of audiology for this group. Deaf children and young people have their own specific needs and they are keen to get involved and learn more about their condition and how they can help to manage it.

"We'll be working with audiology professionals to build an understanding of the particular needs of teenagers and to support them in involving these young people in the design of services for them. We also want to find the best way to bring in volunteers to support these service users.

"Working with the PCTs in east London, we hope to build a model and learn lessons that we can apply across the whole country."

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**Pathology Programme**  
eNewsletter

**Issue 1 April 2010**

**Other Pathology News**

**Commissioning focus on pathology**  
The importance of 'intelligent'

**Stepping up to the mark**  
Pathology's role in meeting the NHS quality and productivity challenge

## Pathology Programme newsletter

The Pathology Modernisation Programme at DH issued the first of its new-look newsletters in April. You can download the newsletter from [www.pathologygateway.org.uk](http://www.pathologygateway.org.uk) and sign up for future newsletters when they are produced.

[More information](#)

## Current research calls

### Wellcome Trust

The Wellcome Trust have a funding call for research projects on monitoring of **chronic illness in the home and remote settings** as the third theme of the Wellcome Health Innovation Challenge Fund.

Deadline: 1 October 2010

[More information](#)

## MSC Roadshow success

The Modernising Scientific Careers roadshows have proved a great success with more than 1,100 people attending the 8 regional events that have been held so far.

These days brought together healthcare scientists with colleagues involved in training, education and planning for the workforce.

NHS South East Coast is holding its MSC Roadshow on Friday 29 October 2010 at the Crowne Plaza, Gatwick.

[More information](#)

[Book a place](#)