# WMAHSN Impact Report 2022/23



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### **FOREWORD**

It is with immense pleasure that I introduce the 2022-23 annual impact report of the West Midlands Academic Health Science Network (WMAHSN).

As the NHS celebrates its 75th year, 2023 also marks an important milestone for the AHSN Network which was established by NHS England 10 years ago to spread innovation at pace and scale. Our purpose remains to lead, catalyse, and drive cooperation, collaboration and productivity between academia, industry, health and care providers and citizens, to accelerate the adoption of innovation to generate continuous improvement in the region's health and wealth.

The healthcare sector continues to be a highly dynamic and evolving environment, with several changes across the landscape during 2022-23. The West Midlands has had the fastest-growing population in the UK, over double the average increase across our Academic Health Science Network (AHSN) counterparts\*. The emergence of Integrated Care Systems (ICSs) reaffirms the crucial part collaboration and innovation have to play in the continued improvement of our health and care system. As an organisation, we continue to work closely and collaboratively with our commissioners – NHS England and the Government's Office for Life Sciences, as well as strengthening our partnerships

with organisations like the West Midlands NIHR Applied Research Collaboration (WM ARC).

In Summer 2022, we were pleased to welcome colleagues from the Accelerated Access Collaborative (AAC), to highlight some of the impacts we have achieved across our region and nationally and would like to take a moment to thank all stakeholders who were involved with the visit. More information about the event is available here.

We have continued with our national programmes and initiatives, including our work to increase the uptake of asthma biologics for people living with severe asthma; to transform the diagnosis of attention deficit hyperactivity disorder (ADHD); and to improve the prevention and management of cardiovascular disease.

Our Patient Safety and Improvement programme has seen measurable impact in the management of deterioration in care homes; a whole systems approach to high-risk opioid prescribing; and the development of effective systems for responding to patient safety incidents.

This year we have seen a 34% increase in the number of users on Meridian, our online Health Innovation Exchange supporting innovators to overcome historic barriers to adopting innovation by forming closer links between the NHS, industry, and academia and by

developing the infrastructure to improve the scale and speed of adoption across the West Midlands.

A new cohort of businesses has been accepted onto our pioneering incubator and accelerator programme, Serendip 2.0, driving growth and opportunity for digital technology companies within the region.

I would like to extend a huge thank you and a fond farewell to Tony Davis, Innovation and Commercial Director, who has played a crucial role in our bid to transform health and social care through innovation since the AHSNs were established

Finally, I would like to thank all the members of our team, as well as our myriad of partners and collaborators for their continued support this year.



Professor Michael Sheppard
Chair of the WMAHSN

### INTRODUCTION

The individual case studies in this report reflect the organisation's priorities, which are aligned with the National AHSN Network, as well as the needs of our local system, and will showcase our impact in these areas of focus from April 2022 – May 2023.



### **Implementation and Adoption Programmes**

Our national adoption and spread programmes are set out by the Accelerated Access Collaborative (AAC) with the aim to get more proven innovations into the hands of clinicians and patients, faster. These programmes have focused on major NHS priorities including cardiovascular disease (CVD), asthma care pathways and more recently, the MedTech Funding Mandate. In alignment with the NHS Long Term plan, we also facilitate the adoption and spread of programmes developed locally, regionally and nationally, by our Network Central Team, to encourage uptake of evidence-based solutions identified through our pipeline.

### **Patient Safety and Improvement Programmes**

Hosted by the WMAHSN, the West Midlands Patient Safety Collaborative (WM PSC) is commissioned to deliver the National Patient Safety Improvement Programmes, enabling patient safety and continual reduction of avoidable harm by helping organisations to work together to develop, implement, share, and spread proven safety practice. These programmes focus on quality improvement and culture across several areas including Managing Deterioration, Mental Health, Maternity and Medicines Safety.

### **Innovation and Commercial Programmes**

The WMAHSN powers the development of ideas through a range of innovation and commercial services including business support, Intellectual Property (IP) advice and the Meridian online innovation exchange. Funded by the Government's Office for Life Sciences (OLS), this programme supports innovators to design, develop and spread innovations that directly respond to health and social care needs. Collaborations include Small Business Research Initiative (SBRI) Healthcare and the NHS Innovation Accelerator (NIA) programme.

### **OUR OVERALL IMPACT**

2,442

West Midlands patients benefitting

from Focus ADHD

Staff receiving improvements through IMpulse CVD training



Integrated

Care Boards supported

11,633

Reduction in hospital bed days as a result of our managing deterioration programme

2,387

Healthcare sites in the West Midlands introduced to a national innovation by WMAHSN

3,029

Registered users on Meridian Innovation



Total inward investment achieved



Jobs created



PCSK9i patients

benefitted from prescribing inhibitors

£9,637,728





### WEST MIDLANDS ACADEMIC HEALTH SCIENCE NETWORK

April 2023 marks 10 years since the AHSN Network was established by NHS England to transform the way the NHS identifies, adopts, and spreads promising innovations. During this time, the WMAHSN has undergone significant growth and transformation, and we are excited to share our journey with you through this infographic.

The last decade has witnessed significant changes in the health and care sector, with rapid advances in medical technology driving transformation across the industry and increasing efforts to provide equitable access to care for all. While the COVID-19 pandemic presented significant challenges for the sector, the WMAHSN are proud to have supported the opportunity it presented to spur innovation, collaboration, and resilience in the face of adversity.

As we progress through the timeline, you will see how we have evolved in response to changes in the health and care sector and some of the major milestones and achievements that have shaped our organisation into what it is today.



WMAHSN: Impact report 2022/23

15 AHSN's
established and
licensed by NHS
England, to deliver
a step-change
in the way the
NHS identifies,
develops, and
adopts innovation
in healthcare.

West Midlands
Patient Safety
Collaborative
(WMPSC) launched
to improve the
quality and safety of
the NHS for patients
by creating an open
and transparent
culture.

WMAHSN Human Factors specialist co-designs Paediatric Early Warning Score (PEWS) form that is now implemented across all UK Paediatric units.

Launch of Serendip Incubator and Accelerator Programme, driving growth and opportunity for digital technology companies within the region. WMAHSN supports the adoption of innovation, SCRIPT, an e-learning programme, designed to encourage safe and effective prescribing and medicines management, which is now commissioned by Health Education England.

The WMAHSN identified American innovation Heartflow, as a proven innovation to identify coronary heart disease, which went on to become part of the Medtech Funding Mandate (MTFM) policy, Innovation and Technology Tariff and Innovation and Technology Payment (ITT/ITP) programmes.

Meridian Health Innovation Exchange launched, one of the first Innovation Exchanges across the AHSN Network.

Hosted the first Meridian Celebration of Innovation Awards, celebrating the individuals and organisations that are revolutionising healthcare in the West Midlands.

2013

2014

2015

2016

The WMAHSN support the local, regional, and national calls for support as a result of the COVID-19 pandemic, including the development of PPE innovations for front line staff.

HSJ Patient Safety Awards scooped by WMAHSN supported innovations; Learning from Excellence; and Birmingham Symptom Specific Triage System (BSOTS).

The WMAHSN awarded PrescQIPP Champion for the Transfer of Care around Medicines (TCAM) to care homes programme.

O Hosted the WM Life
Festival with 6 West
Midlands schools,
paving the way for our
junior accelerator and
apprenticeship projects.

Safer Provision and Caring Excellence (SPACE) QI Programme receives ideas UK Award. First SME Innovation fund launched to support West Midlands based SMEs to develop digital solutions that meet health and care challenges.

AHSN Network signed up to a series of Diversity and Inclusion pledges, demonstrating our national commitment to fostering a diverse and inclusive culture through our work. AHSN Network relicensed for a further five years.

The WMAHSN facilitated the spread of a quality improvement programme, Preventing Cerebral Palsy in Preterm babies (PReCePT) across the region.

2020

2019

2018

AHSNs support the successful national rollout of COVID Oximetry® home and virtual ward models, which went on to win a national Patient Safety HSJ Award.

The WMAHSN receives platinum accreditation from ideasUK.

The WMAHSN Deterioration model branded an example of excellence, with Unity Insights evaluation suggesting adoption of deterioration management tools within care homes across the region exhibited a potential non-cash releasing total saving of £8.5m.

The WMAHSN Asthma
Biologics project exceeds
trajectories and approach
deemed exemplary, as
others adopt a nurse
educator role to identify
asthma patients in primary
care using the Spectra tool.

Applications for the second cohort of the Safety, Innovation and Improvement fund were invited. In total, 10 service innovations have been supported and £128,844 invested since the fund was first launched in December 2020.

 AHSNs are relicensed for five years, under the new name Health Innovation Networks.

First Junior Innovation and Skills Incubator workshops hosted.

2020-2021

2021

2022

2023

# CASE STUDY: JUNIOR INNOVATION AND SKILLS INCUBATOR

The UK continues to face a skills problem, due to the mismatch between the skills employees possess and those employers need. This has resulted in knowledge gaps and talent shortages, which are compounded by the need for businesses to improve their digital competencies to survive.

The implications of this problem for economic growth and productivity are significant, requiring a coordinated effort. We have worked with Digital Innovators and responded to this with the Junior Innovation and Skills Incubator, which aims to unlock untapped potential and accelerate education and training among young professionals.

### Aim

Digital Innovators is a training provider specialising in giving young people access to fulfilling job opportunities and bridging the gap between education, skills, and employment.

Working in partnership with Digital Innovators, the aim of the Junior Innovation and Skills Incubator was to attract and retain skilled employees with the ability to adapt and develop skills to support changing technological, social, and demographic trends.

The programme supports young innovators by providing examples of healthcare challenges in need of solutions,

while building workplace skills to help build confidence and ensure they are ready for employment. In doing this, we are linking the minds of the future to shape the solutions of our current healthcare challenges by collaborating within the system.

### Our approach

Three workshops were held to introduce innovators to a range of real-life health and social care challenges and attendees were asked to come up with solutions to these challenges. The sessions were monitored by members of our team and the Digital Innovators team, with us acting as both customers and sector experts for the purpose of the workshop.

Following the sessions, the students continued to receive support and insight from the sector experts as they refined their initial ideas into potential viable solutions. This included milestone touch bases and access to experts, giving them opportunities for their ideas to become viable propositions to start-ups.

#### **Outcome**

Once the project teams had completed their thinking session and formulated some ideas, they spent the following weeks refining these ideas into proof of concepts. They then had the opportunity to present their



Pictured: Harry Paige, David Hull, Digital Innovators

solutions to our team in a Dragons Den-style pitch, where we provided feedback and agreed a route to take their projects forward.

Through the Junior Innovation and Skills Incubator, we have helped to support the next generation of SMEs, innovators and workforce, shaping the minds of the future.

Working in collaboration with Digital Innovators, the WMAHSN hopes to build on this pilot, providing an exciting and innovative solution to skills development and apprenticeships based on the principles of Change Management. We will present a unique approach to solving business problems, whilst providing people in vocational, education, or community settings, with the digital skills employers need. In doing so we create alternative career pathways to apprenticeships for young people, additional resources to implement new and innovative business solutions, and help address the NHS vacancy challenges.

### CASE STUDY: HUMAN FACTORS

Human Factors and Ergonomics (HFE) is a scientific discipline concerned with the understanding of interactions among humans and other elements of a system. The science is used in many safety-critical industries, and in healthcare it offers a broad, scientific, and evidence-based approach to patient safety, staff wellbeing, quality improvement and clinical excellence.

### Aim

The aim of the project was to support and provide specialist HFE advice to projects and programmes across academia, industry and health and social care in the West Midlands. In doing so, we would encourage the development of HFE knowledge and understanding.

The overall objective was to help facilitate shared learning from organisations that have been successful in implementing HFE principles and gain greater understanding of where there are barriers in the adoption of HFE.

### Our approach

A Human Factors Specialist post was introduced into our organisation to provide HFE leadership to the programmes and projects we support. Embedding HFE into the organisation enabled close working with internal heads of delivery and programme and project managers to provide specialist HFE advice.

Practical HFE support has been provided to the projects and programmes we support, such as introducing the Human Factors System Engineering Initiative for Patient Safety (SEIPS) 2.0 Framework to the Maternity and Neonatal programme. This enables staff to consider optimal cord management from a systems perspective.

A Human Factors Community of Practice (CoP) was also established in 2020. The aim of the CoP is to provide a group of healthcare staff who share an interest in HFE with a forum where they can come together to share knowledge, concerns, best practice and develop networks.

Additionally, a podcast series – 'All Systems Ergo' – has been recorded to provide HFE knowledge and education from a series of HFE specialists from around the world – aiming to educate and support implementation of HFE across healthcare disciplines.

### **Outcome**

The Human Factors Specialist has presented in lectures and workshops to organisations such as University of Toronto, University of Birmingham and the British Society of Gastroenterology, engaging with nearly 350 people.

Membership of the Human Factors CoP has grown from a small group of colleagues to numbers nearing 50 people, with many joining through word of mouth.



Pictured: Fran Ives, Human Factors Specialist, WMAHSN

Over the past 12 months, five CoP meetings were held, focusing on topics such as our Human Factors Workforce Fund, HFE regional support, project knowledge sharing and open networking.

Additionally, the All Systems Ergo podcast launched in early 2023, and the series guests were chosen with the aim of showcasing a wide range of topics across HFE in healthcare, therefore appealing to multidisciplinary staff.

Listen to the podcast here

### **INNOVATOR SUPPORT**



132
Intellectual
Property (IP)
disclosures
received











3,029
Registered users on Meridian Innovation Exchange

154
Innovations signposted



8
Horizon-scanning activities completed

Social enterprises supported through FUSE



448
Companies supported



### CASE STUDY: ASTHMA BIOLOGICS

Asthma Biologics is a national project supported by the Accelerated Access Collaborative (AAC) and all 15 Academic Health Science Networks (AHSNs).

Improving outcomes for patients with respiratory disease is a clinical priority in the NHS Long Term Plan. To support delivery of this commitment, the AAC selected Asthma Biologics as a Rapid Uptake Product (RUP). These are medicines approved by NICE that are not yet integrated into everyday practice.

Asthma Biologics work in a targeted way by disrupting pathways which cause airways inflammation, helping to manage symptoms, reduce relapses and may also reduce reliance on other medicines such as oral steroids.

Currently there are four NICE approved biologics for severe asthma:

- Omalizumab,
- Reslizumab.
- Mepolizumab,
- Benralizumab.

#### Aim

The AAC and AHSNs across the nation were tasked with supporting the stronger adoption and spread of Asthma Biologics.

The aim of the project was to support improvements in pathways and practices to ensure more patients receive timely specialist care for their severe asthma and increase access to biologic treatments.

Some patients have uncontrolled asthma for many years and there is also variation in the time taken to commence biologic therapy.

### Our approach

A successful bid for Pathway Transformation Funding (PTF) was awarded to the Royal Stoke Hospital (University Hospitals North Midlands NHS Foundation Trust), within the Staffordshire and Stoke-on-Trent Integrated Care Board (ICB), to implement an enhanced pathway to improve access to Asthma Biologics. £114,000 of the funding was used to commission additional Consultant time and to employ an Asthma Nurse Educator.

The Asthma Nurse Educator worked with general practice to proactively identify uncontrolled asthma patients who would benefit from a referral to secondary care for specialist input and to provide education on severe asthma to the practice teams.

#### **Outcome**

Data was collected at a patient level based on the requirements of their asthma care pre and post biologic treatment. This provided insight on identifying patients earlier in the asthma pathway and has changed the lives of people living with asthma.

Over the duration of the project, 116 patients were identified and initiated onto Asthma Biologics and the National Institute for Health and Care Research Applied



Research Collaboration (NIHR ARC) independent evaluation indicates that patient waiting times reduced from 76 weeks to 26.7 weeks.

The Asthma Control Questionnaire (ACQ6) showed a statistically and clinically significant improvement for patients starting biologic treatments.

For patients initiated onto Asthma Biologics there was a reduction in prescribing:

- short-acting beta-agonists (SABAs) by 25%
- oral steroids by 60%

For patients initiated onto asthma biologics, there was a reduction in medical interventions:

- exacerbations by 50%
- hospital admissions

Finally, training was delivered to 56 healthcare professionals on the severe asthma pathway.

# CASE STUDY: FRACTIONAL EXHALED NITRIC OXIDE (FENO)

According to Asthma + Lung UK, over 5.4 million people in the UK live with asthma, making it one of the most common long-term health conditions in the country.

It is suspected that 30% of patients currently diagnosed with asthma have been misdiagnosed, meaning that patients are not receiving the care that they need.

To minimise the risk of this happening, the Fractional Exhaled Nitric Oxide (FeNO) test can be used to ensure more accurate and effective diagnosis of suspected asthma cases, as well as excluding patients who have other respiratory conditions such as chronic obstructive pulmonary disease (COPD).



FeNO was selected as a priority for innovation in asthma care, a focus agreed by the Accelerated Access Collaborative (AAC). This project ran from April 2021 until March 2023, with the national project now closing.

### Aim

The aim of the project was to increase the uptake of FeNO in primary care and to improve patient care and outcomes by:

- Using FeNO devices to measure FeNO concentration in the patient's breath to enable more accurate and effective diagnosis of patients suspected of having asthma.
- Improving management of asthma patients by using FeNO to monitor the adherence to inhaled steroids and to step up or down inhaled steroids.

### Our approach

Hereford Medical Group in the Herefordshire and Worcestershire Integrated Care Board (ICB) were awarded funding via the Pathway Transformation Fund (PTF). The successful rollout of FeNO testing in this practice, led us to fund additional FeNO devices that were distributed across all six of our Integrated Care Systems (ICSs).

Stakeholders were identified in primary care through members of the West Midlands Respiratory Network, connections with Clinical Pharmacists and Primary Care Network (PCN) Clinical Directors. Following a competitive bidding process for funding, we supported the distribution and adoption of these devices in the asthma care pathway.

Applications from PCNs that fell in the 20% most deprived population (applying the Core20PLUS5 framework) using the index of multiple deprivation (IMD) with the aim of ensuring equitable access were encouraged and supported.

### **Outcome**

Over the duration of the project, we hosted three online webinars as part of the FeNO Collaborative sessions, created a newsletter outlining all the resources available to support the adoption of FeNO in primary care and produced a podcast with Ockham Healthcare on the use of FeNO in Primary Care.

Two of the NICE approved FeNO device companies have created a 'FeNO device loan offer' to enable more PCNs and practices to access FeNO.

Over the last year, the number of FeNO devices across the West Midlands has increased, which will help to improve diagnosis and monitoring of patients with asthma in our region.

## **CASE STUDY:** FOCUS ADHD

Attention Deficit Hyperactivity Disorder (ADHD) is a treatable disorder that affects around 5% of school-aged children worldwide. The diagnosis process can include multiple steps and is based on clinical judgement informed by subjective reports from parents, teachers, and observation of the patient.

Children in the UK wait 18 months on average to obtain an accurate diagnosis, more than the European average of 11 months. Diagnosing ADHD is estimated to cost the NHS £23 million a year and the total cost for patients over their lifetime is estimated at more than £102,000.

The Focus ADHD intervention introduces an objective assessment within the ADHD diagnosis pathway, called a QbTest, which speeds up the route to diagnosis, reduces waiting lists and costs.

### Aim

The Focus ADHD programme aimed to transform the diagnosis of ADHD across the region, using the QbTest. Through this, we aspired to help children get a validated diagnosis faster, whilst also increasing staff capacity by reducing the number of appointments needed for diagnosis.

The objective assessment also aimed to assist in ruling out an ADHD diagnosis at an earlier stage, releasing the capacity of clinicians, reducing waiting lists and giving an improved experience for patients.

During the national programme, our 22/23 objectives were to support the implementation and spread of adoption of the QbTest to a cumulative total of six trusts (60% services that could utilise the test) in the region, and to enable the test being utilised in 771 patients.

### Our approach

We coordinated a local inter-organisational network which included the necessary expertise, enthusiasm, and influence to make the programme a success. We had champions of the innovation within the region, supporting the adoption and spread both regionally and nationally.

Through this, the project has been able to provide implementation experience which has allowed for a linear project management approach in terms of supporting trusts through the necessary stages prior to implementation. We have actively supported business case development, information governance and procurement understanding, IT requirements and training.

It was also identified that there was a lack of funding directed to ADHD service improvement, due to ADHD not being a priority within the NHS Long Term Plan. The project requested funding from our senior leadership team to resolve this issue. As a result, we are directly supporting four trusts by funding approximately 1,000 additional patient tests.



### **Outcome**

Throughout the course of the Focus ADHD project, we exceeded adoption targets as eight trusts (80% of those eligible) committed to adopt or have adopted the innovation against our original target of six having adopted by the end of 22/23. Additionally, 1,096 patients received the QbTest within the region during 22/23, against our target of 771.

Furthermore, we consistently performed in the top three regions across the network against one of the highest trajectories, with over 2,000 patients receiving a QbTest to date – which included a 65% year-on-year increase.

With respect to workforce sustainability and benefits, use of the QbTest would be predicted to have helped reduce nurse school observations and outpatients appointments. Taking testing numbers in the West Midlands between 2021 and 2023, a predicted 578 outpatients would have been avoided, which would have saved 1,233 workforce hours. Similarly, a predicted total of 203 nurse school observations would have been avoided, which would have saved 812 workforce hours.

# CASE STUDY: PHARMACY ENVIRONMENTAL SUSTAINABILITY NETWORK

Environmental sustainability strategy is a key focus for NHS organisations across the nation. Medicines contribute to 25% of the NHS carbon footprint and have additional environmental impacts, including waterway pollution.

Pharmacy professionals within the West Midlands requested a forum to address this issue and share successful medicine related environmental sustainability projects, discuss challenges, and build networks with peers seeking to improve the environmental impact in this area.

### **Aim**

The West Midlands Pharmacy Environmental Sustainability Community of Practice (CoP) aimed to provide a supportive environment to hear from and connect with other like-minded professionals from across the West Midlands to discuss medicines related environmental sustainability topics.

The group provided a virtual platform for collaboration; to share challenges, successes, and resources to help pharmacy teams contribute to the NHS net zero targets and improve the environmental impact of medicines use.

### Our approach

Initial discussions with pharmacy professionals within the West Midlands identified a need for a forum to share knowledge and learn about medicines and their impact on the environment.

Following this, an initial focus group and further stakeholder engagement confirmed the need for a new forum to be created.

A consultation with an expert on CoP was undertaken to determine helpful approaches and a Pharmacy Cross Sector CoP was formed.

Facilitated by our Medicines Optimisation Environmental Sustainability lead, the group meets virtually every two months. Guest speakers join the meetings to share quality improvement projects and stimulate discussion between members. There is also opportunity within the meeting to share individual success, resources and learning opportunities.

Topics of discussion have been "Journey to improve the environmental impact of medicines within Worcestershire Acute NHS Trust", "Inhalers and the Environment – experiences in Primary Care" and "Medicines Waste"



### **Outcome**

The Pharmacy Environmental Sustainability Network has been well received by professionals across the region.

Since September 2022, four events have been held and there has been a growth in attendees from nine at the first event to 27 at the most recent held in January 2023.

Membership is open to all West Midlands NHS pharmacy team members including Pharmacy Technicians, Pharmacists, and other NHS professionals supporting the impact of medicines on the environment, whether they are from primary or secondary care, community pharmacy, Integrated Care Boards (ICBs), commissioning or academic.

The Pharmacy Environmental Network has underpinned our medicine related environmental sustainability projects, including Greener Inhaler and Anaesthetics. Contacts made through this Network have also enabled links within medicines and the NHS net zero work.

# CASE STUDY: THOPAZ+

NHS England's MedTech Funding Mandate (MTFM) policy supports the NHS Long Term Plan to accelerate equitable patient access to The National Institute for Health and Care Excellence (NICE) approved devices, diagnostics, and digital products. Thopaz+ was one of seven new technologies added to the MTFM 2022/23, and one of three which focuses on the patient experience during procedures.

Thopaz+ is a portable digital chest drainage and monitoring system, which enables patients to be monitored via digital readings. This supports clinical decision-making and assists patients' recovery helping to reduce the length of their stay in hospital.

Through the MTFM Policy, we supported NHS providers to implement Thopaz+ in the West Midlands as well as the other AHSNs in our role as National Lead

### Aim

The first aim was to develop a national offer, including a repository of tools and resources to help all 15 AHSNs across England to support the local implementation of Thopaz+ within their geographical remit. These tools and resources provided equity of access to, and realisation of, the clinical and cost benefits of utilising the technology.

The second aim was to support the implementation and adoption of Thopaz+ in the 13 trusts in the West Midlands with the ability to utilise the technology.

### Our approach

Working with clinical advisors we developed three workstreams for our national lead role:



The above workstreams were underpinned by data from three sources including:

- Supplier uptake and sales data
- NHS England provider data on number of pulmonary resections and pneumothoraces and associated length of stay
- 'On the ground' clinical survey of Thopaz+ usage and potential need

At the beginning of the project, this provided a national baseline level of usage and helped to identify gaps in access and prioritise trusts where greatest benefits could be realised.

We utilised our national support offer to create local cases for change and adoption of Thopaz+ and to support implementation. Our local implementation role involved engagement with key stakeholders within each trust that possess the expertise, influence, and enthusiasm to facilitate progress.



### **Outcome**

In 2022/23, national quarterly reporting metrics have demonstrated an increase from 28% to 46% of trusts implementing or adopting Thopaz+. This is predominantly composed of thoracic centres, of which there are 28 in England according to the Getting It Right First Time (GIRFT) Cardiothoracic Surgery Programme National Specialty Report 2018.

Regionally, 92% of applicable acute trusts are in adoption Stage 1 (knowledge of Thopaz+) to Stage 5 (adoption of Thopaz+). This represents a 38% increase from Quarter 1 baseline, demonstrating the success of our engagement to date, ensuring widespread local awareness of Thopaz+.

This includes facilitating two product demonstrations in two separate trusts with no previous knowledge of Thopaz+. We have seven trusts (54%) either implementing or adopting Thopaz+ where six of these (46%) have already adopted the technology. To date, we have helped to progress West Midlands trusts through eight implementation stages.

# **CASE STUDY:**GAMMACORE

Cluster headaches are some of the most painful, highly incapacitating primary headaches. They are usually unilateral and accompanied by symptoms such as eye redness or watery eyes, nasal congestion, swollen eyelids, facial sweating or flushing, constricted pupils or droopy eyelids.

GammaCore is a handheld, patient-controlled, non-invasive vagus nerve stimulator used for preventing and treating cluster headaches. The device is applied to the neck to deliver a small electric current for two minutes at a time.

GammaCore can reduce the frequency of cluster headache attacks and the intensity of pain during an attack, thus improving patient quality of life and having potential for reducing NHS expenditure through reduced use of painkillers.

### **Aim**

Our aim was to support the implementation and adoption of the GammaCore vagus nerve stimulator within the six trusts in the West Midlands that could utilise the device. Our objective was for 80% or more services in the West Midlands to utilise or access GammaCore.

Through this, we were looking to help healthcare providers accelerate equitable access to GammaCore for patients within the West Midlands, for the prevention and treatment of cluster headaches. In doing this,

the programme would increase patient choice and help healthcare providers realise the clinical, operational and potential cost-saving benefits of the technology.

### Our approach

We worked closely with electroCore, the supplier of GammaCore, and shared responsibilities to support the implementation and adoption of the technology in the West Midlands

We collaborated to assemble a pack of information to assist trust discussions with their commissioners. This information emphasised positive traits of GammaCore including its evidence base, potential for cost benefits, ease of use and training for clinical staff and patients, and its fit with local practices to help promote decisions to sustain funding.

We used networking to engage trusts in the region, coordinating the assembly of appropriate expertise to progress implementation and decision-making. We also helped with clarifying eligibility to use GammaCore in line with NICE Medical technologies guidance (MTG46), which refers to use or prescribing by a 'headache specialist'. We worked with the supplier, National AHSN lead and representation from NHS England to fully define the 'headache specialist' term, to reach an appropriate balance between equitable access and safe prescribing.

#### **Outcome**

Within the West Midlands, there are six trusts with services that could adopt or indirectly access GammaCore for use in accordance with NICE MTG46. Four trusts are directly prescribing GammaCore to their patients while the other two trusts are referring their patients to neighbouring trusts to benefit from the treatment. We have therefore achieved our anticipated adoption ambition, given that 100% of eligible services have access to GammaCore, albeit some via referral to other services.

We have facilitated a 34% increase in usage of the technology and have collectively moved our trusts on 20 implementation stages from our baseline, including helping two trusts progress from no prior knowledge through to sustained adoption.

In the process of facilitating this programme, we assembled an offer which supported implementation through the entire process of acquiring knowledge, generating interest, deciding to implement, implementing, funding and finally sustaining long-term usage or access to the technology.

### SYSTEM SUPPORT AND TRAINING

18

Delegates receiving smoking cessation during pregnancy training



Staff engaged with the QI Notify programme

570

who have adopted

2,387 Healthcare sites in the West Midlands introduced to a national innovation by WMAHSN

Staff receiving improvements through NHS Insights Prioritisation Programme (NIPP) Community of Practices

76

100

34%

West Midlands Wards adopting 'Reducing Restrictive Practice Change Package'

introduced to new

Staff receiving improvements through Community of Practices



919 (55%)

West Midlands care homes using deterioration management tools for at least 12 months



Staff upskilled on

Greener Inhaler Care

2,442



CVD Preventative Cardiology Clinics

Innovations in process of being evaluated at individual sites



1,679

# CASE STUDY: CHILD-PARENT SCREENING (CPS)

Familial hypercholesterolaemia (FH) is an inherited autosomal dominant condition, which is passed down through families. FH is associated with persistently elevated levels of low density lipoprotein cholesterol. If left untreated, the condition can lead to premature cardiovascular disease.

Identification of FH before the onset of atherosclerotic cardiovascular disease, allows for lifestyle modifications to be implemented alongside the timely initiation of lipid lowering therapies to reduce cholesterol.

The current approach for identification involves screening GP clinical systems to identify adults with undiagnosed and under-treated FH. However, this strategy will not be sufficient to meet the ambitions of the NHS Long Term Plan, which aims to increase population prevalence to 25% by 2025. Child Parent Screening (CPS) has been proposed as a viable mechanism by which to supplement the current model. A cholesterol heel prick test is undertaken during the 1 year child immunisation appointment. If a cholesterol level above a particular threshold is noted, a genetic sample is sent to confirm or rule out FH. If a child is found to have FH, this allows for cascade screening of the parent(s) and/or sibling(s), thereby enabling timely identification of the condition. Dietary changes and lifestyle modifications can be discussed for the child and in addition pharmacological treatment can be commenced in the parent(s).

#### Aim

The AHSN Network Lipid Management & FH Programme, running from October 2020 to October 2023, aims to increase the identification of people with FH from the current 4% to 15% of the prevalent population in England.

CPS is a method of identifying children, and their parents, who have FH and supports cascade testing to identify other relatives with FH. Identified individuals will follow an agreed pathway for referral to the West Midlands Familial Hypercholesterolaemia Service (WMFHS) for specialist input. This will provide a systematic and sustained approach to achieve the NHS Long Term Plan target of 25% population prevalence by 2025.

### Our approach

We have invited primary care networks and practices to participate in a national service evaluation project. We, with the support of the WMFHS, are one of seven AHSNs participating in this 24-month pilot project, which has now been extended to March 2024.

CPS involves a heel prick blood test during a child's routine one-year immunisation appointment as a method of identifying children and their parents with FH, and to support cascade testing to identify other relatives with FH.



More timely diagnosis of FH in children and adults allows for earlier treatment with lipid lowering therapies, leading to a reduction in premature coronary artery disease and subsequent reduction in cardiovascular events.

The CPS pilot will help to determine whether such a systematic approach can be commissioned in the longer term, to support the NHS Long Term Plan ambition to increase population prevalence of FH.

### **Outcome**

We were one of the first AHSNs to go-live with the pilot project and have consistently featured in the top three AHSNs in terms of number of children screened.

Across three West Midlands sites – St John's Surgery, Ridgacre House Surgery and Alfred Squire Medical Practice – a total of 99 children have been screened to date, out of a total of 407 screenings across the country. What's more, there are a further three West Midlands sites due to go live in 2023 that have a combined potential of 247 annual immunisations.

## CASE STUDY: CARDIAC REHABILITATION

Cardiovascular disease (CVD) is the single biggest condition where lives can be saved by the NHS over the next 10 years, according to the NHS Long Term Plan. CVD affects 7.6 million people in the UK, accounts for 100,000 hospital admissions and is estimated to cost our economy £19 billion each year.

Cardiac rehabilitation is a proven intervention in people with established CVD, yet, despite a robust and well established evidence base, uptake remains disappointingly low at around 50%, and is even less in seldom heard communities.

Through the CVD Prevention and Management Programme, the WMAHSN aimed to increase uptake of cardiac rehabilitation programmes to people who have experienced a cardiac event in local communities.

### Aim

The purpose of the CVD Prevention and Management Programme was to support Birmingham and Solihull Integrated Care Board (ICB) to better understand the reasons for the low rates of participation in cardiac rehabilitation, particularly among the seldom heard community groups.

The findings and outcome of the work undertaken will inform a series of recommendations to Birmingham and Solihull ICB, which will allow for a review and redesign of the cardiac rehabilitation service

### Our approach

The programme combined user-led innovation, Human Factors (HF) and quality improvement approaches.

To understand the barriers to uptake, our team developed a questionnaire which was shared by Birmingham and Solihull Clinical Commissioning Group (CCG) throughout the month of May 2022. It targeted primary, community and charity faith organisations who distributed the questionnaire in seldom heard communities. The responses showcased why the uptake of rehab was low.

Findings were shared with commissioners and service providers to help support service redesign.

During July 2022, we used Human Factors methodology to host focus groups with individuals from seldom heard communities within the Birmingham and Solihull Integrated Care System area to identify barriers to uptake and establish further understanding. This informed our recommendations of methods to improve participation of those in seldom heard communities.

Following this, we co-developed an adjusted programme that aims to increase participation, combining service user, and provider input.

#### Outcome

In collaboration with Birmingham and Solihull ICB, University Hospitals Birmingham NHS Foundation Trust, Birmingham Community Healthcare NHS Foundation Trust, and social prescribing organisations, we undertook engagement work across Birmingham and Solihull to look at the barriers preventing those using the service and how we can improve this for a better uptake and retention within cardiac rehabilitation.

Feedback suggests that patients would benefit from:

- Undertaking cardiac rehab in their local community, closer to their home.
- Venues with good access to transport links and free parking for those who wish to drive to their rehabilitation.
- Better awareness of cardiac rehabilitation 46% of patients we engaged with were not aware of why cardiac rehabilitation was important or why they had been invited to participate in the sessions.
- The ability to have resources or programmes in different languages.

# CASE STUDY: INCLISIRAN

Inclisiran is a new treatment for the management of hypercholesterolaemia in people with established cardiovascular disease (CVD). Inclisiran has been made available across England, at scale, following the agreement of a population health management approach between NHS England, the Accelerated Access Collaborative (AAC), and the pharmaceutical company, Novartis.

Approved by NICE in September 2021, Inclisiran can be given to people with high cholesterol who have already had a previous cardiovascular event to reduce the chances of them having another.

This three-way collaboration increased the treatment options available to this patient cohort and is an example of a new method of scaling an approved innovation.



### Aim

Inclisiran can be given to patients in primary care as a twice-yearly injection. In collaboration with the Shropshire Telford and Wrekin Integrated Care Board (ICB), we adopted a system-wide approach to improve patient care by effectively treating patients with hypercholesterolemia.

Aims of the project were:

- To reduce the number of heart attacks and strokes.
- To reduce the risk of admissions and re-admissions associated with cardiovascular disease.
- To reduce health inequalities by ensuring a consistent approach to lipid management, through the relevant local guidance, NICE guidance and approved national clinical pathway (from the AAC).
- To provide more treatment options to the highrisk patients who remain at risk despite maximum tolerated statin therapy.

### Our approach

The ICB adapted the national clinical pathway for local implementation – listening to clinical experience and expertise of their lipidologist and cardiologist. They took a pathway approach to implementing novel therapies, ensuring patients are optimised on high-intensity statins and ezetimibe, before considering the novel therapies, which includes Inclision

We worked closely with the ICB to enable primary care upskilling, the delivery of education and training sessions across the system; support improvements in the confidence, competence and capability of all disciplines involved in the diagnosis; and management of people with CVD, including those who will benefit from lipid lowering therapies.

The UCL Partners Proactive Care Framework for Lipid Management/Hypercholesterolaemia was deployed to risk stratify patients most in need of optimisation. This was supported by a local prescribing incentive scheme that focused on optimising lipid management in people with established CVD, acknowledging that the CVD Primary Care Networks Direct Enhanced Service focuses on primary prevention only.

#### **Outcome**

From 2021, the availability of Inclisiran represents a significant milestone in managing those with established cardiovascular disease

Through effective collaboration between partners, we have supported clinical teams to identify those with high cholesterol and opportunities for better patient care. We have also brought this new treatment to patients more quickly, improving the quality of care.

# CASE STUDY: BLOOD PRESSURE OPTIMISATION

The Blood Pressure Optimisation Programme supports systems to take a multi-morbidity approach in supporting patients with hypertension.

The WMAHSN team supported Primary Care Networks (PCNs) to implement the UCL Partners Proactive Care Framework for Hypertension.

We supported PCNs to increase detection of people with hypertension through case finding interventions (including practice case finding through patient record searches, and models that involve the NHS England commissioned community pharmacy blood-pressure check scheme).

We also supported systems to reduce health inequalities by targeting populations that fell in the 20% most deprived PCNs and other local priority groups (applying the Core20PLUS5 framework).

### **Aim**

The aim of the programme was to review all hypertensive patients at Broadway and Brook Medical centres, located in Sandwell and West Bromwich Urban Health Primary Care Network (PCN), risk stratify them and devise a plan to optimise their care.

Urban Health PCN had approximately 602 coronary heart disease (CHD) admissions per 100,000 and fell within the fifth quintile (most deprived 20% PCNs) with high health inequalities. Spark Medical Centre had

approximately 4,000 patients alone, of which 532 were on the hypertension register.

The clinical team at Broadway Health Centre aimed to ensure there was appropriate follow up for patients with a recorded blood pressure (BP) reading of  $\ge 140/90$ mmHg in a GP practice, or  $\ge 135/85$  in a community setting.

### Our approach

The clinical team at Broadway Health Centre met with us at the end of 2022 to discuss the UCL Partners Proactive Care Framework (PCF) and how to utilise it within the practice. PCF searches ran on 12 September 2022 to obtain a baseline of the current hypertension register.

Patients at both practices were risk stratified, and colour coded as red, dark amber, amber and green (defining priority and need for review). From this, an extensive list of patients was identified, particularly for Broadway Surgery.

Before contacting patients, the pharmacy lead formulated a care plan, and patients were block booked for a blood pressure check.

The surgery has strong links with community pharmacy, meaning Ambulatory Blood Pressure Monitoring (ABPMs) could be undertaken in a community setting and readings relayed to the practice.

Patient readings were followed up with an AccuRX text message or a phone call.

All red patients (a total of eight) at Broadway have been seen and the team have now moved on to their priority two list (the dark amber patients – a total of 60), 50% of which have been seen. Due to there being a greater need at Brook surgery, all patients have been risk stratified and treated.

### **Outcome**

As a result of the work undertaken, patients that were previously risk stratified as red in priority group one turned to light amber or green with a developed care plan formulated for their treatment and management going forward in the form of initiating or optimising treatment

As a result of the testing, some patients stratified may now fall into a higher priority group that require treatment. Therefore, the team are continuing re-run the searches and educate patients around diet, weight, exercise as well as their medication.

This project has revealed additional outcomes for patients such as non-compliance with medication and education around the importance of blood pressure optimisation and management.

## CASE STUDY: IMPULSE CVD

Despite robust evidence and guideline mandated recommendations, mortality and morbidity related to cardiovascular disease (CVD) remains high.

The NHS Long Term Plan has set ambitious targets to identify more people at risk of CVD through effective NHS health checks and upskilling of staff to improve detection and management of hypercholesterolemia and atrial fibrillation (AF).

IMpulse CVD is an ambitious collaborative project led by us, with support from the Midlands Cardiovascular Clinical Network, The British Heart Foundation, Office for Health Improvement & Disparities (OHID) and other industry partners.

### Aim

The aim of this project was to provide practical upskilling workshops to all healthcare professionals, in primary care, who are involved in the diagnosis and management of cardiovascular conditions such as atrial fibrillation (AF), hypertension, hypercholesterolaemia and heart failure (HF).

The content of the workshops, which were delivered by local experts from both primary and secondary care, were designed to help support primary care teams to help meet the targets of the NHS Long Term Plan.

The programme also aimed to meet the requirements of the CVD Primary Care Network Direct Enhanced Service (PCN DES). In collaboration with the Academic Health Science Network (AHSN), using the 'Detect, Protect & Perfect' methodology, we supported systems to achieve Public Health England (PHE) targets.

### Our approach

We developed a series of workshops for delivery to those healthcare professionals in primary care involved in diagnosis and management of atrial fibrillation, hypertension, hypercholesterolaemi and heart failure. The content was reflective of current evidence base and guideline recommendations. The same materials were delivered across all 6 ICBs to ensure consistency in the key messages relayed to those in attendance.

We worked closely with the ICB Education & Training Hubs and enlisted the support of local clinicians to deliver the content. This approach enabled the creation of local clinical networks within each locality and allowed for key individuals with an interest in CVD to act as points of contact and provide peer support for their colleagues.

115.5 hours

of training delivered

Outcomes were assessed by pre and post workshop questionnaires. Delegates were asked about baseline knowledge and how this changed as well as the overall benefit of the workshops and how the content will allow them to work towards local attainment of the ambitions outlined in the NHS Long Term Plan.

### **Outcome**

From April 2022 – March 2023, we have collaborated with our ICB partners to deliver a total of 52 workshops focussing on atrial fibrillation (AF), hypertension, hypercholesterolaemia, lipid management and heart failure (HF).

Post workshop questionnaires confirmed improvement in knowledge and understanding for both AF and hypercholesterolemia.

Since the project began in April 2021, we have delivered 115.5 hours of training and 83 workshops, with a total of 2.484 attendees.

83 workshops **2,484** attendees

## CASE STUDY: MANAGING DETERIORATION IN CARE HOMES

Being able to identify early signs that a person's health is deteriorating helps to ensure timely treatment can be sought, before the condition becomes more serious or even life threatening. The ability for care home staff to do this is particularly important, as the patients they care for are often affected by multiple health conditions.

The West Midlands Managing Deterioration Programme worked with 1,679 care homes across the region to support the training, adoption, and sustainability of deterioration management tools. The approach is to improve the quality of care for residents and ensure medical treatment is delivered at the right time and in the right place.

### **Aim**

The aim of the programme was to reduce deteriorationassociated harm by improving the prevention, identification, escalation, and response to physical deterioration through better system coordination.

Our objectives were for 95% of care homes to be aware of and begin to engage in the use of deterioration tools, 85% of care homes to adopt a deterioration tool and 40% of care homes to show sustained use of over a year of a deterioration tool.

### Our approach

We took a whole systems approach as we recognised that the implementation of deterioration tools would only

ever create long-term and sustainable change if we involved stakeholders across the whole pathway of care. This included care home staff, primary care, ambulance trusts, senior leadership, pathway leads and the local authority.

Deterioration networks were established at both regional level and Integrated Care System level to accelerate learning, share best practice, and roll out a deterioration strategy that was bespoke to each area.

We supported in the creation of a Care Home Deterioration Pack for each Integrated Care System to help develop sustainable training for care home staff and signpost services in their area. We also produced a webinar series targeted at care home staff to increase their confidence, knowledge, and level of adoption of deterioration tools. The series was also aimed at General Practitioners and Advanced Nurse Practitioners to support system alignment.

### **Outcome**

We worked with the Midlands and Lancashire Commissioning Support Unit to explore a minimum data set to demonstrate the impact of the Managing Deterioration Safety Improvement Programme.

A modelling evaluation by Unity Insights of the West Midlands suggests that between January 2021 and September 2022, there were 2,236 fewer 999 calls, which resulted in savings of £19.94 per care home. There were also 3,232 fewer emergency admissions,



Pictured: Lesley Roberts, Community Rapid Intervention Service (CRIS), Daniel Hodgkiss, Assistant Programme Manager, WMAHSN

resulting in a saving of £13,590 per care home, and 34,900 fewer bed days. The modelling report also noted that adopting deterioration management tools within care homes across the six Integrated Care Boards within the West Midlands exhibited a potential non-cash releasing total saving of £8.5 million.

If scaled up and a deterioration management tool was adopted using the same approach by the 7,040 care homes who are using tools in England, in the same 21-month timescale there would be 31,116 fewer 999 calls, 44,969 fewer emergency admissions and 485,654 fewer bed days.

# CASE STUDY: MEDICINES SAFETY IMPROVEMENT PROGRAMME (MEDSIP)

Opioids are a highly effective class of analgesic however, when not used judiciously, they can do more harm than good. The National Institute for Health and Care Excellence (NICE) guidance states that opioids should not be offered to manage chronic non-cancer pain. However, half a million people in England are prescribed opioid medicine for longer than 3 months, with the majority having chronic pain that is not associated with cancer.

The Faculty of Pain Medicines has advised that increasing opioid loads to more than 120mg/day morphine equivalent is unlikely to yield further benefit but exposes the patient to increased harm.

Management of 'chronic non-cancer pain' requires personalised care and shared decision-making at its core, with patients also requiring biopsychosocial support so that they can live well with pain.

### **Aim**

The aim of the MedSIP programme was to contribute to the reduction of severe avoidable medication-related harm by 50% over five years. To do this, we aimed to improve chronic pain management by reducing pain from harm from opioids.

The national objective for 2022/23 was for 30,000 fewer people to be prescribed oral or transdermal opioids of any dose for more than three months. To contribute to the achievement of this national ambition, the West

Midlands Patient Safety Collaborative (WMPSC), hosted by the WMAHSN, supported one Integrated Care System (ICS) to implement a system-wide approach to reduce high-risk opioid prescribing.

### Our approach

The WMPSC identified Shropshire, Telford and Wrekin (STW) as the ICS to support. A case for change demonstrated that STW ICS had the highest high-dose opioid prescribing nationally.

In line with NHS England and Improvement recommendations, the WMPSC adopted the seven-phase whole systems approach, using quality improvement methodology to reduce high-risk opioid prescribing.

Phase One of the programme commenced in July 2022, with establishment of a core working group, along with a clinical lead and executive support to provide strategic steer. Phase Two and Three involved understanding the stakeholders involved in pain management and mapping the support available across the ICS. This mapping helped the system to think about where people would seek support beyond pain services.

Phase Four successfully brought together stakeholders in a system-wide Opioid Improvement workshop, which saw stakeholders work in collaboration to identify barriers and priorities for local systems.



### **Outcome**

The STW system-wide workshop generated a shared vision for improvement and identified priorities and interventions aligned to the MedSIP improvement themes. 71 healthcare professionals attended the workshop across the community, primary care, secondary care, and voluntary sectors.

The workshop identified three areas of improvement to focus on. These were: building capability of workforce; improving primary care management; and improving care, communication, and management of surgical patients across the system.

Overall feedback from the workshop demonstrated how it enabled participants to connect with one another and helped them identify actions or ideas they could take back to their organisation.

Early findings have shown a reduction of opioid prescribing in 63 people in STW ICS, contributing to the overall national MedSIP ambition

### PATIENT BENEFITS

111

Healthcare Professionals supported by our Polypharmacy Project



745

Reduction in 999 calls as a result of our managing deterioration programme



325

People living with severe asthma in the West Midlands benefitted from Asthma biologics

1,261

Reduction in people with chronic noncancer pain being prescribed long-term opioid analgesic 20

Lives saved each year because of fewer people with chronic non-cancer pain being prescribed long-term opioid analgesic

126

Reduction of cases of moderate harm each year because of fewer people with chronic non-cancer pain being prescribed long-term opioid analgesic



Patients had new medication recommended as part of the Cardiovascular Disease (CVD) Preventative Cardiology project



1,096

West Midlands patients benefitting from Focus ADHD



5,000

Bed days saved per year for emergency laparotomy patients



219

New CVD Preventative Cardiology patients



1,504

PCSK9i patients benefitted from prescribing inhibitors



318,670

Ezetimibe prescriptions

issued to patients

1,077

Reduction in emergency admissions as a result of our managing deterioration programme

6

Integrated Care Systems (ICS) supported



**65** [66%]

Maternity and Neonatal Optimisations adopted by West Midland Trusts

# CASE STUDY: EMERGENCY LAPAROTOMY COLLABORATIVE (ELC)

An emergency laparotomy (EmLap) is major abdominal surgery, performed urgently in patients who are often acutely unwell. Although this type of surgery can be lifesaving, it is also high-risk, with one in 10 patients dying in hospital and an average length of stay of over two weeks.

Outcomes vary significantly between hospitals, but the early input of senior clinicians and a bundle of interventions coordinated through an EmLap pathway has been shown to improve outcomes and reduce variations in care. We delivered a region-wide Emergency Laparotomy Collaborative (ELC) from November 2018 until July 2022, supporting 14 acute sites.

### Aim

The aim of our ELC was to support staff in each of our 14 acute hospital sites where these procedures are performed to accelerate their EmLap quality improvement journey. The EmLap programme is supported by the National Emergency Laparotomy Audit (NELA) and the key to success would be sharing and learning not only our experience, but also our data with each other.



### Our approach

We used a combination of approaches to deliver our programme, at the centre of which were a series of seven collaborative events. These included clinicians and leaders, representing specialties across the patient journey, at least twice a year.

We also ran workshops on improvement methodology, human factors, NELA data capture and the design of a region wide EmLap pathway. We invited internationally renowned keynote speakers who are experts in their field to deliver talks on every stage of the patient journey, including surgical rota redesign, laparoscopic surgery, frailty, imaging the abdomen and civility saves lives.

NELA leads from each site presented their data, highlighting local areas of excellence and challenge, and we produced comprehensive comparative reports which were shared across the collaborative, allowing a clear understanding of where significant improvement had occurred.

### **Outcome**

Our ELC was considered high value by sites, with strong support for the two-year extension as a local programme. The whole programme was associated with a 17% reduction in hospital mortality (from 11.5% to 9.54%) and two-day reduction in Length of Stay (LOS) (19.7 days to 17.6 days). This represented up to 50 lives saved and 5,000 bed days freed up per year across the region.



These improvements in patient outcomes reflect the impact local teams made to their EmLap pathway. For example, we saw formal pre-operative risk assessment increase by 24% (to 84%), access to theatre time for patients with sepsis reduce by 12% (to 3.3 hrs), and the presence of a consultant surgeon in theatre increase by 10% (to 98%). We also saw significant development of Care of The Elderly services in some sites for these patients. All these changes were associated with significant reductions in the variability of care across the West Midlands

### CASE STUDY: SMOKE-FREE BABIES

Smoking in pregnancy is the leading modifiable risk factor for a range of poor clinical outcomes. Research suggests that women from the most deprived communities are 12 times more likely to smoke during pregnancy than women from more affluent areas.

Smoking during pregnancy places women and neonates at increased risk of adverse outcomes and costs the NHS in England approximately £21 million each year in secondary care costs. In addition, exposure of children to second-hand smoke costs the NHS in England at least £5 million each year in secondary care costs.

The smoke-free babies project was initiated in response to the smoke-free pregnancies workstream within the National Maternal & Neonatal Safety Improvement Programme.



### Aim

The WMAHSN are working in partnership with the National & local Maternity Voices Partnership (MVP) and the Point of Care Foundation, with the aim of engaging with women that face inequalities, particularly socioeconomic deprivation, to understand their lived experience of smoking during pregnancy. Gaining insights into their touch points with NHS services and then progressing to co-production with NHS smoking cessation services.

The project also aims to develop co-production knowledge and skills within the West Midlands MVP, perinatal services and the WMAHSN team.

### Our approach

Using Experience Based Co-Design methodology, the project seeks to gain an understanding of the lived experience of women who experience health inequalities, with the potential to ultimately improve the lives of those with the worst health outcomes fastest. Exploring factors influencing women who find it difficult to stop smoking during pregnancy and their interactions with NHS smoking cessation services.

Additionally, the project will deliver a meaningful approach to co-production through supporting the West Midlands MVP to train and develop capability, whilst aligning with their intention of 'nothing about us without us'.

Any opportunities to share success and learning across the AHSN network via our Innovation Exchange will be taken, in respect of both co-production and successful Public and Patient Involvement and Engagement.

### **Outcome**

As a result of the project thus far, there has been the development of partnership with the MVP and we have delivered Experience Based Co-Design training to local MVP leads, our own staff and the West Midlands Neonatal Operational Delivery Network.

There have been rich learning opportunities regarding the challenges and complexity of engaging in coproduction and how timelines may vary.

Additionally, there has been the inclusion of the MVP in training, as well as local Maternity and Neonatal Safety Improvement planning and meetings, to ensure alignment across the network.

Looking forward, co-production activities between the MVP and NHS Trusts are being planned, as MVP facilitators develop trusting relationships with local smoking cessation midwives in NHS Trusts.

# CASE STUDY: SYSTEM SAFETY - NATIONAL PATIENT SAFETY IMPROVEMENT PROGRAMME

The Patient Safety Incident Response Framework (PSIRF) sets out the NHS' approach to developing and maintaining effective systems and processes for responding to patient safety incidents. The purpose of this is to promote learnings and improvements of patient safety.

PSIRF is a contractual requirement under the NHS Standard Contract. It is mandatory for services provided under that contract including acute, ambulance, mental health, and community healthcare providers.

The framework supports the key principles of a patient safety culture, focusing on effective learning and leading to safer care for patients.

### Aim

The National Patient Safety Improvement Programme – System Safety aimed to create optimal conditions for patient safety improvement across health and integrated care systems. PSIRF is to be implemented across health and integrated care systems after a 12-month preparation period.

Patient Safety Collaboratives are asked to support NHS organisations in their adoption of PSIRF through things such as process mapping, quality improvement, practical implementation, facilitating peer to peer learning and capturing and sharing learning. They also facilitate improvement as providers plan to meet patient safety incident response standards.

### Our approach

We began this journey by working with regional teams and Integrated Care Boards (ICBs) to support system-level planning and coordinate activities and networking, as well as providing coaching and improvement support using a range of quality improvement approaches.

To achieve the desired programme deliverables, a system-level approach was taken with engagement across the West Midlands region at all levels – macro, meso and micro – as well as from multiple settings.

The vision was to share learning and create a cohesive approach to developing system-level plans from which impact and measurement could be drawn. The aim at this time was to develop trusted relationships with stakeholders. These relationships were to be integral throughout the preparation and delivery of PSIRF, framed in a 'just culture' via a co-designed, shared approach.

### **Outcome**

We have facilitated progression through early PSIRF preparation phases, bringing PSIRF leaders together utilising existing networks, as well as supporting ICBs in the creation and development of PSIRF implementation groups. We have also supported provider leads to access support through signposting and shared learning, offering improvement expertise.

Much of this work took place through workshops and facilitated sessions, led by the System Safety Programme Manager, enabling the ICB and provider organisations to move forwards from their initial understanding and thinking, supporting progress towards implementation of PSIRF.

We also created and delivered a four-part PSIRF shared learning webinar series, where internationally recognised expert speakers, representatives from early adopter organisations and patient safety partners presented their knowledge and insights alongside expert speakers from our organisation.

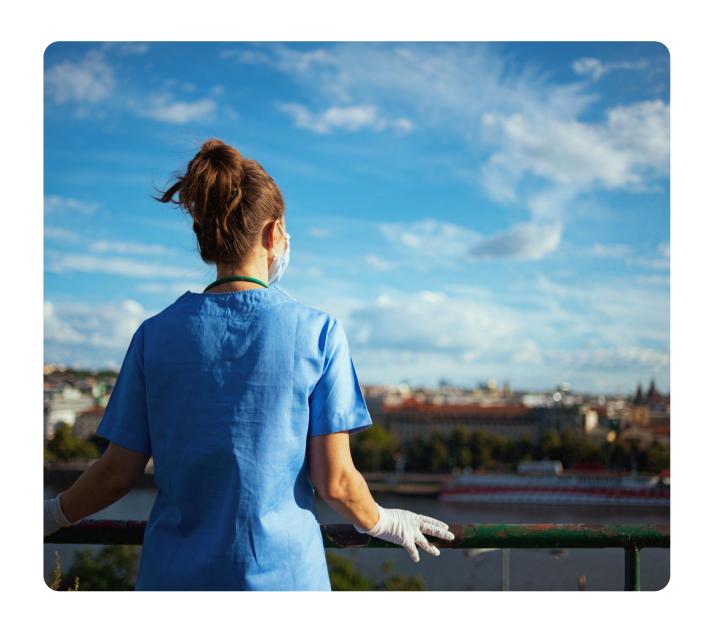
This series offered the opportunity for staff across healthcare in the UK to gain knowledge of positive safety culture, Human Factors and Quality Improvement.

### **LOOKING FORWARD**

As we come to the end of another successful year at the West Midlands Academic Health Science Network, we are pleased to share with you significant strides in advancing the quality and accessibility of healthcare services in our communities as a result of the work we have been involved in. Through our partnerships with our commissioners, colleagues across the AHSN Network and our academic, industry, and health and care stakeholders, we have been able to power the development of health technology and services and facilitate the adoption and spread of innovative solutions that have improved patient outcomes and experiences.

As we move forward, we will look to strengthen our relationships with our six Integrated Care Boards (ICBs) to respond to the challenges of our region whilst complementing the priorities of the AHSN Network. Aligned with the Core 20Plus5 framework we will continue to prioritise the reduction of unwarranted variation in access, treatment, care and outcome, engaging with the diverse populations across our Integrated Care Systems to understand their unique healthcare needs, and lead in the delivery of sustainable solutions.

As we reflect on the past year's achievements and look forward, we are grateful for the support of our stakeholders and the hard work of our dedicated team. With the continued endorsement from NHS England and the Office for Life Science, we are confident that we will be able to achieve an even greater impact for our region. We look forward to collaborating with our partners and stakeholders and are excited to drive positive change in healthcare and create a more equitable, sustainable, and innovative health and care system.



### WEST MIDLANDS ACADEMIC HEALTH SCIENCE NETWORK

Office 11, Ground Floor Institute of Translational Medicine Heritage Building (Queen Elizabeth Hospital) Mindelsohn Way Edgbaston, Birmingham B15 2TH

www wmahsn or



in @West Midlands Academic Health Science Network

