



## East Midlands Academic Health Science Network Programmes

# Support for Nottinghamshire Implementation

The tables in the following document summarise the East Midlands AHSN's portfolio of innovations against the indicated and emerging priorities of the Nottingham and Nottinghamshire Integrated Care System (ICS):

- Redesign of the urgent and emergency care system
- Improve the care of people with single and multiple long term conditions through greater proactive management and self management to reduce crises
- Re-shape and transform services and other interventions so they better respond to the mental health and care needs of the population
- Reduce waste and improve efficiency and value across the system
- More action on and improvements in the upstream prevention of avoidable illness and its exacerbations

Many of our programmes span more than one of these priority areas, but are demonstrated under the most appropriate priority for ease.

England's 15 Academic Health Science Networks (AHSNs) operate as the innovation arm of the NHS. We work across all sectors involved in health and care - NHS organisations, social care, public health, universities, third sector and industry - to broker innovative solutions and support NHS transformation.

Each AHSN works with its partners to develop, test and then spread proven solutions that respond to local NHS challenges. By operating as a national network we can both export home-grown innovations and import solutions proven to work elsewhere that address the needs of our region.

- |   |  |
|---|--|
| ✓ Deployed in Nottinghamshire           | ★ Limited deployment while in demonstrator / testing phase |
| ? Partially deployed in Nottinghamshire | £ Savings information                                      |
| ✗ Not deployed in Nottinghamshire       |  |

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# Nottingham and Nottinghamshire ICS Priority 1: Redesign of the urgent and emergency care system

Project Summary	Why?	Nottinghamshire Adoption
<p><b>Atrial Fibrillation - East Midlands AF Advance Programme</b></p> <p>Part of a major AHSN / NHS national initiative to detect and treat Atrial Fibrillation (AF), by distributing mobile electronic testing devices to GP practices along with more effective prescribing of anti-coagulation medication and testing of patients in their local community.</p>	<p>AF is a leading cause of stroke, accounting for one in every five cases - there are over 36,000 undiagnosed patients in the East Midlands.</p> <p>Latest figures show 6,175 more East Midlands' patients at high risk of AF are now being anti-coagulated - a 9.7% increase over 12 months and the highest treatment rate in England.</p>	<p> Deployed across four of the six Nottinghamshire CCGs (devices not currently in use in Mansfield and Ashfield CCG and Newark and Sherwood CCG).</p> <p> As a result of the 4,400 additional people who will have AF diagnosed, this will save the East Midlands' NHS over £2.5m.</p>
<p><b>Emergency Laparotomy Collaborative</b></p> <p>Reducing deaths associated with Emergency Laparotomy (complex emergency abdominal surgery). It uses collaborative working to embed quality improvement - bringing together dozens of staff from Emergency Departments, radiology, acute admission units, theatres, anaesthetics and intensive care.</p>	<p>Emergency Laparotomy is a high risk procedure - up to 25% of patients die within 30 days.</p> <p>Up to 50,000 are performed every year in the UK and over 25% of surviving patients remain in hospital for more than 20 days after surgery, costing over £200m a year and leading to big variations in care.</p>	<p> Deployed across all hospitals in Nottinghamshire where Emergency Laparotomy procedures are performed.</p>
<p><b>Falls prevention and management</b></p> <p>Multi-agency collaboration (NHS, social care, third sector and technology providers) to develop a service model to reduce falls through early identification of risk, early intervention and proactive management - improving patient management and supporting self-management by patients.</p>	<p>55,000 people over 65 are at risk of falling in the area currently covered by this project (Leicester, Leicestershire and Rutland). Once a fall occurs there is a higher probability of falling again with a year. Understanding why falls happen reduces the likelihood - causes range from faulty footwear to medication and poor visibility.</p>	<p> Currently in demonstrator phase in Leicester, Leicestershire and Rutland. Full evaluation will be available Q2 20/21.</p>

# Nottingham and Nottinghamshire ICS Priority 2:

Improve the care of people with single and multiple long term conditions through greater proactive management and self management to reduce crises

Project Summary	Why?	Nottinghamshire Adoption
<p><b>Safety in Care Homes (LPZ)</b></p> <p>LPZ (Landelijke Prevalentiemeting Zorgkwaliteit) is an audit tool developed in the Netherlands to measure common care problems in nursing and residential homes such as falls, pressure ulcers and hydration.</p> <p>East Midlands care homes have taken part in the audit providing consistent recording of data to support and measure improvements in quality of care, and enable cost savings.</p>	<p>Care home providers in the UK use different indicators and metrics for care quality. With no nationally agreed benchmarking tool it is impossible to know the true incidence or prevalence of common problems such as pressure ulcers.</p> <p>LPZ offers a benchmark to drive quality improvement, improve patient safety and reduce unnecessary admissions to hospital.</p>	<ul style="list-style-type: none"> <li><b>?</b> Deployed across 27 care homes in Nottinghamshire.</li> <li><b>£</b> If deployed across the East Midlands care home sector, this programme would result in an annual cost saving of £4.58m.</li> </ul>
<p><b>The 'Scarred Liver' programme</b></p> <p>This innovative diagnostic pathway is proven to more effectively detect chronic liver disease at an early stage, when it can be halted or even reversed.</p> <p>It combines identification of patients who are at risk (as a result of their lifestyle) with a diagnostic test using a mobile scanner that highlights the degree of scarring to the liver.</p>	<p>Liver disease is the third leading cause of premature death in the UK and deaths have increased in each of the last four decades.</p> <p>Deaths in the East Midlands have increased by over 60% in the last 20 years - but as most cases result from lifestyle-related factors (such as alcohol and obesity) they can be prevented as long as they are detected early enough.</p>	<ul style="list-style-type: none"> <li><b>?</b> Deployed in Nottingham City and South Nottinghamshire CCGs.</li> <li><b>£</b> Reduces one consultant outpatient appointment per patient with risk factors for liver disease.</li> </ul>

# Nottingham and Nottinghamshire ICS Priority 2:

Improve the care of people with single and multiple long term conditions through greater proactive management and self management to reduce crises

Project Summary	Why?	Nottinghamshire Adoption
<p><b>ESCAPE-Pain</b></p> <p>NICE-approved programme provides group rehabilitation for people with chronic joint pain. It uses self-management to help people cope, with exercise tailored to each person. It is delivered via physiotherapists or health trainers away from clinical settings such as leisure centres and work places.</p>	<p>One in four GP appointments are estimated to be related to joint pain. ESCAPE-Pain participants experience a marked improvement in mobility and pain reduction and are better able to cope with everyday activities. There is also a reduction in anxiety and depression.</p>	<p> Currently in deployment phase in four community settings in Nottinghamshire (including Bulwell Riverside Centre, King’s Mill Hospital, Mary Potter Health Centre and Newark Hospital).</p> <p> Every £1 spent gives a £5.20 return to the health system.</p>
<p><b>COPD Discharge Bundle</b></p> <p>This programme focuses on the facilitation and spread of the British Thoracic Society, Chronic obstructive pulmonary disease (COPD) discharge bundle, which outlines high impact actions with the aim of improving care and reducing re-admissions.</p>	<p>COPD has a large impact on quality of life and can result in unplanned hospital admissions.</p> <p>The condition narrows the airways throughout the lung, reducing capacity and leads to breathlessness. It affects the lung’s ability to transfer oxygen to the blood and can lead to respiratory failure.</p>	<p> To be rolled out in the city / county during 2019 via the East Midlands respiratory network.</p>

# Nottingham and Nottinghamshire ICS Priority 3:

Re-shape and transform services and other interventions so they better respond to the mental health and care needs of the population

Project Summary	Why?	Nottinghamshire Adoption
<p><b>ChatHealth</b></p> <p>Safe and secure text messaging service that puts secondary school pupils in touch with a school nurse using their own mobile phone.</p>	<p>School nursing capacity is stretched and young people may want to avoid face-to-face appointments on highly sensitive issues. Chathealth is highly effective at reaching this hard-to-reach audience using technology they are familiar and comfortable with.</p>	<p>✓ Available across Nottinghamshire.</p>
<p><b>Transforming ADHD Care</b></p> <p>In the East Midlands over 76,000 young people have Attention Deficit Hyperactivity Disorder (ADHD). QbTest uses technology to assess core symptoms of ADHD, supporting faster and more effective diagnosis.</p>	<p>ADHD assessment can be lengthy and relies heavily on interpretation of subjective reports. QbTest reduces the number of clinician consultations needed to confirm diagnosis and speeds up diagnosis.</p>	<p>✗ Not currently deployed in Nottinghamshire. Originally pioneered in Nottinghamshire.</p> <p>£ Estimated savings for 2019-20 across the three areas currently using QbTest is £191,000.</p>
<p><b>Group Psychoeducation for Bipolar Disorder</b></p> <p>NICE-approved group therapy for people with bipolar disorder delivered in mental health provider organisations.</p> <p>Patients receive information on their illness and work with family members to develop personalised coping strategies.</p>	<p>Few adults with bipolar disorder access appropriate psychological interventions because of capacity and training issues within mental health services.</p> <p>These structured group sessions are highly successful in treating patients in the early stages of bipolar disorder compared to standard peer-support offered by the NHS and voluntary sector.</p>	<p>✓ Deployed in Nottinghamshire via Nottinghamshire Healthcare NHS Foundation Trust, which was the lead site for the intervention.</p>

# Nottingham and Nottinghamshire ICS Priority 3:

Re-shape and transform services and other interventions so they better respond to the mental health and care needs of the population

Project Summary	Why?	Nottinghamshire Adoption
<p><b>Serenity Integrated Mentoring (SIM)</b></p> <p>Integrates mental health care and policing, focusing on patients with complex mental health needs. It trains a police officer in high intensity behaviour, risk management and basic clinical theory and parachutes them into a community mental health team to help with the most challenging cases.</p>	<p>Public services are struggling to manage a small number of callers with highly complex behaviour, placing pressures on police, emergency and healthcare teams.</p> <p>SIM makes the connection between emotional trauma and offending, providing joined up support across health and justice systems. It is proven to significantly reduce crisis calls to emergency services, admissions to A&amp;E for false or malicious and abusive behaviour.</p>	<p> Not currently deployed in Nottinghamshire.</p> <p> Combined cost savings to police, ambulance, Emergency Department and mental health services of £950 per calendar month, per patient.</p>

# Nottingham and Nottinghamshire ICS Priority 4: Reduce waste and improve efficiency and value across the system

Project Summary	Why?	Nottinghamshire Adoption
<p><b>Digital outpatient appointment management</b></p> <p>This project is currently at testing phase and will put in place a digital outpatient management system across a number of acute NHS trust clinical specialities, integrating with the trust's existing IT systems. It will help move scheduling of outpatient appointments to a needs, rather than time, basis.</p>	<p>Tailoring care to individuals can cut costs by reducing unnecessary appointments, and it also improves patients' experiences and supports them to live well, for example by helping them manage side-effects of medication.</p>	<p>★ Currently in demonstrator phase within Nottingham University Hospitals NHS Trust across three clinical specialities. Full evaluation will be available Q4 2019/20.</p>
<p><b>PINCER</b></p> <p>Pharmacist-led <b>IN</b>formation technology intervention for Reducing <b>C</b>linically Important <b>ER</b>rors) is software that helps GPs review patient caseloads and highlight risk of prescribing errors - particularly for people with complex combinations of medicines. This enables action to reduce risk of errors.</p>	<p>Errors are rare but expensive to resolve and lead to patient harm, hospitalisation and deaths.</p> <p>Error rates are around 5% and serious errors affect 1 in 500 prescriptions. Mistakes happen for many reasons such as knowledge gaps, ignoring warnings, lack of monitoring and breakdown of systems. PINCER helps to prevent these mistakes.</p>	<p>✔ Deployed within all Nottinghamshire CCG areas. Currently used in 100 out of 134 GP practices (74%).</p>
<p><b>Unit Dose Close Loop Medicines Management</b></p> <p>Uses robotics to individually package medicines for patients in acute NHS hospitals.</p> <p>The system coordinates the entire process - cutting, bagging and labelling with unique barcodes for each patient. Automated storage cabinets on wards automatically fill medicines trolleys.</p>	<p>It is a challenge for hospital staff to get the right medicines to the right patients at the right time - resulting in waste and risking patient safety from mistakes in the combination or quantity of medicines prescribed.</p> <p>This end-to-end high-tech solution enables over 80% of medicines to be tracked and traced from order to patient administration at a unit dose level - saving money and improving the safety of patients.</p>	<p>★ Under evaluation in University Hospitals of Leicester NHS Trust.</p>

# Nottingham and Nottinghamshire ICS Priority 4:

## Reduce waste and improve efficiency and value across the system

Project Summary	Why?	Nottinghamshire Adoption
<p><b>Transfers of Care Around Medicines (TCAM)</b></p> <p>When people move between care providers or are discharged from hospital, mistakes can be made about medication. TCAM ensures ongoing local pharmacist support, so they have the right medicines and take them appropriately.</p> <p>It leads to significant reductions in hospital length of stay and re-admissions.</p>	<p>Patients don't always remember everything they are told in hospital; having a pharmacist go through their medicines - discussing side effects and checking they understand -keeps them safe and means they are less likely to be readmitted to hospital.</p>	<p> Deployed in Nottingham University Hospitals NHS Trust and Sherwood Forest Hospitals NHS foundation Trust.</p> <p> Estimated saving of over £2m for current trusts through avoided admissions and shorter hospital stays.</p>
<p><b>Polypharmacy</b></p> <p>Polypharmacy (where people are prescribed many medicines) can lead to errors and unintended side effects.</p> <p>This project reviews people's medicines and provides information and advice for clinicians to identify patients at risk, and for people to understand their conditions.</p>	<p>Polypharmacy is common for elderly people - around 40% of older adults living in their own homes are prescribed more than 10 medicines.</p> <p>It can lead to a number of problems, for example patients who are prescribed more medicines than they actually need, or take the wrong medication for their condition.</p>	<p> Frailty pathway in demonstrator phase at Nottingham University Hospitals NHS Trust and a new Social Prescribing Tool will be available in Nottinghamshire in late 2019.</p>

# Nottingham and Nottinghamshire ICS Priority 5:

More action on and improvements in the upstream prevention of avoidable illness and its exacerbations

Project Summary	Why?	Nottinghamshire Adoption
<p><b>Maternal and Neonatal - PReCePT (PReventing Cerebral Palsy in Pre-Term labour)</b></p> <p>Prescribes magnesium sulphate to mothers in pre-term labour.</p>	<p>Magnesium sulphate significantly reduces infant mortality and prevents cerebral palsy.</p>	<p>✓ Deployed across all of the maternity units in Nottinghamshire (about to commence at Nottingham University Hospitals NHS Trust).</p> <p>£ In 2018-19, based on the average lifetime healthcare cost for an individual with cerebral palsy, this programme saved the region's NHS over £4m.</p>
<p><b>Diabetic foot service digital solution</b></p> <p>Hand-held 3D camera assesses diabetic foot ulcers over time.</p> <p>The system shares wound imaging, measurements and electronic clinical notes in real time across care teams. Patients can have follow up appointments in the community, which is more convenient and reduces waiting times.</p>	<p>Around £650m is spent on foot ulcers and amputations each year in the NHS, but there is massive variation in the practice of prevention and management.</p> <p>This system helps clinicians keep track of healing progress, ensures patients receive appropriate care and treatment and reduces the risk of foot amputations - saving NHS time and money.</p>	<p>✓ Deployed in Nottingham University Hospitals NHS Trust.</p>



## Supporting Health and Care Transformation

We provide advice and expertise to assist East Midlands health and care organisations with their transformation work - our support is summarised below, please get in touch to discuss how we can help:

**Innovation Exchanges** - these structured processes bring together partners across sectors to develop, test and spread solutions to major challenges identified within East Midlands STP and ICS plans. We are keen to get your views on themes for future Innovation Exchanges.

**Patient and Public Leadership and inclusion** - we provide expertise and resources including 'top tips' guides, training events and masterclasses. We also host the East Midlands Patient and Public Involvement Senate, a group of patients and carers with 'lived experience' that provides independent advice. As well as offering access to events, resources and the PPI Senate we may be able to provide bespoke support for STPs and ICSs.

**Navigating and signposting** - through our local and national networks we bring together organisations across sectors and identify opportunities to work on shared priorities. In particular we connect health and industry partners and can support STPs and ICSs to identify proven solutions to existing challenges.

**Analytics, business cases and procurement** - we can provide STPs and ICSs with access to expert and independent specialist advice.

**Digital Transformation** - we host the East Midlands digital transformation forum that brings together digital leads from across East Midlands NHS organisations. Please get in touch to access this Network.

**Clinical entrepreneurship** - we support NHS clinical innovators to assess and develop their ideas, understand the environment and navigate the health system, and advise NHS organisations on issues such as protecting Intellectual Property. We are inviting applications for our next intake of clinical entrepreneur training - please get in touch.

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