

Newsletter of Health Enterprise East (HEE)

The NHS Innovation Hub for the East Midlands, East of England and North London

Issue 9 Winter 2013/14



More NHS Trusts sign up for innovation expertise

Health Enterprise East (HEE) is celebrating expanding its membership base with a raft of new NHS Trusts looking to benefit from its innovation services.

In recent months, as a result of a wider geographical remit, HEE has recruited NHS Trusts from further afield – including Derbyshire, Lincolnshire, Leicestershire, Kettering and North London – to become members and receive specialist help to turn their ideas for new products and services into reality. A total of 35 NHS Trusts are now HEE members, representing an increase of 25% on last year.

HEE's team provides in-depth knowledge to enable NHS employees working on the front-line to identify new medical technologies, software, publications and training aids which can improve healthcare delivery and patient experience. The team evaluates these ideas and then takes them forward by protecting the intellectual property, helping to fund development and finding suitable commercial partners.

Dr Anne Blackwood, HEE Chief Executive said: "We are delighted to welcome our new NHS member Trusts and look forward to working with them to develop their ideas for new medical products. Attracting new members demonstrates clearly the importance of optimising innovation within Trusts and highlights the value of our specialist knowledge to make this happen. Linking with HEE brings other benefits too such as being able to attend events on a range of current NHS hot topics and entering our regular innovation competitions.

"Over the next year we are also looking forward to developing our relationship with the newly-formed Academic Health Science Networks, providing innovation and industry engagement support to meet their strategic needs."



Winning idea, left to right: Simon Coward, Director of Innovation at Hethel Engineering; Sally Boor, East of England Ambulance Service NHS Trust who won a £5,000 Innovation Voucher to progress her design for a new spinal longboard for safer and more effective mobilisation of patients and Chris Armstrong, Marketing Manager, HEE.

First Innovation Voucher Competition is a great success

2013 saw the first HEE Innovation Voucher Competition where NHS staff were invited to put forward suggestions for Medical Technology products with a chance of winning a £5,000 Innovation Voucher, to be used towards the development of their idea.

A fantastic response was received from Member Trusts, with three winners coming from: The Queen Elizabeth Hospital King's Lynn NHS Foundation Trust, University Hospitals of Leicester NHS Trust and East of England Ambulance Service NHS Trust.

Look out for details of our next Innovation Voucher Competition due to be launched early January 2014. Further information can be found on the HEE website homepage.

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Meet the team

Three new members of staff have recently joined HEE.



Dr Clare Beddoes has joined the MedTech Services team as Senior Consultant, previously working at Cambridge Consultants where she managed many projects including those in medical technology. Clare holds a PhD in Plant Biochemistry from the University of Manchester.



Rosemary Wilson has been appointed Technology Associate and is supporting the Innovation team as well as being involved in the management of the SBRI Healthcare Competition.



Karen Day in her role as Administration Manager is primarily responsible for the administration of HEE including booking meetings, database maintenance and helping with the day-to-day running of the office.



New office for HEE

HEE has recently relocated from its offices at Papworth Hospital to the Cambourne Business Park. This means HEE is still centrally located in the region to be able to serve its member Trusts.

HEE finds commercial partner for neurological device

A new positioning aid which enables more accurate and faster attachment of a stereotactic frame to a patient has been devised by neurosurgeons at Barking, Havering & Redbridge University Hospitals NHS Trust with help from HEE.

The Stereotactic Frame Position Aid has been created by Mr Hu Liang Low and Mr Harith Akram as a result of their own problems in trying to attach frame holders to patients in a quick and reliable manner.

Stereotactic frames have head-holding clamps and bars which put the head in a fixed position so that surgical instruments can be guided to the required target area using a route which results in minimal damage to surrounding tissues. These devices are used by neurosurgeons to deal with a range of conditions including brain cysts and tumour biopsies.

Various methods of accurately aligning the stereotactic frame have been tried in the past but this latest device holds the frame in the correct position and enables fine adjustment, allowing a single operator to quickly and accurately position the stereotactic frame.

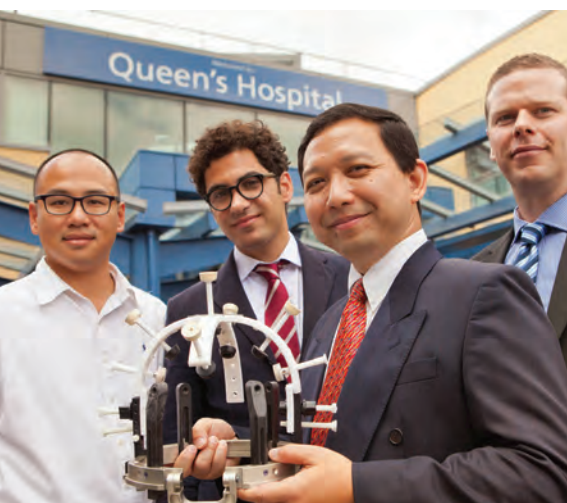
The positioning aid is being manufactured by Innomed, a leading manufacturer of surgical instruments, based in Germany, with over 25 years experience in the field.

HEE helped to bring the product to market by sourcing a suitable commercial partner – Innomed – who they first made contact with at



Medica, the world's largest medical device exhibition held annually in Düsseldorf, Germany.

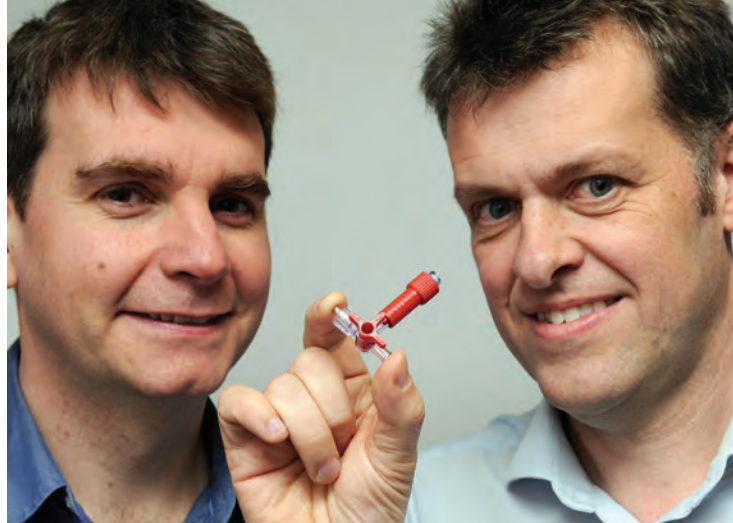
Chris Armstrong HEE Marketing Manager said: "This is the first project HEE has commercialised with Barking, Havering and Redbridge University Hospitals NHS Trust and we are delighted to have been able to provide the help needed to take it to provide the help needed to take it from concept through to market. We hope this is the first of many exciting innovations on which we will be able to collaborate."



Left to right: From Barking, Havering & Redbridge University Hospitals NHS Trust, Dr Davy Yeung, Associate Director of Research and Innovation; Mr Harith Akram, Neurosurgeon and Mr Hu Liang Low, Consultant Neurosurgeon with Chris Armstrong, Marketing Manager, HEE.

Award-winning medical device saves patients' lives

A novel device which increases the safety of patients undergoing blood sampling, invented by two Consultants from The Queen Elizabeth Hospital King's Lynn NHS Foundation Trust (QEH), is now in commercial production.



The Non-injectable Connector (NIC) was devised by Dr Joseph Carter and Dr Peter Young (pictured), with help from HEE.

The innovative design, which incorporates a one-way valve, only allows removal of the blood and prevents anything from being injected into the arterial line. It also stops blood from leaking out of the system should the three-way tap be

accidentally left open.

HEE helped by protecting the idea with a patent, funded Proof of Concept development and supported clinical evaluation at QEH. It also identified a suitable commercial partner – Amdel Medical Limited – and negotiated the exclusive licence with them.

Joseph Carter, one of the inventors explains: "The potential problems associated with conventional arterial lines were the subject of a Rapid Response Report from the NHS National Patient Safety Agency in July 2008. Current arterial line systems do not prevent intra-arterial injection of drugs and this has been a reported complication which can result in dramatic consequences such as, skin loss, tissue necrosis, loss of a limb or potentially loss of life.

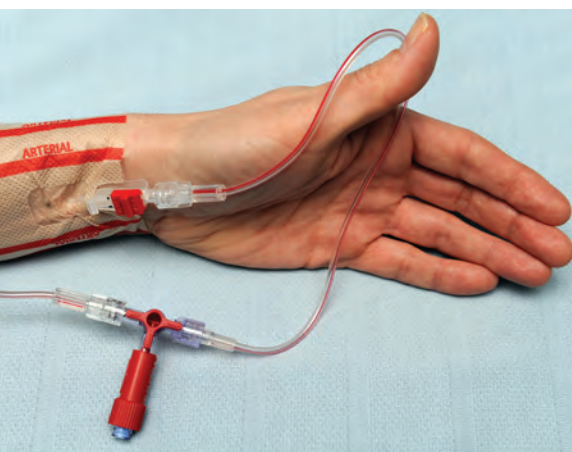
"As Consultants in intensive care at QEH, we were commonly exposed

to patients with arterial lines in place and were aware that wrong route injection here was a problem. That's why we came up with the idea for the NIC."

James Lyon, Managing Director, Amdel Medical added: "This award-winning device is a perfect fit with our current portfolio of innovative products that are already being used to increase quality of care and efficiency across the UK".

As part of the development process, a patient trial of prototype non-injectable connectors was carried out, in addition to a survey of clinicians, in which 95% said that they would recommend the use of the non-injectable connector. It is estimated that around one million non-injectable connectors could be used in the UK annually.

Further information from Amdel Medical: www.amdelmedical.com



Network provides valuable forum

Managed by HEE, the East of England Assistive Technology Network brings together over 150 clinicians, industry, entrepreneurs, community care workers and commissioners.

With quarterly meetings, each focusing on a different topic, the

EoE AT Network provides a forum for sharing ideas, best practice and making connections.

At the last meeting of 2013, held at the Cambridge Biomedical Campus, Addenbrooke's, members looked at the different considerations

needed when caring for patients with dementia in the community and in the acute setting.

The next meeting will be in the New Year looking at how to overcome barriers to adoption. Further information available on our website.

Milestone achieved in RECAP project

As a lead partner within the INTERREG IVB North West Europe funded project, HEE is pleased to announce the passing of an important milestone.

In collaboration with North East London NHS Foundation Trust (NELFT) and Katholieke Universiteit (KU)

Leuven, we are analysing the impact education plays in the post-discharge management of Chronic Heart Failure (CHF) patients via telehealth.

With the ultimate aim of analysing six weeks of data from more than 300 patients and still with a year to go on the project, NELFT has already

collected data from more than 200 patients and sent it to our partners in KU Leuven for analysis.

This significant milestone highlights a successful collaboration which will lead to improvements in the use of telehealth technologies and patient outcomes.



HEE works on pilot to help families connect

Mindings is an App-based technology through which family and friends can send photos and messages to older, often digitally disconnected, people via a digital screen in the home. It's designed to be easy to use and provide family and friends with a mechanism to digitally connect to a loved one.



Last December, a competition was organised by the East of England Local Government Association and NHS Midlands and East to find innovative new products

and services to reduce social isolation and help keep older people out of long-term care.

First prize was an investment of £100,000 to pilot the technology within a local system in the Midlands and East of England which was won by tech start-up Mindings.

HEE is working with Mindings to provide support on the pilot project.

Dr Clare Beddoes, Senior Consultant in HEE's Medtech Services Team said: "We shall be interviewing participants at the beginning and end of the trial to establish whether the technology has had any effect on their lives, as well as devising questionnaires, providing interviewers with experience in primary research and analysing interview data from the Mindings App. We will then prepare a report delivered to key stakeholders on the impact of the technology and recommendations for the next steps."

Stuart Arnott, Founder of Mindings said: "My technology-shy Dad lives alone, 500 miles away in Scotland. I always thought it ironic that I spend all day texting, Tweeting and Facebooking but the one person who would really appreciate all that stuff is the one person who, because he can't use a computer or mobile phone, misses out on it all.



The Medtech Services team, left to right: Sue Watson, Nick Offer and Clare Beddoes.

"So, I created Mindings, and now Dad can see pictures of his grand-daughter growing up and share in all these moments we tech-savvy folk share online. I'm thrilled to have this opportunity to share Mindings and help connect socially excluded people with their family and friends."

Device helps treat prominent ears



Up to one in 20 people could be said to have prominent ears – those that stick out too far from the side of the head – and a sizeable percentage experience psychological distress as a result.

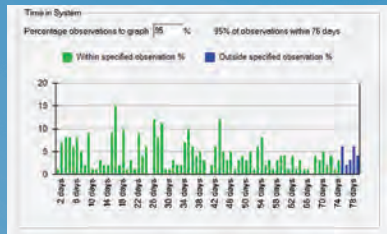
Consultant Plastic Surgeon, Norbert Kang from West Hertfordshire Hospitals NHS Trust, has developed a new approach to the treatment of prominent ears by using an implant manufactured from a high technology memory metal. The earFold™ Implant can be inserted subcutaneously under the skin of the ear.

Performed under local anaesthetic, this quick and effective procedure has fewer side effects than otoplasty surgery and faster healing. The treatment is available from Northwood Medical Innovations. HEE was responsible for: IP Protection, Proof of Concept funding and drawing up the commercial agreement for the formation of the new company.

Further information from www.earfold.com

Software tool to help strategic planning now on offer

Scenario Generator is one of our most successful innovations – it's a simulation software tool designed to support strategic planning in health and social care.



Developed between the former East of England SHA, NHS Institute for Innovation and Improvement and SIMUL8 Corporation, it has been used extensively by commissioners to test strategies for change and their impact on patient flow, waiting lists, resource utilisation and costs.

Users can test the possible impact of many different types of change – such as an increase in demand for services, changes to the way services are delivered or the implementation of a new national policy initiative to help understand how their system might behave as a result of any change.

Scenario Generator allows users to create a visual representation of care pathways that will assist in engaging all levels of management and help in gaining consensus from decision-makers.

It is currently being used by the NHS England Year of Care programme to test the financial impact of any

changes, and in projects in Scotland, Canada, Italy and the USA.

As commissioners have changed employers recently, we wanted to remind everyone in NHS England and public health departments in local authorities that they have a license

for this software and to let you know that SIMUL8 Corporation is offering training in AHSN regions to anyone who would like to learn how to use it.

Sign up at this link http://www.scenario-generator.com/community/AHSN_regional-training.htm



HEE Innovation Scouts in action

Our Innovation Scouts continue to champion awareness of innovation, Intellectual Property (IP) and HEE support services to help budding inventors in their Trusts.

For example, at West Suffolk Hospital, Trust Librarian and Innovation Scout Laura Wilkes recently presented at a Research and Skills Event on the topic of Intellectual Property and Innovation. Laura used the knowledge and understanding she gained from the HEE Innovation Scout training.

Laura was supported by HEE who provided some tailored materials to assist her in her presentation. "It was a great opportunity to drive home the message about thinking about protecting IP rights from the very beginning and to be cautious when sharing information with third parties," said

Laura after the event. The presentation inspired a number of her colleagues to seek further advice in relation to intellectual property and their new ideas.

HEE always enjoys opportunities to help the Innovation Scouts in their very valuable work to uncover, protect and develop NHS innovations.

Are you interested in becoming an Innovation Scout? Would like to know more about the role? Contact Tracy Eke, Innovation Manager at tracy.eke@hee.co.uk



Awards showcase healthcare innovations

Awards for outstanding innovations in healthcare were presented to NHS staff at a prestigious event organised by HEE on Wednesday 25th September at Girton College, Cambridge. Host for the evening was BBC Look East presenter Stewart White.

The HEE 2013 Innovation Competition was open to staff working in Member Trusts across all branches of the NHS to put forward their ideas for products and services which will benefit patients. This year it comprised five categories:

- Patient Safety
- Improved Dementia Care
- Patient Dignity and Experience
- Medical Technology
- Assistive Technology

Dr Anne Blackwood, HEE Chief Executive said: "This is our eighth Annual Innovation Competition



Awards and once again, we have been overwhelmed by the standard of entries we have received across our five categories.

The choice of focus for this year's competition reflects current healthcare priorities and some of the innovations showcased here will play an important role in how services are delivered in the future to benefit both patients and those looking after them."

This year's event included an Innovation Q&A with inventors talking about their ideas and the process of

turning these into products or services.

All winners were presented with a specially engraved glass trophy and where possible, they will be supported by HEE to progress their idea.

The 2013 Awards were generously sponsored by: EA Law – East Anglian Chambers, The Eastern Academic Health Science Network, The East Midlands Academic Health Science Network, P3 Medical Limited and Mathys & Squire LLP.

Pictured below, left: Innovation Q&A and right: Dr Chris Winter, HEE Chairman and Dr Anne Blackwood, HEE Chief Executive



The Eastern Academic Health Science Network Award for **Improved Dementia Care** went to Dr Jeremy Brown, Kate Dawson and Julie Wiggins from The Queen Elizabeth Hospital King's Lynn NHS Foundation Trust for 'Test Your Memory', a short cognitive test which is sensitive to Alzheimer's disease. TYM can be used by GPs, nurses and hospital physicians to assess cognitive problems in patients and facilitate earlier and more accurate diagnosis of dementia and other cognitive conditions.

The P3 Medical Award for **Medical Technology** was won by Dr Emad Fawzy, Dr Peter Young, Dr Joe Carter and Dr John Gibson from The Queen Elizabeth Hospital King's Lynn NHS Foundation Trust for 'SAFIRA – Safer Injection System for Regional Anaesthesia'. This improves safety, reduces the potential for nerve injury and converts a two-operator technique to a single operator with an easier, more convenient and cost-effective method. (Please see back page for more details on SAFIRA.)

New software speeds up staging of tumours

A Consultant Radiologist at The Queen Elizabeth Hospital King's Lynn NHS Foundation Trust has devised new software to enable faster and more consistent staging of cancerous tumours.

Dr Martin Crowe has created StageCRAFT, which is already in use and helping radiologists to speed up the process of determining the 'stage' of a malignancy.

Dr Crowe was supported during the development process by HEE.

StageCRAFT uses the internationally recognised (TNM) system. The TNM classification of malignant tumours is a cancer staging system that describes the extent of a person's cancer: T describes the size of the primary tumour, N describes nearby lymph nodes involved and M describes the distant metastasis (the spread of cancer from one part of the body to another).

The software works by the radiologist answering some key questions about the tumour which enables a TNM stage to be produced, removing the need for the radiologist to look up the appropriate staging category in books or rely on memory with the chance of error or inconsistency. The software also includes rapid 'calculators' to assess bone metastases or tumour response to therapy.

Currently StageCRAFT supports the staging of nine different types of cancer: Lung, Rectum, Renal,



Award-winning software speeds up staging of tumours, left to right: Robert Donald, IP Manager HEE, Dr Martin Crowe, Consultant Radiologist QEH and Matt Wardlow, Client Manager HSS Ltd.

Oesophagus, Cervix, Bladder, Endometrium, Lymphoma and Prostate. There are plans to increase this in the future.

Dr Martin Crowe said: "In devising StageCRAFT I was keen to increase the use of the TNM staging system in radiological reports whilst at the same time making it a simpler process for the radiologist. This is also a first – interactive software such as this has not been used in this process before."

Commercial partner for StageCRAFT is Healthcare Software Solutions (HSS), supplier of CRIS, the UK's most widely utilised radiology information system.



Winners of the East Midlands Academic Health Science Network Award for **Patient Safety** were Paul Brooks and Helen Forrest from Derby Hospitals NHS Foundation Trust for 'The Derby Door'. This is an inflatable barrier which fits flush against walls and ceilings to form a safe and reliable seal around an area of a ward that needs decontaminating. This enables staff to enter the bay without putting themselves or patients at risk and gives the Infection Control team another tool in the fight against HCAI.



Winners of the EA Law-East Anglian Chambers Award for **Patient Dignity and Experience** were Rohna Kearney, Claire Brown and Myfanwy Champness from Cambridge University Hospitals NHS Foundation Trust for 'POP Home Project', which teaches women how to self-manage their vaginal prolapse. This removes the need for six-monthly outpatient appointments and potentially reduces the number of women opting for surgery.



The Mathys & Squire **Assistive Technology** Award was won by Andrew Bateman and Aislinn Enright from Cambridgeshire Community Services NHS Trust for their 'online platform to support the wellbeing of people with long-term neurological conditions', a bespoke portal offering a direct route to clinical support. Use of a modern interface to create a 'virtual learning environment' offers patients help to manage their condition and improve their quality of life, reducing mild to moderate depression, preventing relapse and improving rehabilitation outcomes.

Innovations in Brief

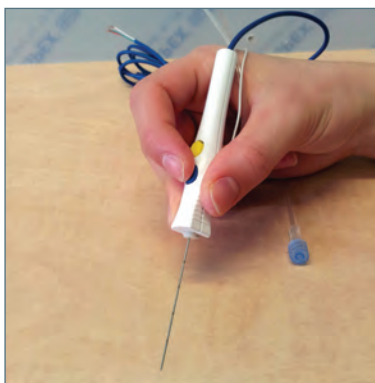


Biomodal Electric Tissue Ablation

Innovation: BETA is a new technology that enhances the performance of Radio Frequency (RF) ablation equipment to enable larger ablation of tumours. It applies two kinds of electrical energy – Direct Current and Alternating Current – and is currently in development for liver ablation but could potentially be used for other therapy areas such as lung, kidney and bone tumours.

Trust: Norfolk and Norwich University Hospitals NHS Foundation Trust

Further details:
stuart.thomson@hee.co.uk

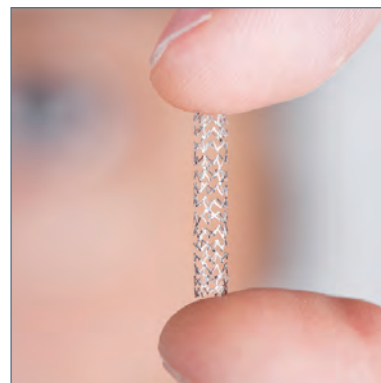


SAFIRA

Innovation: The Safer Injection for Regional Anaesthesia provides a safe, single user local anaesthetic delivery system invented by Consultant Anaesthetists. SAFIRA allows the anaesthetist to control the delivery of local anaesthetic with a user-friendly control for use with the needle or ultrasound probe. The system's injection pressure can be limited to less than 15 psi – a level at which it has been shown that nerve fascicles are not irreversibly damaged even if the injection occurs into the nerve.

Trust: The Queen Elizabeth Hospital King's Lynn NHS Foundation Trust

Further details:
stuart.thomson@hee.co.uk



Dedicated Bifurcation Stent

Innovation: This is a dedicated side-branch stent for angioplasties, featuring a patented, modifiable proximal end, which allows complete coverage of the side-branch opening for any bifurcation angle. The stent is unique and features a highly malleable end that can be crushed into position using a balloon which creates a flush finish at the main branch.

Trust: University Hospitals of Leicester NHS Trust

Further details:
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Tap into our expertise

HEE membership gives organisations and their staff full access to a range of IP and innovation management services across six main areas:

1. Raising awareness – helping you to foster a culture of innovation and creative thinking
2. Evaluation – providing expertise to assess the uniqueness of an idea
3. IP Protection, Proof of Concept & Commercialisation – sharing our specialist knowledge to protect the innovation and exploit IP
4. Innovation Scout Network – support and training to help individuals promote innovation within their own workplace
5. Connecting with other stakeholders – helping you to engage with patients, industry and social care to deliver new products and services
6. Assisting your Trust to qualify for CQUIN payment for commercial activity.

For further information about membership, please email: enquiries@hee.co.uk



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