Meridian
Celebration of Innovation 2018
Winners’ brochure
OUR CHAIR’S INTRODUCTION

PROFESSOR MICHAEL SHEPPARD
WEST MIDLANDS ACADEMIC HEALTH SCIENCE NETWORK

More than 100 representatives from the West Midlands’ NHS, industry, academia, third sector, charities, care homes, and patient population gathered at the Birmingham Conference & Events Centre for the Meridian Celebration of Innovation Awards on 13 July.

West Midlands Academic Health Science Network (WMAHSN) established the awards to recognise - and celebrate - the work of individuals and organisations in developing better healthcare and generating economic benefit for the region.

We have been delighted to see the quality of submissions increase year-on-year. The 2018 field was so strong the judging panel decided that, in addition to choosing a winner and highly commended entry in each category, many were also deserving of recognition as ‘one to watch’.

What follows here in our winners brochure is a reflection of the best of innovation, creativity and hard work that goes on all across our region. Congratulations to all our winners and thank you for joining us on what has become a true ‘celebration of innovation’.
SUPPORTING SELF CARE AND PREVENTION OF ILLNESS INNOVATION AWARD

Awarded for the successful widespread adoption of an innovation focused on empowering patients with long-term conditions to manage their health and social care while generating good clinical and patient outcomes.

Thank you to our Award Presenter, Dr Sue Ibbotson, Public Health England

SUPPORTING SELF CARE AND PREVENTION OF ILLNESS INNOVATION AWARD WINNER

LOVE YOUR HEART

‘Love Your Heart’ represents a collaboration between The Dudley Group NHS Foundation Trust and the National Rheumatoid Arthritis Society (NRAS).

The Dudley Group is the main provider of hospital and adult community services for Dudley. It was the first hospital trust in the area to be awarded coveted Foundation Trust status in 2008 and serves a population of around 450,000, providing a full range of secondary care services and some specialist services for the West Midlands region.

NRAS is the only UK charity devoted specifically to rheumatoid arthritis (RA) and provides a comprehensive range of products and member services for all affected by RA.

‘Love Your Heart’ is an online interactive educational programme to address the cardiovascular aspects of rheumatoid disease.

‘Love Your Heart’ launched in February 2018. Built into the programme are two feedback questionnaires; the first is upon completing the online programme to evaluate the content and experience; the second is after six months to measure what psychological or tangible behaviour changes have been achieved. The results of these will drive a continuous improvement cycle for the programme.

The aim for the future is to work with both rheumatologists nationwide to integrate this programme into all early RA clinics and GPs nationwide to highlight how this programme meets their requirement to assess RA patients for cardiovascular disease.

The results that have been achieved by effective collaboration between the NHS and the charity sector have been inspiring and future plans must include further collaborative working, both within rheumatology as well as advocating the benefits of collaboration to other specialties.
SMARTChip is a purine biosensor using a finger-prick sample of blood to detect ischaemic brain events, which occur during a stroke.

SMARTChip has been developed to address the need for rapid diagnostic tests to inform clinical decision making in the early critical period following a stroke that can be readily combined with the current care pathway to give improved diagnosis.

SMARTChip has been developed through a series of research studies in collaboration with a vascular surgeon (Professor Chris Imray, University Hospitals Coventry and Warwickshire NHS Trust (UHCW); a scientist / small and medium-sized enterprise, (Professor Nick Dale, Sarissa Ltd); and a stroke physician (Professor Christine Roffe, University Hospitals of North Midlands NHS Trust). Following pilot work funded and carried out at UHCW, promising pilot data enabled the team to secure an NIHR Invention for Innovation (i4i) product development award. This resulted in the delivery of three sequential inter-linked projects which have recruited over 600 participants nationally and provided a unique opportunity to test and refine this innovative product in an NHS setting.

This study provides an excellent example of partnership working across academia, industry (providing the expertise in manufacture of the SMARTChip) and the NHS.

**MIDTECH AWARD FOR BEST NHS-DEVELOPED MEDICAL TECHNOLOGY INNOVATION WINNER**

SMARTCHIP

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Thank you to our Award Presenter, Florian Bazant-Hegemark, Marks & Clerk LLP.

**MIDTECH AWARD FOR BEST NHS-DEVELOPED MEDICAL TECHNOLOGY INNOVATION**

This award highlights the best new inventions and novel innovations coming from within the NHS in the region which have been designed to solve a problem or meet a need and have commercial potential. This award has a £5,000 cash prize for the winner, with a remaining £5,000 split between the runners up.

**The MidTECH Development Award prize fund was awarded to the following:**

Dual Mobility Reverse Shoulder Arthroplasty - awarded £2,000

The District Nursing Caseload Review - awarded £2,000

Step Right Buddy - awarded £1,000
Genomics England is aggregating the entire dataset of patients recruited to the 100,000 Genomes Project. Over 11,000 patients have already been recruited from the West Midlands Genomics Medicine Centre (WMGMC) alone. The imaging dataset of the WM patients accounts for nearly 200,000 radiology exams (CT, MRI, X-rays, Ultrasound etc.) and over 50 terabytes of associated image data held within nine different Picture Archiving and Communications systems at 16 secondary care trusts in the region.

The WMGMC is implementing the innovative Regional Image Sharing Platform (RISP) to pool this data electronically. RISP is creating an entirely new IT infrastructure across the West Midlands by connecting all 16 trusts to each other using advanced security protocols that will support future regional projects. The automatic retrieval of imaging data is only one of several uses of this new infrastructure.

RISP is poised to deliver significant clinical and patient safety benefits. A significant secondary use of the RISP infrastructure is Radiology Image Sharing for direct clinical care. Each year, the West Midlands trusts collectively share more than 500,000 studies amongst themselves. Clinicians, however, are completely ‘blindfolded’ when it comes to knowing the radiology history of patients they are caring for. Clinician’s are reliant on the patient informing them about relevant imaging examinations they’ve had in the past. The clinician then initiates a very time consuming process. At its best, images get transferred within about two hours. This is frequently too late for a clinical decision that was required urgently.

DIGITAL OR ARTIFICIAL INTELLIGENCE INNOVATION OF THE YEAR AWARD

This award recognises the most innovative and forward-thinking use of digital technologies and artificial intelligence in the healthcare industry.

Thank you to our Award Presenter, Kari Lawler, Youth4AI

DIGITAL OR ARTIFICIAL INTELLIGENCE INNOVATION OF THE YEAR AWARD WINNER

WEST MIDLANDS REGIONAL IMAGE SHARING PLATFORM (RISP)

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MENTAL HEALTH INNOVATION AWARD

Awarded to individuals or organisations whose innovation has made a positive impact on the mental health and wellbeing of people in the West Midlands.

Thank you to our Award Presenter, Dr Peter Lewis, West Midlands Academic Health Science Network.

MENTAL HEALTH INNOVATION AWARD WINNER

ELECTRONIC HEALTH RECORD VIEWER (MERIT)

Merit is a partnership of NHS mental health trusts in the West Midlands (Birmingham and Solihull Mental Health NHS Foundation Trust, Black Country Partnership NHS Foundation Trust, Coventry and Warwickshire Partnership NHS Trust, Dudley and Walsall Mental Health Partnership NHS Trust). Originally one of NHS England’s 50 Vanguard programmes, MERIT has continued beyond the end of central funding and welcomed a fifth partner (Forward Thinking Birmingham) in early 2018.

For the first time, clinicians are able to view aspects of a patient’s clinical record from another partner trust, in real time. The Electronic Health Record Viewer (EHRV) facilitates safe and effective care to patients who need mental health care at another MERIT trust, most usually those who present at emergency departments or who are admitted as inpatients. The dataset includes demographic information, and details of patients’ conditions, medications, care co-ordinator, referrals and appointments, together with any allergies/alerts which may apply.

The EHRV was part of a wider programme of collaborative working on shared objectives across the four trusts. Further changes have been included:

- Bed utilisation across the Vanguard - giving trusts first call on each other’s vacant beds, to avoid long-distance out-of-area placements;
- Launching ‘care in a crisis’ website - to allow service users and carers to find appropriate care at a time of mental health crisis;
- Developing an evidence-based model of recovery practice - to contribute to greater self-management and mental health resilience;
- Developing and implementing a training passport - to permit staff transferring between organisations to bring elements of their statutory and mandatory training with them.
There are approximately 2.3 million people in the UK with coronary heart disease (British Heart Foundation). Due to limitations of existing non-invasive diagnostic tests, it is difficult to determine which of these patients have obstructive disease. Patients undergo extensive testing with indeterminate outcomes. As a result, many of these patients are referred on to an invasive angiography only to find that they do not need treatment.

As described by NICE: “HeartFlow FFRct is coronary physiology simulation software used for the qualitative and quantitative analysis of previously acquired computerised tomography Digital Imaging and Communications in Medicine (DICOM) data. The software provides a non-invasive method of estimating fractional flow reserve (FFR) using standard coronary CT angiography (CCTA) image data.”

In February 2017 NICE recommended HeartFlow stating: “The case for adopting HeartFlow FFRCT for estimating fractional flow reserve from coronary CT angiography (CCTA) is supported by the evidence. The technology is non-invasive and safe, and has a high level of diagnostic accuracy. “HeartFlow FFRCT should be considered as an option for patients with stable, recent onset chest pain, who are offered CCTA as part of the NICE pathway on chest pain.”

HeartFlow is a medical company founded in 2007. The technology, which received favourable NICE guidance in 2017, and NHS funding in 2018, is revolutionising the care of patients with suspected coronary artery disease. HeartFlow is actively partnering with hospital trusts that meet criteria set by NHS England to be part of the Innovation and Technology Payment (ITP) Program. The number of sites and thus patients with access to HeartFlow technology is growing significantly.
Healthy.io is a small and medium-sized enterprise with a mission to use the smartphone camera to improve healthcare. Founded in 2013 in Tel Aviv, it established its UK company to focus on the UK as its primary market in 2017. Healthy.io is the first company to successfully turn the smartphone into a regulatory approved clinical device using computer vision and patient-centric design.

Their first product is built around existing semi-quantitative urinalysis dipsticks to digitise urinalysis, empowering patients to self-test at home with no quality compromise, and securely share results with a clinician. They are also developing a smartphone wound assessment tool to analyse chronic wounds over time and facilitate better care coordination for wound patients.

Healthy.io and the Dip.io solution provide existing healthcare organisations with a full-service offering for home urinalysis to improve efficiency, value and outcomes by digitising existing pathways. This includes:

- Saving outpatient appointment and reduce consultation time to reduce resource pressures;
- Increasing clinical guideline adherence, improving patient safety;
- Improving patient experience (e.g. minimise absence from work and avoid travel expenses).

Their vision is to serve as the backbone for smartphone-enabled image based medical diagnostics and enable partners to bring their innovation to their existing user base. For the next two years, they anticipate that success from the current phased rollouts will lead to scaling the adoption and implementation of the technology to other specialties within the organisation, other hospitals/GPs within the group and to other providers and partners within the region.
Binding Site provides specialist diagnostic products to clinicians and laboratory professionals worldwide. They are dedicated to improving patient lives, delivering innovative medical solutions that improve the diagnosis and management of blood cancers and immune system disorders.

Founded by researchers at the University of Birmingham, Binding Site has built on its strong scientific foundations, supporting research and development and responding to the changing needs of patients, researchers and clinicians for over 25 years.

The Binding Site has engaged with the NHS in a ‘Multiple Myeloma early diagnosis’ project, via a collaboration with the NIHR Diagnostic Evidence Co-operative Oxford and Churchill Hospital Immunology and Haematology Departments.

Multiple Myeloma is the second most common blood cancer and has the longest time to diagnosis of all such cancers. Increasing time to diagnosis is associated with increased development of complications, poorer patient outcomes and thus increased NHS costs. A key factor resulting in delayed diagnoses is the inadequacy of urine analysis as part of the laboratory investigation of patients suspected of having myeloma.

This collaboration aimed to determine if replacement of urine analysis with the Binding Site Freelite test would improve detection rates and decrease diagnostic delays.

This project was initiated and agreed in collaboration with Myeloma UK, the key patient group in the UK for this cancer.

The Binding Site’s commitment to reducing diagnostic delays in myeloma continues, through improving both the laboratory investigation for myeloma and the education of clinicians to recognise the symptoms of myeloma; in this regard they have and are continuing to develop new and more effective diagnostic tests (e.g. Hevylite) and continuing to improve and promote their clinical education programmes.

COLLABORATION WITH THE NHS AWARD

For the development of a collaboration with the NHS that has, or will, have a major impact or benefit to both business performance and patient care.

Thank you to our Award Presenter, Tony Davis, West Midlands Academic Health Science Network

THE BINDING SITE LTD.
Although not winners in their category, the judges felt that one application stood out from the others. This application inspired and impressed the judges who, in consensus, agreed that this organisation should receive special recognition for their innovation. From this, the Meridian Award was created.

The panel felt that the Robert Jones and Agnes Hunt Orthopaedic NHS Foundation Trust (RJAH) showed vision and drive by embracing genomic medicine, and the potential the 100,000 Genomes Project has to transform the way health is delivered. RJAH is a leading orthopaedic centre of excellence with a reputation for innovation. The trust provides a comprehensive range of musculoskeletal (bone, joint and tissue) tumour, surgical, medical, paediatric and adult neuromuscular disorders and rehabilitation services; locally, regionally and nationally.

The organisation is a single-site hospital, which has been in existence since 1900. The trust serves the people of both England and Wales, as well as acting as a national healthcare provider, and achieved NHS Trust status in 1994, and more recently NHS Foundation Trust status in 2011.

They value their links with the local community, who are strong supporters of the hospital.

Muscle Team: Through working with the Genomics Ambassador, Clinical Geneticists from the Regional Genetic Service, the West Midlands Genomic Medicine Centre and bringing together diverse staffing groups at RJAH they have arrived at a transformational and sustainable model, which they feel could be applied to other specialist services.

The RJAH muscle team have developed a ‘one stop shop’ for patients under one roof with respiratory and cardiac monitoring as well as access to psychologists, physiotherapists and genetic diagnostics.

AS SELECTED BY OUR PANEL OF JUDGES, WE PRESENT **ROBERT JONES AND AGNES HUNT**  
**ORTHOPAEDIC HOSPITAL NHS FOUNDATION TRUST**  
THE MERIDIAN AWARD WINNERS
Digital or Artificial Intelligence Innovation Award, Highly Commended
Sensely UK Ltd.
Supporting Self Care and Prevention of Illness Innovation Award, Highly Commended
Health Navigator
Advanced Diagnostics, Genomics and Precision Medicine Award, Highly Commended
Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust
Advanced Diagnostics, Genomics and Precision Medicine Award, Highly Commended
The Binding Site Ltd.
Digital or Artificial Intelligence Innovation of the Year Award, Highly Commended
Lantum
Supporting Self Care and Prevention of Illness Innovation Award, Highly Commended
Warwick Medical School
CONGRATULATIONS TO OUR ONES TO WATCH

In 2018, in addition to choosing a winner and highly commended entry in each category, the judges decided to introduce a new category: One to Watch.

Each and everyone of these submissions impressed our panel of judges with their potential to deliver a tangible solution to an identified or unmet healthcare challenge.

Tammy Holmes, WMAHSN’s Innovation & Adoption Programme Manager said: “We look forward to working together with our Ones to Watch over the coming months and years to further develop their innovations.”

View more photos from the Meridian Celebration of Innovation 2018 at: https://flic.kr/s/aHsmn27mAK
“The awards were established to recognise and celebrate the work of individuals and organisations in developing better healthcare and economic benefit for the region, and the ceremony provided an opportunity to celebrate achievements from across the West Midlands.”
IF YOU WANT TO GO FAST, GO ALONE; IF YOU WANT TO GO FAR, GO TOGETHER

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