



Oxford AHSN Year 7 Q2 Report

For the quarter ending 30th Sept 2019

“An understanding of the need to give MgSO₄ in preterm labour has reached the same level of awareness as giving steroids – this fact alone is likely to create sustainability in practice. In addition, local learning systems, electronic patient record reminders and network audit and benchmarking will further encourage excellent practice.”

Dr Mark Anthony, Consultant Neonatologist and Regional improvement Lead

Cover image: Through a national AHSN spread and adoption programme all of England’s maternity units are now offering magnesium sulphate (MgSO₄) to help prevent cerebral palsy in pre-term babies. Jennie, Richard and their twin boys born at the John Radcliffe Hospital in Oxford were among the first to benefit from this initiative. Read more in the case study inside.

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Chief Executive's Review

In the first half of the year our three programmes have made good progress. We are in sight of delivering six of the seven NHS England national programmes and we are developing our plans to monitor and sustain the current national programmes next year as these become 'business as usual' for our partners. The next set of national programmes are being developed and agreed with our commissioners. Three have been identified as potential national programmes subject to further scoping and consultation; detection and treatment of familial hypercholesterolaemia, improving management of eating disorders in young adults, and reducing the time to diagnosis in ADHS. A number of other potential national programmes are being evaluated through further evaluation in a subset of AHSNs to confirm feasibility of implantation and impact that would be achieved in a national programme.

In September we held our joint meeting with the NIHR Oxford and Thames Valley Applied Research Collaborative (ARC) to discuss with regional stakeholders the findings of the NHS research and innovation needs survey. Dr Sam Roberts, Chief Executive of the Accelerated Access Collaborative, gave the keynote speech and outlined the aim to move the NHS to be an internationally leading health care system for adoption of high value innovation, and the key role of the AHSNs in this endeavour. Workshops were held to discuss the four key themes in the survey of workforce, mental health, use of digital technology/artificial intelligence, and frailty /multi-morbidity. We are increasing our collaboration with the ARC to identify and develop a pipeline of research outputs ready for national adoption to address needs of the in health and social care system.

At a time of continuing uncertainty about the UK's future relationship with Europe, we continue our collaboration with European health innovators as a member of the EIT health which has major investment to promote healthy living, active ageing and improvements in healthcare across Europe <https://www.eithealth.eu/our-network>. Our Clinical Innovation Adoption team has led the development of the EIT funded eMaps project - an online platform launched to support the life science industry and innovators introduce innovation across Europe through to understand how different countries' health systems operate. At a meeting of the EIT Health Strategic Innovation Board I attended it is clear our European partners value the involvement of the UK in EIT Health and wish to continue collaboration whatever the outcome of the political negotiations.

Two of our case studies this quarter illustrate the impact of AHSN national programmes on patient safety. Rollout of the PINCER prescribing error system will provide a major support to safe prescribing in primary care at a time when drug therapies are increasing in effectiveness but also complexity. The PReCEPT programme has achieved consistent administration across the region of magnesium to 90% women in preterm labour reducing the risk of cerebral palsy and life-long disability by a third. I am very pleased to report that NHS Improvement has agreed to fund the Patient Safety Collaboratives for a further three years, recognising the value and further potential of the regional partnerships to drive uptake of proven safety

solutions. Investment in safety delivers long term financial benefits, in addition to saving lives and benefits to health care workforce culture, and will remain a core element of our future work.

Professor Gary Ford CBE FMedSci
CEO, Oxford AHSN

Oxford AHSN case studies

Case studies included in this report:

1: Adoption and spread of a quality improvement programme to prevent cerebral palsy in preterm labour (PReCePT)

Overview summary

In September 2018 the Oxford AHSN and Patient Safety Collaborative (PSC) began a programme of work with all five maternity units in the Oxford AHSN region to support the national adoption and spread of the West of England AHSN PReCePT programme. This was one of seven national programmes adopted by all 15 AHSNs. The overall aim of PReCePT is to increase the numbers of eligible women who receive magnesium sulphate (MgSO₄) to reduce the risk of cerebral palsy in preterm babies, from the England average of 43% to at least 85% nationally with minimal variation. The longer term aim is a reduction in the incidence of cerebral palsy in babies born preterm.

2: Preventing prescribing errors with PINCER

Overview summary

The Oxford AHSN and partners in Clinical Commissioning Groups (CCGs) have implemented a collaborative work programme to reduce hazardous prescribing in primary care through PINCER, an evidence-based approach to reducing prescribing errors. So far it has been implemented in over 80% of practices in Berkshire, Buckinghamshire, Oxfordshire and Milton Keynes.

3: Feasibility study for introducing a new rapid point-of-care HIV test into sexual health clinics

Overview summary

Owen Mumford has become a global leader in medical device design and manufacturing. In January 2019 it launched a new rapid HIV point-of-care (POC) testing kit called Simplitude™ Pro. The Oxford AHSN worked with the company to evaluate the new test, using a new methodology - the Lean Assessment Process (LAP). The aim was to enable Owen Mumford to gauge the clinical utility and acceptability of the new test against current clinical practice and potential value to sexual health clinics in the NHS in England and elsewhere.

Oxford AHSN case study 1

Date: Q2 2019/20

Programme/Theme: Patient Safety and Clinical Improvement

Title: Adoption and spread of a quality improvement programme to prevent cerebral palsy in preterm labour (PReCePT)

Overview summary

In September 2018 the Oxford AHSN and Patient Safety Collaborative (PSC) began a programme of work with all five maternity units in the Oxford AHSN region to support the national adoption and spread of the West of England AHSN PReCePT programme. This was one of seven national programmes adopted by all 15 AHSNs. The overall aim of PReCePT is to increase the numbers of eligible women who receive magnesium sulphate (MgSO₄) to reduce the risk of cerebral palsy in preterm babies, from the England average of 43% to at least 85% nationally with minimal variation. The longer term aim is a reduction in the incidence of cerebral palsy in babies born preterm.

The Oxford AHSN region has made great strides in improving rates of MgSO₄ administration, with rates of 80% in 2017/18 before the national programme started. Our region was challenged to improve this even further. At the close of the active wave of the programme in September 2019 the Oxford AHSN region had demonstrated significant improvement from 82.8% of in Q1 18/19 for eligible mothers in preterm labour at less than 30 weeks gestation to 93.3% in Q2 19/20, with individual trusts demonstrating significant improvement.



Challenge identified, and actions taken

Preterm birth (defined as birth at less than 37 weeks of pregnancy), is a common complication of pregnancy, occurring in around 8% of births in England and Wales (NICE 2015). Babies born preterm are at a higher risk of dying in the first few weeks of life, and those who survive have a higher rate of cerebral palsy (CP) compared with babies born at term (Crowther et al, 2017). The incidence of cerebral palsy increases the earlier the baby is born. Evidence supports the recommendation that magnesium sulphate (MgSO₄) should be considered in women at less than 30 weeks of gestation (Australian Research Centre for Health of Women and Babies, 2010). MgSO₄ given to mothers shortly before delivery reduces the risk of cerebral palsy and protects gross motor function in those infants who are born preterm.

Our priority was to understand the reasons why MgSO₄ was not given in some cases. This was to identify areas for improvement and share the learning regionally and nationally. To drive improvement a PReCePT lead midwife (four hours a week) was appointed by each maternity unit. These midwives looked at each case in detail and led a programme of staff training within their

unit. They were supported by an obstetrician, a neonatologist appointed as the regional improvement lead and two patient safety managers.

Regular meetings including the neonatologist and midwife leads focussed on understanding the baseline data, identifying areas for improvement and mutual support to deliver the programme and share the learning regionally. The regional improvement lead visited the units to meet senior staff in leadership roles who could use their influence to drive improvements and encourage collaboration between neonatal, obstetric and midwifery staff.

The Oxford PSC maternity network led two pieces of regional work which were instrumental in supporting timely administration of MgSO₄:

1. an updated bundle of evidence-based guidelines for administration of MgSO₄ and a unified method of administration was developed for maternity hospitals.
2. a regionally agreed pathway for transfer to the tertiary unit of women at risk of or in very premature labour.

A programme of education and training of multidisciplinary groups of hospital staff led by PReCePT midwife leads and support obstetricians in each of the trusts in our region was key to the overall improvement. This programme included an e-learning module, certificates as evidence of training, inclusion in emergency scenario training and mandatory training, eye-catching newsletters, 'tea trolley training' and plans for a newborn day to include resuscitation simulations. This approach kept momentum going despite many competing clinical priorities.

Improvements have also been made to the record-keeping systems (BadgerNet) locally to more reliably capture administration.

We also wanted to understand the lived experience of receiving this drug – to support this we made a film with a family who had received MgSO₄ for their preterm twins. This video has now been featured in the national PReCePT campaign (see image on previous page and report cover).

Impacts/outcomes

Significant improvement in the uptake of MgSO₄ with improved neonatal outcomes has been possible through regional and local collaboration fostered through the PReCePT regional quality improvement (QI) programme supported by maternity clinical networks, local learning systems and operational neonatal delivery networks (ODN).

Individual maternity units in the Oxford AHSN region now have a highly reliable process in place for the administration of MgSO₄ and have created extensive awareness through education and training on why, how and when to give MgSO₄ to mothers in preterm labour. This is very important for units in our region which only infrequently have women in very preterm labour.

Supporting quotes

"I'm definitely pleased that I went ahead and had the MgSO₄ ... one of the things we put down to the fact that our miracle boys have survived is that without the MgSO₄ ... I will never know for sure but they (the twin boys) did not have any bleeds on the brain, it was absolutely the right decision that

was made among many other decisions ... It gave us some marginal gains in terms of helping our boys' survival at the time and in the future.” - Jennie, mother of preterm twin boys

“Improving MgSO₄ administration for mothers in preterm labour is a significant step in reducing cerebral palsy but also the latest of many perinatal and neonatal interventions over two decades, each of which have produced incremental gains in survival and neuro-development for the very preterm baby. An understanding of the need to give MgSO₄ in preterm labour has reached the same level of awareness as giving steroids – this fact alone is likely to create sustainability. In addition, local learning systems, electronic patient record reminders, and network audit and benchmarking will further encourage excellent practice.” - Dr Mark Anthony, Regional PReCePT Improvement Lead & Consultant Neonatologist, Oxford University Hospitals

During the PReCePT programme one of our PReCePT midwife leads spoke with a mother who had previously had a preterm birth at 31 weeks' gestation and received MgSO₄. She was currently pregnant with twins at 29 weeks and was in preterm labour. She was relieved to be receiving MgSO₄ again.

“I was pleased to receive magnesium sulphate for my son and believe he benefited and although I would not wish my symptoms on anyone, I am willing to go through them again for the benefit of my babies.” - Rosie O'Neill, PReCePT Lead Midwife, Frimley Health

“It was exciting to see staff develop an increased awareness of the importance of giving MgSO₄ and see how their confidence grew throughout the programme.” - PReCePT midwife leads

“I am thrilled to have been part of this safety and improvement work, working through our local challenges with the fantastic support of the PReCePT AHSN team.” - Kerry Smith, PReCePT Midwife Lead, Milton Keynes University Hospital

NHS England priorities addressed

- Care and quality
- Funding and efficiency
- Health and wellbeing

AHSN priorities addressed

- Promoting health equality and best practice
- Speeding up adoption of innovation into practice to improve clinical outcomes
- Building a culture of partnership and collaboration
- Positive experience of treatment and care
- Treating people in a safe environment and protecting them from avoidable harm.

Start and end dates

2018-2020

Future plans

The regional maternity, neonatal and perinatal governance networks will collectively monitor sustainability through exception reporting by individual trusts. This will ensure that we can monitor trends and proactively manage any threats to the uptake of MgSO₄ and ensure that extreme preterm babies are born in the right place.

Contact

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References

- Assessing the neuroprotective benefits for babies of antenatal magnesium sulphate: An individual participant data meta-analysis. Caroline A Crowther, Phillipa F Middleton, Merryn Voysey, Lisa Askie, Leila Duley, Peter G Pryde, Stephane Marret, Lex W Doyle for the AMICABLE GROUP PLOS MEDICINE October 4, 2017 pp 1/24
- National Institute for Health and Care Excellence (2015). Preterm Labour and birth (NICE guidelines 25). Available from <https://www.nice.org.uk/guidance/ng25>
- Australian Research Centre for Health of Women and Babies. Antenatal magnesium Sulphate Prior to Preterm Birth for Neuroprotection of the Fetus, infant and Child – National Clinical Practice Guidelines. Adelaide. ARCH; 2010 www.adelaide.edu.au/arch

Oxford AHSN case study 2

Date: Q2 2019/20

Programme/Theme: Clinical Innovation Adoption

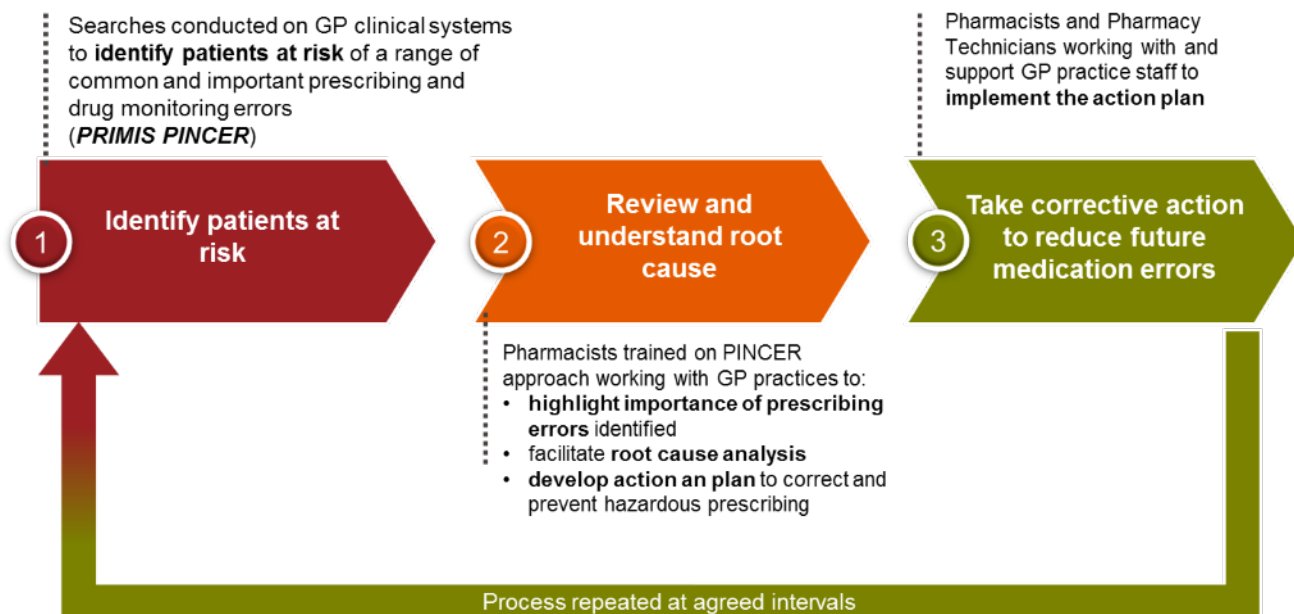
Title: Preventing prescribing errors with PINCER

Overview summary

The Oxford AHSN and partners in Clinical Commissioning Groups (CCGs) have implemented a collaborative work programme to reduce hazardous prescribing in primary care through PINCER, an evidence-based approach to reducing prescribing errors. So far it has been implemented in over 80% of practices in Berkshire, Buckinghamshire, Oxfordshire and Milton Keynes.

Challenge identified

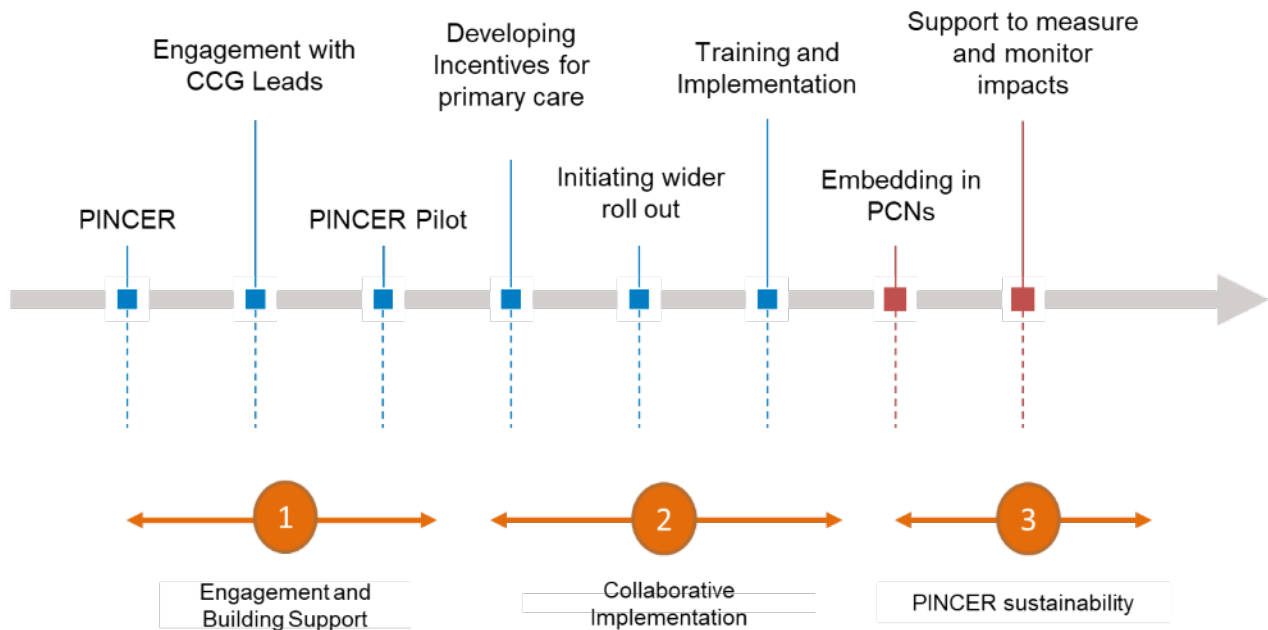
Prescribing errors in general practice are an expensive, preventable cause of safety incidents, hospitalisations and, in some cases, death. Serious errors affect one in 550 prescription items, while hazardous prescribing in general practice contributes to around one in 25 hospital admissions. Outcomes of a trial published in [The Lancet](#) showed a reduction in error rates of up to 50% following adoption of PINCER – a pharmacist-led IT intervention to reduce clinically important errors in general practice prescribing. A published [economic analysis](#) showed introducing PINCER was cost effective, demonstrating an increased quality of life for patients (0.81 Quality Adjusted Life Years per practice)ⁱ and an overall reduction in costs of £2,679 per practice. PINCER was selected in 2018 as one of seven national projects on which all AHSNs across England would deliver in 2018/19 and 2019/20. PINCER comprises three core elements:



The software component of PINCER is based on a set of computerised queries which can be run on GP clinical systems to identify at-risk patients who were being prescribed drugs that are commonly and consistently associated with medication errors. These “indicators” include the prescription of

nonselective non-steroidal anti-inflammatory drugs (NSAIDs) and beta-blockers, and the monitoring of angiotensin-converting-enzyme (ACE) inhibitor or loop diuretics, methotrexate, lithium, warfarin, and amiodarone.

Actions taken



1. Engagement and building support

The PINCER project was raised at a joint workshop with heads of medicines management in Berkshire, Buckinghamshire, Oxfordshire and Milton Keynes in September 2018. The Oxford AHSN, along with four out of five of its CCGs, agreed to support a region-wide pilot to evaluate the PINCER programme and to develop a plan for wider roll out. Participants recognised a positive impact on patient safety and practice resource, with system changes saving staff time in reviewing/correcting hazardous prescribing. Participating practices found the process of reporting findings and engaging practice staff very positive with GP teams happy to support developing an action plan to address system issues. This was also seen to create an opportunity to speak more generally about prescribing issues.

In addition, potential barriers to wide-scale roll-out of training were assessed and addressed. This included:

- moving PINCER indicators from CHART software and into the GPs clinical systems
- streamlining and digitising training to allow PINCER leads in the region to join remotely
- expanding access to PINCER, to include practices without a practice-based pharmacist but which had a willing and engaged GP lead.

2. Collaborative Implementation

CCG partners in the region developed plans for local implementation to fit with the needs and ways of working within their local systems. For some CCGs, implementation was linked to local incentive schemes, others decided to use existing levers around QI and prescribing safety in the GP

contract. Implementation of PINCER was built around three action learning training sessions which guide nominated PINCER leads for practices through the process of implementation. The Oxford AHSN and CCG leads across the region developed a comprehensive training plan for the first quarter of 2019/20 which offered all practices in the region an opportunity to join the PINCER initiative action learning training sessions. Two of these were delivered between March and June 2019 - ALS1 as an interactive webinar and ALS2 a face-to-face workshop. Both were delivered to 13 localities across the region. Practices are now developing local action plans based on the PINCER audit data and root cause analysis methods. Many practices have now submitted baseline data offering a rich source of comparative data around prescribing errors for practices, CCG and the Oxford AHSN.

3.PINCER sustainability

Whilst financial levers and incentives are in place to support PINCER implementation in 2019/20, in order to ensure PINCER is sustainable in the new models of working around new primary care networks (PCN), the Oxford AHSN is supporting PINCER training for all PCN pharmacists. Plans are in place to re-run a series of action learning sets for these newly appointed pharmacists.

Impacts/outcomes

- The PINCER process has already yielded some excellent examples of quality improvement around prescribing in primary care. The ambition is to capture these initiatives and activities in case studies on the Oxford AHSN website: <https://clinicalinnovation.org.uk/project/pincer/>
- Over 200 pharmacists and GPs have now been trained on how to use the PINCER tools and on using root cause analysis and QI techniques to improve practice systems and reduce rates of hazardous prescribing.
- 194 practices (over 80% of practices in the Oxford AHSN region) have implemented PINCER - running PINCER searches and uploading baseline data between June and August 2019.
- Six-month impact data from the PINCER pilot carried out in 25 practices suggests that over 80% of practices have reduced numbers of patients at risk against at least five PINCER indicators.
- Six-month impact data on the wider roll-out is expected in early 2020 - the Oxford AHSN aims to assess the numbers of patients impacted by the PINCER intervention, and improvements in actual numbers of prescribing errors.

Future plans

- Continue to support practices and CCGs with PINCER implementation and QI activity where required.
- Develop a repository for excellent practice for the benefit of practices in the region.
- Use PINCER baseline data to develop medicines optimisation strategy.

NHS priorities addressed

- Care and Quality
- Patient Safety
- Medication Safety

- Driving Economic Growth

AHSN priorities covered:

- Medicines optimisation
- Patient safety
- Medication safety

Start and end dates

2018-ongoing

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Oxford AHSN case study 3

Date: Q2 2019/20

Programme/Theme: Strategic and Industry Partnerships

Title: Feasibility study for introducing a new rapid point-of-care HIV test into sexual health clinics

Overview summary

HIV is an immunodeficiency virus that damages the cells in the immune system and weakens the body's ability to fight off everyday infections and disease. It is usually transmitted through unprotected sex and the sharing of needles. Earlier diagnosis and treatment substantially reduce the disease burden on the patient and the NHS.

Owen Mumford has been at the forefront of medical device innovation for over 60 years. The company has become a global leader in medical device design and manufacturing. In January 2019 it launched a new rapid HIV point-of-care (POC) testing kit called Simplitude™ Pro.

It has a simple sample collection system and provides a prompt result to help support the early diagnosis of HIV. The Oxford AHSN worked with Owen Mumford to evaluate the new test. The Oxford AHSN team conducted a new methodology, the Lean Assessment Process (LAP), which was developed in conjunction with Imperial College, London.

The aim was to enable the company to gauge the clinical utility and acceptability of the new test against current clinical practice and potential value to sexual health clinics in the NHS in England and explore utility in other potential clinical settings.

Challenge identified

Delayed diagnosis and treatment of HIV substantially increases the disease impact on the patient and costs to the NHS. The Oxford AHSN performed an initial literature review to identify the care pathway for rapid HIV testing in sexual health clinics in the NHS in England.

In testing the potential scenario, a visual representation of the current standard of care (SoC) pathway was developed with the help of available literature and discussions with Owen Mumford. The visual representation of the pathway was used to guide the qualitative methodologies including face-to-face interviews based around semi-structured questionnaires. These interviews enabled exploration of potential use and benefit of the new test in clinical settings.

Impacts and outcomes

The partnership between the Oxford AHSN and Owen Mumford helped the company develop its HIV test in a clinical setting, aligning more closely with clinical needs. As part of the literature review, the Oxford AHSN identified clinicians who need to be engaged in the clinical utility and acceptability of the test, helping to ensure it meets their needs. The Oxford AHSN feedback was crucial in adapting the test for adoption by the NHS.

Supporting quotes

“The Oxford AHSN has provided us with feedback from clinicians and stakeholders and has been a gateway into the NHS. Understanding the acceptability of the HIV test has been paramount in the adoption of the test and has enabled us to speak to clinicians we otherwise would not have had access to.” - **Leanne Adam, Marketing Manager, Owen Mumford**

“The Oxford AHSN assessed the clinical benefits of the Simplitude™ Pro rapid HIV point-of-care test kit by completing a LAP study. Early economic evaluation was conducted to assess the economic benefit within the NHS. The report is based on the qualitative questionnaire, results of perceived usefulness, stakeholder importance and net promoter score.” - **Mamta Bajre, Lead Methodologist, Oxford AHSN**

“Looks promising, and neat to use” - **GP**

“Less room for error as it is more streamlined” - **Sexual health advisor**

“Device seems user-friendly” - **Sexual health advisor**

Future plans

More real world evaluation

NHS England priorities addressed:

- Care and Quality
- Funding and Efficiency
- Health and Well Being
- Driving Economic Growth

Contact

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Operational Review

We have made significant progress in our three programmes and two themes in the first half of the year. We are on track to deliver against six of the seven NHS England national programmes. Our Patient Safety Collaborative had made a great start to delivering then new national specification; exploratory work has started on the new medicine's safety programme for care homes with extensive engagement with local stakeholders. The Clinical Innovation Adoption programme launched eMaps, the online tool for innovators interested in international health market access. The Strategic and Industry Partnerships programme has had a very successful quarter with increased activity across the four functions of our Innovation Exchange and a rapidly growing programme in diabetes.

Prizes and publications

The pre-eclampsia test is a great example of research being taken into clinical practice at scale to benefit many patients. The test, developed by Roche Diagnostics, was trialled at the Oxford University Hospitals (OUH) John Radcliffe Women's Centre. It predicts with almost 100 per cent accuracy that a pregnant woman will not develop pre-eclampsia within the following seven days. After being accepted as routine clinical practice at OUH in 2018, it is now being rolled out across the NHS by the AHSN Network led by the Oxford AHSN. The Oxford team - including Tim James, Head Biomedical Scientist, , Dr Manu Vatish, an academic obstetrician at the University of Oxford, and Dr Sofia Cerdeira, OUH obstetrician and Academic Clinical Lecturer at the University of Oxford - won a [UNIVANTS of Healthcare Excellence Award](#).

A paper on the pre-eclampsia work was published in Hypertension in August.

The Oxford Patient Safety Collaborative and East Berkshire Clinical Commissioning Group's HSJ award-winning initiative to improve hydration of residents in care homes is featured in the AHSN Network's publication '[Improving Safety in Care Homes](#)'

Case studies this quarter:

1. Adoption and spread of a quality improvement programme to prevent cerebral palsy in preterm labour (PReCePT). In September 2018 the Oxford AHSN and Patient Safety Collaborative (PSC) began a programme of work with all five maternity units in the Oxford AHSN region to support the national adoption and spread of the West of England AHSN PReCePT programme. This was one of seven national programmes adopted by all 15 AHSNs. The overall aim of PReCePT is to increase the numbers of eligible women who receive magnesium sulphate (MgSO₄) to reduce the risk of cerebral palsy in preterm babies, from the England average of 43% to at least 85% nationally with minimal variation. The Oxford AHSN region is sustaining compliance of 90%. The longer-term aim is a reduction in the incidence of cerebral palsy in babies born preterm.
2. Preventing prescribing errors with PINCER. The Oxford AHSN and partners in Clinical Commissioning Groups (CCGs) have implemented a collaborative work programme to reduce hazardous prescribing in primary care through PINCER, an evidence-based approach to

reducing prescribing errors. So far it has been implemented in over 200 practices in Berkshire, Buckinghamshire, Oxfordshire and Milton Keynes.

3. Feasibility study for introducing a new rapid point-of-care HIV test into sexual health clinics. Owen Mumford has become a global leader in medical device design and manufacturing. In January 2019 it launched a new rapid HIV point-of-care (POC) testing kit called Simplitude™ Pro. The Oxford AHSN worked with the company to evaluate the new test, using a new methodology - the Lean Assessment Process (LAP). The aim was to enable Owen Mumford to gauge the clinical utility and acceptability of the new test against current clinical practice and potential value to sexual health clinics in the NHS in England and elsewhere.

Engagement

We welcomed the appointment of our new PPIEE Coordinator, Laurie Kenny, and our Lead Lay Partner, Douglas Findlay. We launched our [Working Together](#) recording and impact checklist at a workshop in Aylesbury. The event attracted a range of staff and lay people and overall feedback was very positive, in line with previous workshop feedback.

In September we co-hosted a workshop to clarify priorities for future research and innovation with the new NIHR Applied Research Collaborative Oxford and Thames Valley. We were delighted to welcome Sam Roberts, Chief Executive of the Accelerated Access Collaborative at NHS England/Improvement, as our keynote speaker. She joined about 80 people in discussions which will shape future work programmes relating to workforce, multi-morbidity, mental health and digital/AI.

Also, in September, 52 people from across our region and beyond came to the fourth meeting of our regional emergency laparotomy collaborative (ELC). Other important events this quarter included three workshops focused on market access for SMEs ahead of the launch of our new Accelerator programme and ongoing support for regional clinical networks led by our Patient Safety and Clinical Improvement programme.

An independent national stakeholder survey of all AHSNs took place in Q2. Follow-up interviews are ongoing and final reports are due to be published in Q3.

Our regular monthly newsletter now has more than 1,400 subscribers. In Q2 we also published a [special edition devoted to primary care](#) – the second in a series of one-off updates to reflect the growing wealth of projects led by the Oxford AHSN and its partners. The Oxford AHSN Twitter account (@OxfordAHSN) passed 5,000 followers in Q2. Our web content is regularly updated; collectively these websites had around 20,000-page views in Q2.

Integrated Care Systems Long Term Plans

For the Buckinghamshire, Oxfordshire and Berkshire West (BOB) Integrated Care System (ICS) Long Term Plan (LTP) we have engaged in the Digital, Mental Health, Acute and Maternity workstreams. We have also submitted plans on Research and Innovation, Patient Safety and exemplars of system-wide working supporting the following themes:

- Reducing pressure on emergency hospital services
- Giving people more control over their own health and more personalised care

- Digitally-enabling primary care and outpatient care – Primary Care
- A strong start in life for children and young people – Maternity & Neonatal and Preventing Learning Disabilities
- Better care for major health conditions – Stroke care
- Giving NHS staff the backing they need

We have offered support to the directors of the Frimley Health and Care and Bedford Luton and Milton Keynes (BLMK) ICSs and provided text.

Highlights from the Oxford AHSN's three programmes (includes Patient Safety, local programmes and Innovation Exchange; NHS England national programmes reported below):

1. **Patient Safety and Clinical Improvement (PSCI).** In this quarter there has been good progress in a strong portfolio including the launch of the Medicines Safety programme which will focus on safety issues around the administration of medication in care homes.
 - **Deterioration.** As part of the national deteriorating patient workstream remit we are continuing to support a project in Buckinghamshire to pilot the introduction of [RESTORE2](#) in three care homes. The data from the [Suspicion of Sepsis dashboard](#) continues to show a downward trend in relation to length of stay and mortality.
 - **Maternity and neonatal safety** is a very strong programme with extensive clinical engagement. The Oxford Patient Safety Collaborative is supporting two system-wide pieces of improvement work with the five NHS trusts in our region. There is an improvement programme on optimisation and stabilisation of the extreme preterm and preterm infant. Regional perinatal governance work continues with shared learning between all maternity units. With Health Education England support and in collaboration with consultant midwives, we are developing an e-learning package to improve auscultation.
 - **Medicines safety in care homes.** This is a three-year programme; a diagnostic phase will run from October 2019-March 2020, followed by a testing phase to March 2021 and a scale-up phase from 2021 onwards. During the diagnostic phase, the PSCs are undertaking investigations and information gathering to build a picture of what current intelligence exists around the issue and of any interventions which have been shown to make a difference. A literature search and evidence scan has been jointly undertaken by us and University College London Partners (UCLP) and shared with the national workstream. We are forming new relationships and building on current ones within CCGs, the CQC, primary care networks, integrated care networks, GPs, local authorities and within care homes.
 - The 5th Regional **Emergency Department Collaborative** multidisciplinary meeting hosted by Frimley Health and convened at Wexham Park Hospital is being held on 10 October 2019. Approximately 60 staff including a cross-section of emergency department staff, representatives from the South Central Ambulance Service (SCAS), the Health Safety Investigation Branch and NHS resolution are taking part.
 - PSCI delivers PReCePT and SIM (and supports emergency laparotomy) – reported below.
2. **Clinical Innovation Adoption (CIA).** CIA delivers five of the seven national programmes and deployment of ten products (rapid uptake programme - RUP, Innovation Technology Payment - ITP, Accelerated Access Collaborative - AAC) – reported below. Highlights include:
 - **Heart Failure (HF)** (a local project and one involving collaboration with other AHSNs),

this quarter delivered audits for four practices with significant improvement in the number of patients on the HF register and the patient coded with **Left Ventricular Systolic Dysfunction (LVSD)**. Of the 152 patients who received face-to-face reviews, 85 received pharmacological intervention and 40 were recommended for specialist review. For the purpose of national sharing with other AHSNs the toolkit development is progressing and should be ready by the end of Q3.

- **Sleepio** - a final draft of the paper “Determinants of and barriers to adoption of **digital mental health** at scale in the NHS” will be submitted to BMJ Innovations shortly. Good progress on engagement with participants from large employers and primary care – 7,800 people in the Thames Valley have accessed the system.
 - 29 NHS staff joined the seventh cohort of the “**Practical Innovators**” course in September 2019. The cohort consists of NHS staff from different backgrounds and settings which is a continuing trend for the programme.
 - **eMaps** is launched. The online platform to support the life science industry and innovators to understand how the NHS and health sectors in other countries work. Its primary purpose is for preparing to access markets. The digital platform provides advice and information on key areas of market access including clarifying and testing value proposition, regulations and compliance, pricing and reimbursement, market structure, stakeholders and overall pathways for market access. Information has been developed for the UK, France, Spain and Denmark and is in development for Germany, Italy, Portugal and the USA. The modules give information about digital, medical technology and drugs within country’s markets. This is an EIT Health Knowledge and Innovation Community funded activity.
3. **Strategic and Industry Partnerships (SIP)** delivers Oxford AHSN’s Innovation Exchange. The Local Implementation Plan was updated during September, resubmitted to the Office for Life Sciences and subsequently approved. The Self-Assessment Quarterly report was RAG rated Green for the last quarter. There are four core functions:
- **Needs definition.** In September at the NHS Expo event the AHSN Network launched a new digital gateway for innovators, streamlining access to vital support from teams of experts across the country who can help companies deliver innovation for the NHS and care sector.
 - The **Treatment Resistant Depression** product assessment project is proceeding well with key opinion leader interviews being conducted and considerable clinician and payer insights collected and collated.
 - The Oxford AHSN is also partnering with Roche Diabetes Care to undertake research across Clinical Commissioning Groups (CCGs) within the Buckinghamshire, Oxfordshire and Berkshire West (BOB) Integrated Care System (ICS) to identify evidence-based needs in **diabetes** management pathways that could be addressed through implementation of their Integrated Personal Diabetes Management (iPDM) system.
 - The Innovation Exchange portal has been launched and is linked from the main Oxford AHSN website.
 - The Oxford AHSN pre-accelerator workshops took place, with over 30 attendees. We invited 20 SMEs to pitch for a place on the full programme, starting 7 October. The final

cohort of eight will be meeting the Oxford AHSN/BioCity mentors and experts on a once-per-week basis to report their progress, pick inspirations from domain experts and storytellers and refine their value proposition whilst sequentially adapting it with insights developed across the phase. Subsequently, these candidates will pitch their final value proposition to a panel of partners from the AHSN-NHS-industry ecosystem in November 2019 and will be eligible to apply for funding routes.

- The second national economic growth magazine 'The Innovators' has been published and included Oxford AHSN case studies on: Sensyne, Physiomics, Ufonia and Consentricare.
- Through the Bucks HSC Ventures programme, the SIP team provided a Lean Strategyzer workshop to help direct Consentricare's future customer discovery, develop their value proposition and further their product development.
- **Signposting.** Most of the signposting emails have been redirected towards the national Innovation Exchange website and HealthTech Connect, as they have not been of regional interest or have required more support than we have had the capacity to support.
- 55 companies have been added to the Office for Life Sciences database.
- **Real World Evaluation.** A point of care (POC) service evaluation of the Abbot iSTAT and Horiba MicroSemi at Brookside clinic in Earley, Reading, has drawn to a close. In total, diagnostic tests were run for 107 separate patients, with >1 test being performed per patient in some cases according to diagnostic needs.
- Progress has been made in meeting the need to tackle **asthma** management and reviews in primary care. By bringing an industry partner together with Berkshire West CCG, a joint working agreement is in the draft stage, which includes the utilisation of digital attachments to inhalers, so patients may have greater insights in terms of their usage.
- A new project has been initiated that follows on from the work that the Oxford AHSN did with the Royal Berkshire NHS Foundation Trust and Roche Diagnostics over the 2017/18 **flu season**, where the Roche LIAT was implemented in the Emergency Department. The LIAT is a Point of Care PCR-based test, and requires a nasopharyngeal swab from an infected patient, with minimal sample preparation. The machine then provides a result (Flu A positive/Flu B positive/Negative) within 20 minutes.
- **Adoption of innovation and diffusion** – SIP is leading the adoption and diffusion locally of breakthrough diagnostic products evaluated through the Innovation Exchange activity.
- SIP also leads the gastroenterology programme including delivery of an industry-funded programme for **Inflammatory Bowel Disease** using TrueColours, or similar software, as a patient reported outcomes measure for ulcerative colitis and Crohn's; 750 patients are involved. Potential to optimise outpatient appointments and manage patients' condition at a population level.
- **Accelerated Access Collaborative.** The Oxford AHSN has two members of staff working at NHS England for six months to support the AAC process.
- National spread and adoption of Placental Growth Factor (PIGF)-based testing for suspected **pre-eclampsia** continues to be driven by the AHSN Network, led by the Oxford AHSN. All AHSNs report very positive reception by NHS trusts for adoption of either the Roche Elecsys ratio test or the Quidel Triage PIGF test, with many planning to adopt testing regionally across maternity and lab networks. Given the very rapid speed of adoption, it is expected that close to 40% of all maternity services in England will have

adopted or be very close to adoption of a PIGF-based test into standard clinical practice by the end of the 2019 calendar year (nine months into the 18-month ITP funding window). This translates to >250,000 women being able to benefit from the availability of PIGF-based testing for suspected PE.

NHS England national programmes

We are in sight of delivering six of the seven national programmes this year. Transfer of Care Around Medicines (TCAM) delivery is tight. ESCAPE-Pain remains very challenging.

The Oxford AHSN Chief Operating Officer co-created two surveys with colleagues on the AHSN Network Operations Group for the AHSN Network – one to determine each AHSN's intentions on sustaining the seven national programmes and the second to assess the views on the quality of and need for central support for national programmes. In summary, the AHSNs will sustain most of the programmes and measuring and monitoring will continue for another year. Where there is strong engagement, AHSNs will seek to complete implementation. Central support was generally seen in a positive light. The need for implementation packs and well research evidence base was strongly supported.

Atrial fibrillation (AF)

On track to exceed target; 5,983 patients (target: 3,000). By the end of the programme, AF will have been detected in 15,000 patients, about 50% of undetected AF in the region. Highlights this quarter include:

- Oxford AHSN, Wokingham GP Alliance and the Royal Berkshire have developed a local AF Champions programme funded by the Pfizer-BMS alliance. Through this initiative each of the 48 GP practices across Berkshire West will develop an in-house GP champion with the confidence and knowledge to ensure atrial fibrillation is identified and managed appropriately.
- Oxford AHSN is developing an e-learning programme to support improved anticoagulation initiation and quality. In Q2 work has focused on finalising the storyboard and design. The aim is to launch in Q3.
- A proposal is being developed to support PCNs in Milton Keynes with delivering improvements around AF. This follows on from a meeting between Oxford AHSN, NHS RightCare and two PCN clinical directors. The proposal will be aligned to a unified offer being made to the BLMK ICS by Oxford, UCLP and Eastern AHSNs.
- Following a meeting with Pfizer, Oxford AHSN is working with stakeholders from across the BOB ICS to develop a proposal for an AF detection project at ICS level. This will support the programme's sustainability.

Emergency Laparotomy. On track to deliver.

- The fourth regional meeting of the Thames Valley Emergency Laparotomy Collaborative (SLC) was the best attended yet hosting 52 people of whom nearly half were first-time attendees. All six hospitals within the region performing this surgery were represented.
- Feedback from the day included: *"Excellent programme"*, *"Very well planned and good choice of speakers"*, *"Will try to initiate something similar [in my region]"*, *"Well done for the hard work that goes into planning these events!"* - Consultant Anaesthetist.

- Oxford AHSN Director of Patient and Public Involvement Engagement and Experience (PPIEE) and ELC Steering Group Lay Representative have continued to prepare for a patient and family focus group, to be piloted at Royal Berkshire.
- We are developing plans to sustain this programme.

ESCAPE-Pain. This programme will not achieve the target.

- Despite exhaustive engagement of commissioners and leisure centres, uptake of ESCAPE-Pain is very low in the region.
- The three centres that have adopted ESCAPE-Pain had zero attendances in the quarter
- There are alternative services and although it achieves positive patient outcomes, ESCAPE-Pain is a very inflexible model
- We will not be continuing with this programme.

PINCER. On track to exceed target.

- 201 practices in the Oxford AHSN region (over 80% of practices) have now fully implemented and are using PINCER to reduce prescribing errors.
- Over 200 pharmacists and GPs have been trained on Quality Improvement methodology and root cause analysis around prescribing safety.
- Oxford AHSN was the first AHSN nationally to reach its two-year NHS England target and has contributed considerably to overall national adoption.
- Six-month follow up data emerging from early adopter sites demonstrates that over 80% of practices have seen reductions in numbers of patients at risk in at least five of the PINCER indicators.
- We have plans to sustain PINCER with top-up training next year.

PReCePT. On track to deliver

- Compliance rates were 93% in Q2. The region is sustaining compliance levels of 90%.
- Quarterly figures are prone to volatility – in Q1 ten babies were born out of hospital
- The programme will be sustained through the MatNeo collaborative.

Quote - “An understanding of the need to give MgSO₄ in preterm labour has reached the same level of awareness as giving steroids – this fact alone is likely to create sustainability in practice. In addition, local learning systems, electronic patient record reminders and network audit and benchmarking will further encourage excellent practice” - Dr Mark Anthony, Consultant Neonatologist and Regional improvement Lead

SIM. On track to deliver

- Berkshire Healthcare and Thames Valley Police have agreed to implement the service model in Hampshire which is equivalent to SIM
- Oxford Health and the police in Oxford are also interested.

TCAM. On track to deliver although risk of delay.

- The IT solution to enable usage of PharmOutcomes is now in place at Buckinghamshire Healthcare and is on course to go live in Q3.
- Royal Berkshire has a plan to go live in Q4.

- Milton Keynes University Hospital is developing its IT solution and Frimley Health and Oxford University Hospitals continue to express interest.
- The forecast of 453 patient referrals, which is on target, depends on one of the trusts going live in November 2019 followed by another in January 2020.

Uptake of ITP

Generally, uptake of ITP products is positive across the region. PneuX has been rejected by ALL the region's Trusts for clinical and operational reasons.

Pre-eclampsia – placental growth factor diagnostic – although nationally 40% of trusts will have adopted by year-end we would like to see adoption in Frimley Health and Royal Berkshire. There is a second wave of funding that they could benefit from in addition to the ITP payment (and we are halfway through this) so there is money on the table that they can benefit from.

	Products													
	Heartflow	Urolift	PIGF	Troponin	Cladribine	PCSK9i	SecurAcath	Endocuff	PlusSutures	NIC	Episcissors	FMT	Pneux	GammaCore
			Mat Units											
Buckinghamshire Healthcare	NA	Yes	Yes	NA	NA	Considering	Considering	Yes	NA	No	Yes	Considering	No	Yes
Frimley Health	Yes	Yes	Considering	NA	NA	no informatio	Yes	Yes	NA	Considering	no informatio	no informatio	No	NA
Milton Keynes University Hospit	NA	Yes	Yes	NA	NA	no informatio	Considering	Yes	NA	Yes	Yes	Considering	No	NA
Oxford Health														
Oxford University Hospitals	Considering	Yes	Yes	NA	NA	no informatio	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Royal Berkshire	Considering	Yes	No	NA	NA	Considering	Considering	Yes	NA	Yes	No	Considering	No	NA
Region														

AHSN Network National programmes – forecast 2019/20

Programme	Contracted Metric	Reason for Higher or Lower Estimate	(2019/20) Business Plan or 5/7/19 forecast	2019/20 revised AHSN Network target	2019/20 excess or shortfall
AF	Number of previously unknown AF patients diagnosed with AF	Business plan target based on 2017/18 QoF performance	5,983	3,000	2,983
Emergency Laparotomy	Number of emergency laparotomies in hospitals implementing the pathway	All 6 Trusts are included in reporting for 2019-20. The Q2 forecast based on an annual target of 803 was 201. Q1 known cases at the time of Q1 reporting: 220. Final Q1 figures from national team available September 2019 was 243. Q2 known cases at the time of Q2 reporting: 235. Final Q2 figures from the national team expected December 2019. On target for year end.	803	803	0
ESCAPE-Pain	Number of people completing the ESCAPE-Pain programme	The three active leisure sites have struggled to recruit suitable participants and therefore no courses were run during Q2. Q2 has seen ongoing active engagement with individual leisure centres, local authorities, Active Partnerships and public health.	59	570	9
PINCER	Number of GP practices adopting PINCER	Target exceeded - now at 201 in Q2.	201	192	0
PReCePT	Number of additional mothers where MgSO4 given	Sustaining uptake of 90% - 93.3% in Q2 (82% Q1); results impacted by 10 pre-term births outside hospital in Q1	11	23	-12
SIM	Number of high-intensity users covered by SIM	Interest in 2 out of 3 mental health providers. If this is implemented, more likely to be based on the similar Hampshire model than SIM itself.	4	0	4
TCAM	Number of completed referrals using TCAM	It is very tight, but our estimates suggest that we can hit the cumulative target with 2 Trusts going live in Q3 and early Q4. IT solution in place in Buckinghamshire Healthcare	453	453	0

Key Milestones - Q2 Progress (Programmes to complete Q2 Progress)

Programme/Theme	Key milestones 2019/20	Q2 Progress
Corporate	Improve appraisal system	New appraisal form issued
Patient Safety and Clinical Improvement	Initiate COPD Discharge Care Bundle	Care Bundle Dashboard is now being shared with key stakeholders
Clinical Innovation Adoption	Initiate two new funded projects that significantly benefit the NHS	<p>Healthy Aging – Bone Health Project – initiated development of an Osteoporosis audit tool with University of Oxford and a national supplier and initiated plans for the patient focus group required.</p> <p>Heart Failure – 17 Bucks Practices have signed up, 4 have completed their audit cycle (344 patient notes reviewed, 85 patients received pharmacological interventions and 40 were recommended for specialist review).</p>
Strategic and Industry Partnerships	<p>Launch of Project Accelerate</p> <p>National Support to pre-eclampsia</p>	<p>Launched successfully</p> <p>PIGF adopted by 44% of maternity units</p>
Patient and Public Involvement, Engagement and Experience	Development and deployment of on-line recording and impact tool	<p>Tool officially launched at Recording and Measuring Impact on 14 September</p> <p>Currently collecting feedback from users</p>
Stakeholder Engagement and Communications	<p>Implement findings of local research and innovation needs survey</p> <p>Lead national AHSN Network stakeholder survey</p> <p>Publish four single subject special edition newsletters</p> <p>Reach 5,000 Twitter followers</p>	<p>Joint workshop with ARC Sep 19</p> <p>Survey carried out Aug-Oct 19</p> <p>Mental health & primary care editions published in 2019</p> <p>Target hit Sep 19</p>

Finance

Our forecast income for 2019/20 is £5.86m. As part of the Accelerated Access Collaborative, our commissioner NHS England has increased core funding by £0.18m. Therefore, our overall commissioner income forecast is £4.17m. We shall receive grant and commercial income of £1.18m and partner contributions of £0.4m.

Quarter 2 2019-2020

Model Period Beginning	01-Apr-19	01-Apr-19
Model Period Ending	31-Mar-20	31-Mar-20
Financial Year Ending	2020	2020
Year of Licence Agreement	7	7
INCOME (REVENUE)	Opening Plan	Forecast
NHS England funding	2,411,385	2,584,041
NHS England - Other commissioning Funding	308,750	308,750
Partner contributions	399,966	399,966
Management Recharges	187,500	87,968
Health Education England	0	0
Office of Life Sciences Funding	830,000	830,300
NHS Improvement funding - PSC income	447,925	447,925
Other Income - Corporate Support	20,900	41,800
Other Income - Patient Safety Collaborative	20,225	20,798
Other Income - Clinical Innovation Adoption	816,995	818,922
Other income - Strategic & Industry Partnerships	299,422	304,422
Other Income - PPIEE	13,250	14,972
Total income	5,756,318	5,859,864
AHSN FUNDING OF ACTIVITIES		
Patient Safety & Clinical Improvement	749,468	751,475
Clinical Innovation Adoption	1,692,555	1,610,305
Strategic & Industry Partnerships	1,317,360	1,391,771
Informatics	163,481	104,177
PPIEE	152,024	153,783
Communications, events and sponsorship	167,986	143,851
Contribution to/From AHSN Network	136,000	138,761
Grant to Accelerare Ltd	235,318	371,696
Programmes and themes	4,614,192	4,665,819
CORPORATE		
Pay costs	721,258	709,797
Non-pay costs	420,868	484,247
Total Corporate Costs	1,142,126	1,194,044
Total expenditure	5,756,318	5,859,863
Net Income/Expenditure	-0	-1
Programme funding previously committed	0	0
Surplus/(deficit)	0	1

Risks and issues

After months of delays from South, Central and West Commissioning Support Unit we are seeking alternative arrangements for sourcing NHS data. The issue has been added to the Risk and Issue register.

Dr Paul Durrands ACA CMILT, Chief Operating Officer, Oxford AHSN

Patient Safety and Clinical Improvement

In this quarter we have continued to progress with our strong portfolio of work, further details of which follow, and we are particularly pleased to announce the start of the Medicines Safety programme – which will focus on safety issues around the administration of medication in care homes.

Deterioration



Recognise early soft-signs, Take observations, Respond, Escalate

As part of the national deteriorating patient workstream remit we are continuing to support a project in Buckinghamshire to pilot the introduction of RESTORE2 in three care homes. This is a joint programme with Buckinghamshire Healthcare and Buckinghamshire CCG. Initial training has been offered to the care home clinical leads and they are helping to co-design the two half day workshops planned for 15 November 2019 to introduce the tool to care home staff and GPs.

We are also continuing to support the spread of the successful pilot project in Oxfordshire, again linking in Oxfordshire CCG and sharing the learning and resources across the two regions.

We held our 14th regional Sepsis Stakeholders meeting this quarter with a range of presentations including Anne Hunt, Sepsis Lead Nurse East and North Hertfordshire NHS Trust, who is undertaking her PhD in sepsis and learning disabilities. Additional skills are needed to recognise and respond to deterioration in this population. Resources have been shared on our [website](#) for staff, patients and relatives/careers.

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What is Sepsis?

Sepsis is when your body reacts badly to an infection. It can make you very ill and you could die.

? What are the signs and symptoms of Sepsis?






- Feeling very hot or very cold and shivering.




- Having a very fast heart beat.
- Breathing fast or feeling out of breath even if you are sitting still.




- Feeling confused.
- Feeling sick or vomiting.

- Fainting or collapsing.
- Not able to have a wee or not going for a wee all day.

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? What should you do if you think you have Sepsis?



Phone NHS 111 and say you are worried about Sepsis



You may need to go to hospital straight away.

For more information about Sepsis you can



Look at this website
www.sepsistrust.org

Or email
info@sepsistrust.org



or call
0800 800 0029

Sepsis definition: Singer, M, Deutschman, CS, Seymour, CW et al (2016) The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3) JAMA Vol 315 No. 8 p801 – 810 doi:10.1001/jama.2016.0287
Signs and Symptoms & treatment of Sepsis: UK Sepsis Trust <https://sepsistrust.org/education/>

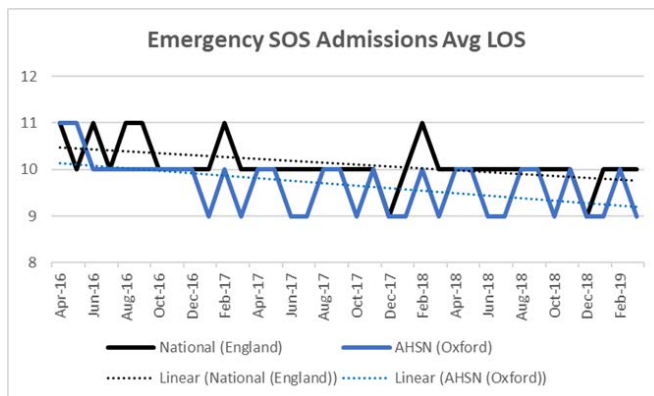
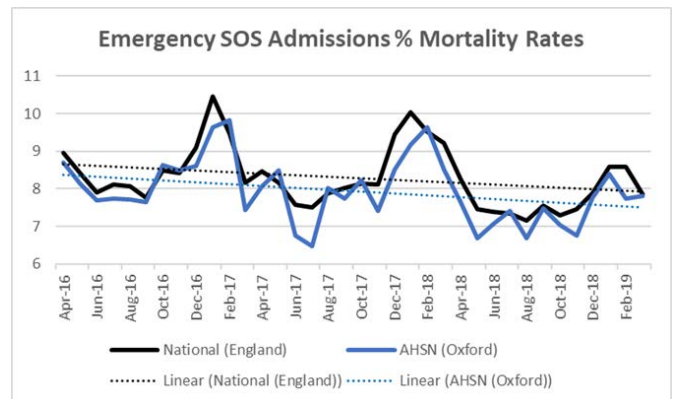
Example of resources for people with learning disabilities.

We also heard about the ‘hot gall bladder’ service from Mr Giles Bond-Smith, consultant surgeon at Oxford University Hospitals which is improving patient experience and reducing readmissions and gram-negative sepsis (GNS) rates. Hepatobiliary related GNS is the second biggest category after urinary tract infections. Organisations in the region are now looking to adopt this approach.

HPB Related Gram Negative Sepsis

- Gram-negative sepsis (GNS) contributed to **5500** patient deaths in the NHS in 2015.
- GNS is one of the three biggest drivers of **antimicrobial resistance** in the UK.
- The incidence of GNS is rising – cases of *E. coli* bloodstream infections in England increased by **23.3%** from 2013 to 2017

The data from the [Suspicion of Sepsis dashboard](#) data continues to show a downward trend in relation to length of stay and mortality.





National guidance for ambulance trusts on Learning from Deaths

A framework for NHS ambulance trusts in England on identifying, reporting, reviewing and learning from deaths in care

This quarter's regional mortality review group reviewed the latest National Quality Board guidance, this time aimed at Ambulance Trusts. Two pilot approaches to support sharing reviews and learning are to be trialed with South Central Ambulance Service in Oxford University Hospitals and Buckinghamshire Healthcare.

The group also welcomed Dr Helen Hogan, Associate Professor in UK Public Health, Department of Health Service Research and Policy, London School of Hygiene and Tropical Medicine. Helen is leading a patient safety themed research programme to determine how external and internal contextual factors influence the implementation and integration of policy and patient safety priorities and actions. One of their first studies is learning from deaths. Five NHS trusts, including Buckinghamshire Healthcare, Milton Keynes and Oxfordshire Healthcare will be participating in the research.

Maternal and Neonatal Safety

The Maternal and Neonatal Health Safety Collaborative is a three-year national programme running until March 2020 aimed at improving outcomes for women and neonates through employing improvement methodology to projects locally.

Over the last three months Milton Keynes University Hospital and Buckinghamshire Healthcare both began working on their quality improvement projects within the deterioration workstream following the diagnostic stage. Buckinghamshire Healthcare are working to reduce postpartum haemorrhages and have introduced the measurement of blood volume for all vaginal births in labour ward and their alongside birthing unit. Staff are extremely engaged in the project and this practice is starting to embed locally. Milton Keynes is working to ensure that women are identified and treated appropriately for sepsis. The use of an electric proforma for suspected sepsis has been introduced to ensure a clear pathway is followed. Alongside this both hospitals are reviewing how to move forward on the culture issues identified within their SCORE survey to improve the working environment for staff and safety for women.

The Thames Valley Local Learning System (LLS) met on 27 September 2019 with 21 midwifery and neonatal representatives from all five hospitals. The focus to these days is for everyone to learn from each other's quality improvement journey and five people from four of the hospitals shared

their learning within their improvement project. The meeting also covered the importance of diagnosis through process mapping and the use of iterative Plan, Do, Study, Act (PDSA) cycles. Regional system level work is critical to reduce variation, learn from others and improve outcomes for women and babies. The Oxford PSC is supporting two system wide pieces of improvement work working with the five trusts in our region.

Postpartum Haemorrhage (PPH)

Postpartum haemorrhage is a leading cause of maternal morbidity and mortality. This system level quality improvement work is progressing using a minimum data set criterion to obtain a baseline analysis of the current variation in all five maternity units within the Oxford PSC. The aim of this is to provide baseline data for improvement, understand the prevalence of PPH ≥ 1000 mls, identify the population of women who have a PPH, their associated risk factors and to identify the prevalence of women having a blood transfusion. Baseline data collection is complete in two of the hospitals and will begin work with the remaining hospitals in the next quarter. Royal Berkshire and Buckinghamshire Healthcare are currently working on QI projects related to better detection and accurate assessment of blood loss and early intervention. Collaboration with the Oxford Blood Transfusion service is underway with the hope to work together on quality improvement projects related to this in the future. These projects have engaged clinical staff who are committed and enthusiastic and we will build on this engagement with more work in this space helped by the knowledge gained through the data collection work.

Optimisation and stabilisation of the extreme preterm and preterm infant



Our programme of work is building on the successful regional quality improvement project which saw a 40% improvement in the transfer rates of extremely preterm infants to the tertiary unit (L3). Sustainability is being managed through several approaches/supportive measures including:

1. A regional guideline bundle on the management of extreme preterm labour, preterm ruptured membranes and the administration of Magnesium Sulphate as appropriate.
2. Development of a regional guideline to increase confidence in the in-utero transfer process for the extreme preterm infant and ensure the midwife escort feels confident is progressing, led by the Regional Improvement Lead & Consultant Neonatologist. We plan to measure the effectiveness of this guideline by evaluating improvements in our in-utero transfer rate.
3. Processes are in place with the Operational Delivery Network (ODN), maternity and perinatal networks to review all exception reports for the extreme preterm baby born outside a L3 unit each quarter. This analysis will allow supported and focused quality improvement ensuring we provide the optimum service for the extreme preterm baby.
4. Expanding on the portfolio of improving the optimisation and stabilisation of the extreme preterm focuses on the prevention, prediction and preparation of preterm birth in line with the national drive (Saving Babies Lives, Version 2) for a reduction in preterm birth from 8% to 6%. The hospitals in our region are working together to understand the variation in the services available to pregnant women

at medium and higher risk of preterm birth, including guidelines to manage risk assessment at booking, point of care testing, expertise and availability of scanning facilities. Buckinghamshire has a successful preterm birth service and has agreed to share the model and business case with Milton Keynes which is interested in establishing a preterm birth service for their service users. The maternity clinical network lead has shared a Preterm birth initiation document which the hospitals in the region will use to inform the development of services to ensure that the Oxford AHSN region is taking a strict approach to the management of women at medium and higher risk of preterm birth.

Regional Perinatal Governance network

This network of multidisciplinary governance leads from the five hospitals within the Oxford PSC region and Frimley is showing maturity of thought and a positive impact on patient safety through shared discussion and learning from serious incidents. The group has now shared the safety recommendations where a local Health Safety Investigation Branch (HSIB) investigation report has been undertaken. The plan is to collate the safety recommendations, highlight any regional themes and share the learning, actions and improvements undertaken to improve safety at local and regional level.

Intelligent Intermittent Auscultation training

The aim of Intelligent Intermittent Auscultation (IIA) of the fetal heart is to identify those babies, during labour who are deviating from the 'norm' and who require more intensive surveillance in order that monitoring can be increased appropriately. Innovative training work to increase midwives' competency with this skill was developed by a consultant midwife from Royal Berkshire and has been further developed to include real time fetal heart sounds by a consultant midwife from Oxford University Hospitals. During this quarter the Oxford PSC in collaboration with the consultant midwives are developing an e- learning package which is funded and supported by Health Education England, to spread this approach further.

Medicines Safety

As part of the National Patient Safety Improvement Programme, a new PSC workstream was launched in August 2019 with the aim of reducing harm as a result of errors in the administration of medicines in care homes, and to improve the safety and experience of care for residents. It is a three-year programme; a diagnostic phase will run from October 2019 – March 2020, followed by a testing phase to March 2021 and a scale up phase from 2021 onwards. During the diagnostic phase, the PSCs are collaboratively undertaking investigations and information gathering to build a picture of what current intelligence exists around the issue and of any interventions which have been shown to make a difference. A literature search and evidence scan has been jointly undertaken by us and UCLP and shared with the national workstream. As part of this phase we are engaging with all appropriate stakeholders. We are forming new relationships and building on current ones within CCGs, the CQC, PCNs, ICNs, GPs, local authorities etc. and within Care Homes, to establish where capability and capacity exists to move forward into the next phase of the workstream.

Spread and Adoption

PReCePT

The overall aim of the national PReCePT programme which concludes in March 2020 is to increase the number of eligible women within England who receive Magnesium Sulphate (MgSO₄) from a baseline of 43% to $\geq 85\%$. The long-term vision is to reduce the incidence of cerebral palsy in babies born preterm.



The regional PReCePT team

The final meeting with the PReCePT midwives from our regional hospitals in September 2019. Over the last year these midwives have created extensive awareness through the education of doctors and midwives, working to ensure that women in preterm labour < 30 weeks gestation receive MgSO₄ prior to birth. Individual units now have a highly reliable processes in place regarding the administration of MgSO₄, which is vital for hospitals in our region who have infrequent exposure to women in extreme preterm labour.

Significant improvement in the uptake of MgSO₄ with improved neonatal outcomes has been possible through regional and local collaboration fostered through the PReCePT regional QI programme supported by the maternity clinical networks, local learning systems and the operational neonatal delivery network. Hospitals within the Oxford AHSN region have demonstrated significant improvement in the administration of MgSO₄ from 82% in Q1 2018/19 to in to 93.3% in Q2 2019/20.

“An understanding of the need to give MgSO₄ in preterm labour has reached the same level of awareness as giving steroids – this fact alone is likely to create sustainability in practice. In addition, local learning systems, electronic patient record reminders and network audit and benchmarking will further encourage excellent practice”.

Case Study 1- PReCePT, page 5

Dr Mark Anthony, Consultant Neonatologist and Regional improvement Lead

Emergency Department Checklist

The Emergency Department (ED) checklist is one of the interventions outlined within the national spread and adoption workstream. The purpose of the ED checklist is to improve the safety and clinical outcomes of patients accessing the emergency department with a focus on two key elements, physiological parameters to form a NEWS2 score and a Pain score. The aim is to increase

the number (from baseline) of (Type 1 adult) of ED's using an ED safety checklist by 31 March 2020. All our five regional trusts have the Bristol ED checklist or equivalent in place either in paper or electronic form. The Oxford AHSN is monitoring the sustainability of this safety initiative.

Regional Emergency Department Safety Collaborative

The 5th Regional Emergency Department Safety Collaborative multidisciplinary meeting hosted by Frimley Health and convened at Wexham Park Hospital is being held on the 10 October 2019. Approximately 60 staff including a cross section of emergency department staff, SCAS, the Health Safety Investigation Branch and NHS resolution are taking part

COPD Discharge Care Bundle

Our work on the COPD Discharge Care Bundle forms one of the interventions in the NHSI Adoption and Spread workstream aiming to support implementation of the British Thoracic Society COPD discharge bundle in acute trusts and increasing the number of organisations implementing one or more elements of bundle by March 31, 2020.

In addition to the overall bundle adherence data received in Q1, in Q2 a data dashboard became available showing compliance of all NHS Trusts with delivery of each of the four bundle elements. This has been extracted by KSS AHSN from the NACAP audit data, although yet it does not take account of case ascertainment.

Clinical logins will shortly be available to Trusts to enable them to review this data themselves, but ahead of this we are sharing it with our partner Trusts and exploring how we might work with them to improve performance in areas of lower performance and share the experiences of high performing Trusts.

Emergency Laparotomy Collaborative - PSC contribution

The PSC continues to support CIA with the Thames Valley Emergency Laparotomy Collaborative. This quarter we have completed another round of 6 site visits to our 5 participating Trusts, using the NELA dashboards which offer real time data and support discussions about areas to focus improvement efforts.

The 4th regional event in September included presentations from Buckinghamshire Healthcare on how the surgical and palliative care teams work together to support patients and relatives in decision making. Dr Helen Pegrum, consultant palliative care, who is also our regional clinical lead for mortality reviews, presented with Mr Rame Sunthareswaran, consultant surgeon.

Refer to page 35 (Clinical Innovation Adoption section) for further information – refer to CIA report/tables updating ELC progress

Mental Health

Anxiety and Depression Network

The Anxiety and Depression Network has now finalised the development work of two new service innovations focused on relapse prevention: The Paddle therapy support app and the new, integrated

step two- treatment relapse prevention/ staying well protocol. As is the case with all aspects of new these initiatives, the Paddle website and instruction video have been through a rigorous consultation and feedback process with a patient forum and the Expert Reference Group and will be released into the public domain in the next two weeks. The network has trained groups of champions within each of the Improving Access to Psychological Therapies (IAPT) services across Thames Valley and Milton Keynes to support piloting and has also produced a number of staff training videos for future use. The network's Patient Forum will be supporting the piloting and evaluation of both. The Anxiety and Depression Network is also supporting the new Improving Access to Psychological Therapies for Older Adults Network which was launched in Q2.

Regional Collaborative - Improving Care for Emergency Department Frequently Attending Patients

This Health Foundation funded Thames Valley-wide project has proceeded with several key areas including service user involvement and addressing information sharing.

To understand better the factors which, drive frequent attendances, we invited service users to co-produce a psychosocial assessment form which has also received input from psychologists, and Emergency Department (ED) and psychiatry clinicians. This is now being trialed in two EDs.

We have continued discussions with the Thames Valley and Surrey Local Health and Care Records Partnership (see <https://www.thamesvalleysurreycarerecords.net/about> looking at how records from more than one ED can be made available when the same patient attends several Emergency Departments (EDs). We have also worked on a risk matrix and data sharing protocol for frequently attending patients within the BOB ICS footprint.

The project will be ending shortly and the Q initiative within the Health Foundation asked us to report on what we had achieved. We did this in the form of a website which can be found here <https://www.thamesvalleystarlingcollaborative.net> and which contains more details of the work of the project.

Early Intervention in Psychosis – Improving Transfers

This initiative looking at the safety of patient transfers has also been liaising with the Thames Valley and Surrey Local Health and Care Records Partnership to ensure that this 'case use' is included in the early work of the partnership, facilitating appropriate sharing of information during transfers of care.

Serenity Integrated Mentoring (SIM)

SIM is a national initiative being rolled out by AHSNs, in which police are integrated within a mental health team, working together with high impact users of services helping them towards safer and healthier lives. As reported in our previous Q1 report, the Oxford AHSN's target was set to zero because of reluctance in this area to follow the SIM model for these service users. However, there is now considerable interest in following a similar model in place in Hampshire, and some of the local mental health and police teams have visited Hampshire to find out more. We are hopeful that we may see one or more joint police / mental health teams set up to work proactively to support a small number of high intensity service users to reduce the impact of their crises.

Best Practice Network for Care Homes Health In-reach teams

We continue to facilitate this network of health professionals that in-reach into care homes in the dementia field. We have held a further workshop, where we heard Kris Sylvester from the Oxfordshire Care Home Support Service talk about her experience of the implementation of NEWS2 (a nationally recognised tool for standardising the assessment of acute illness severity) in a nursing home with a high level of residents with advanced dementia. The workshops are well attended with representatives from across the Thames Valley helping each other with challenges and sharing their initiatives.

New Steering Group for Oxford AHSN Mental Health Programme

We have set up a new steering group to inform the work of the AHSN Mental Health Programme. This has membership from Berkshire Healthcare, Oxford Health, and Central & North West London and will help to ensure that the programme is supporting local needs and priorities.

Clinical Innovation Adoption

The Clinical Innovation Adoption team is presently delivering 11 large-scale projects (national, local and international), supporting deployment of ten products (RUP, ITP, AAC), in addition to seeding new possibilities and internally improving our skills and efficiency to deliver this varied portfolio.

Highlights for quarter 2 include:



Supported and received Buckinghamshire Healthcare Pathway Transformation Fund application for Urolift and working with the Trust to implement new one stop clinic.

Working with Berks West CCG on Atrial Fibrillation Champions course and Quality Improvement Project. Nine practices have completed audit, resulting in 500 patients screened and 35 detected. Both national and local projects are progressing at pace.

National projects

- **TCAM:** The IT solution to enable usage of PharmOutcomes is now in place at Buckinghamshire Healthcare Trust and we are cautiously optimistic that the national target will be met.
- **PINCER:** We have surpassed the national target. 201 practices signed up and 80% of the error criteria reported.
- **ESCAPE-Pain:** This remains challenging even though interest has been expressed locally.

Local Projects

Heart Failure (a local project and one involving collaboration with other AHSNs), this quarter delivered audits for 4 Practices with significant improvement in the number of patients on the HF register and the patient coded with Left Ventricular Systolic Dysfunction (LVSD). Of the 152 patients who received face to face reviews, 85 received pharmacological intervention and 40 were recommended for specialist review. For sharing nationally with other AHSNs, the toolkit development is progressing and should be ready by the end of Q3.

Other Activities

The team has been working with Health Education England in a quid pro quo arrangement that gives us access to a Knowledge Officer for one day per week for six months to horizon scan on topics, summarise and synthesis reviews of evidence from research and learning from practice on topics that we specify and to facilitate and apply knowledge management techniques as appropriate. This arrangement is forms part of HEE’s work to demonstrate the value of knowledge specialists in health and care and further shape, inform and grow embedded knowledge specialist roles in the NHS.

An MSK First Contact Practitioner is also working with us on a fragility project in primary care.

Project progress for Clinical Innovation Adoption Q2

The CIA Programme manages five of the seven national programmes undertaken by the Oxford AHSN.

Three are progressing well and two are challenging

National Programme	Measure/goal	Business Plan	Q2 Position	Comment	Status
Atrial Fibrillation	Number of patients diagnosed with AF	3,000	5,983 (forecast) Annual measure in Oct 20)	Based on the 2017/18 QoF we have a high degree of confidence that the target will be achieved and exceeded. QoF 2018/19 is due for	
Emergency Laparotomy	Number of procedures	803	478	Final figures for each quarter are only available several months after the quarter has ended due to the nature of data collection for EL procedures, hospital episodes of care and the NELA audit. For example, 2019 Q1 final data from the national team became available in late September 2019. Accordingly, the original (known cases) figure at the time of reporting Q1 was 220 and can now be revised to 243. At this time, the in quarter Q2 figure is expected to be 235. Equally, national final figures for Q2 will be	

National Programme	Measure/goal	Business Plan	Q2 Position	Comment	Status
PINCER	Number of GP Practices implementing PINCER	192	201	Two-year cumulative target now exceeded and now focusing on sustainability of the	
TCAM	Number of completed referrals	453	0	All five Trusts continue to engage with us to implement TCAM. IT development at one Trust is in the testing phase of sending referrals and is on track to going live in November. Another Trust is close to having a working IT solution. We continue to work with the remaining Trusts. Our estimates of implementation suggest	
ESCAPE-Pain	Number of people completing the programme	80	4 (year-end forecast has been reduced from 80 to 59)	<p>The three active leisure sites have struggled to recruit suitable participants and therefore no courses were run during Q2. The quarter focused on marketing for the three sites, with bespoke flyers distributed to the local GP practices close to each site.</p> <p>Ravenscroft Physiotherapy in Milton Keynes is due to pilot the programme and training was due to take place during Q2. However, due to operational issues this has been delayed. The pilot is planned to commence in Q4.</p> <p>Q2 has seen ongoing active engagement with individual leisure centres, local authorities, Active</p>	

National Project: Atrial Fibrillation

Background

Atrial fibrillation (AF) is the most common cardiac arrhythmia affecting around 2% of the population. AF is the cause of 20% of all strokes and confers a five-fold increase stroke risk for an individual. Anticoagulation (with warfarin or a Direct Oral Anticoagulant – DOAC) has been shown to reduce the risk of stroke in patients with AF by two-thirds.

Quarter 2 highlights

Berkshire West Integrated Care System project – AF Champions

Oxford AHSN, Wokingham GP Alliance and the Royal Berkshire have developed a local AF Champions programme funded by the Pfizer-BMS alliance. Through this initiative each of the 48 GP practices across Berkshire West will develop an in-house GP champion with the confidence and knowledge to ensure atrial fibrillation is identified and managed appropriately. The initiative involves attendance at a series of evenings to develop skills and form a community of learning and shared peer support. In addition, the champions and other members of the practice teams are engaging in a Quality Improvement project, designed to increase the detection of AF. MyDiagnostick devices have been provided to practices to support increased detection of AF.

In Q2 the first cohort of the AF champions completed their education sessions. The quality improvement projects for this cohort are well underway with nine practices focused on AF detection and one practice focused on DOAC dosing. Data from cohort one practices indicate that over 500 patients were screened as part of this project in Q2 and 35 cases of probable AF were detected.

The second cohort launched in September with seven practices taking part. All practices in this cohort have been provided with MyDiagnostick devices and screening projects have commenced.

A third cohort will launch in November, with 15 practices participating.

E-learning

Oxford AHSN is developing an e-learning programme to support improved anticoagulation initiation and quality. In Q2 work has been focused on finalising the storyboard and design. The aim is to launch in Q3.

Milton Keynes

A proposal is being developed to support PCNs in Milton Keynes with delivering improvements around AF. This follows on from a meeting between Oxford AHSN, NHS RightCare and two PCN Clinical Directors. The proposal will be aligned to a unified offer being made to the BLMK ICS by Oxford, UCLP and Eastern AHSNs.

BOB ICS Joint Working

Following a meeting with Pfizer, Oxford AHSN is working with stakeholders from across the BOB ICS to develop a proposal for an AF detection project at ICS level.

Broader engagement

Oxford AHSN continues to attend various local and regional forums to support development of new AF initiatives and support the sustainability of projects that have previously been delivered. As the Oxford AHSN AF programme approaches its final year, we will consolidate and share the learning that has been gained from the various projects that have been delivered.

Activities for next quarter

- Cohort 3 of AF Champions to launch
- Develop JWA with Pfizer
- Meeting with Milton Keynes PCNs to present proposal
- Launch e-learning package

National Project: Emergency Laparotomy Collaborative (ELC)

Emergency Laparotomy is high risk surgery addressing several causes. The Emergency Laparotomy Collaborative Programme supports the establishment of a formal Emergency Laparotomy pathway with the adoption of a bundle of six best practice care interventions associated with reduced mortality & length of stay.

The ELC Programme incorporates the Royal College of Anaesthetists National Emergency Laparotomy Audit (NELA) that captures the data underpinning the Programme. These metrics provide the evidence-base to enable identification of areas for improvement, evaluation of the success or otherwise of new ways of working and supports activities leading to sustainable change.

Activities in Q2

The 4th Thames Valley ELC Conference – 9 September 2019

The fourth regional meeting was the best attended yet hosting fifty-two people of whom nearly half were first-time attendees. All six hospitals within the region performing this surgery were represented. Speakers covered topics including best practice in high risk surgery, palliative care in emergency surgery settings, pre-habilitation medicine, perioperative geriatrician review together with site updates from all sites, an extended site update from Stoke Mandeville Hospital, a live demonstration of the NELA Dashboard and a presentation on an enabling technology seeking to optimize point of entry triage of patients with likely surgical conditions. Speakers from Salford, Southampton and Bristol joined presentations from regional colleagues. The multi-professional speakers drew the broadest range of colleagues to date, exemplifying the breadth of professionals caring for this patient group and included: a medical director, a professor of clinical science, surgeons, anaesthetists, intensivists, geriatricians, perioperative physicians, palliative care team, a matron and nurses, a team leader, a ward manager, a quality lead and an audit lead.

Feedback from the day included:

“Excellent programme. Very well planned and good choice of speakers. Will try to initiate something similar [in my region]. Well done for the hard work that goes into planning these events!”

Consultant Anaesthetist.

Emergency Laparotomy Collaborative Steering Group

The Steering Group met in August for the second time. Actions from the meeting are ongoing including consideration of outstanding programme governance needs at each site and measures to enable sustainability of adoption of best practices at sites performing this surgery.

Patient and Public Involvement, Engagement and Experience

OxCCare supported by the Oxford AHSN Director of PPIEE and ELC Steering Group Lay Representative have continued to prepare for a patient and family focus group, to be piloted at Royal Berkshire Hospital.

Site Visits

Site visits to ELC teams at Wexham Park Hospital, Milton Keynes University Hospital, John Radcliffe Hospital, Frimley Park Hospital and Royal Berkshire Hospital have taken place during the quarter and additional data analysis support provided to the team at Stoke Mandeville Hospital.

ELC Dashboard

The national NELA Dashboard has become available with access of a cut-down version made available to the AHSNs. The tool provides near real-time data metrics for local insight and comparison with hospitals nationally, regionally and with hospitals 'of a similar size'.

National Project PINCER

What is PINCER?

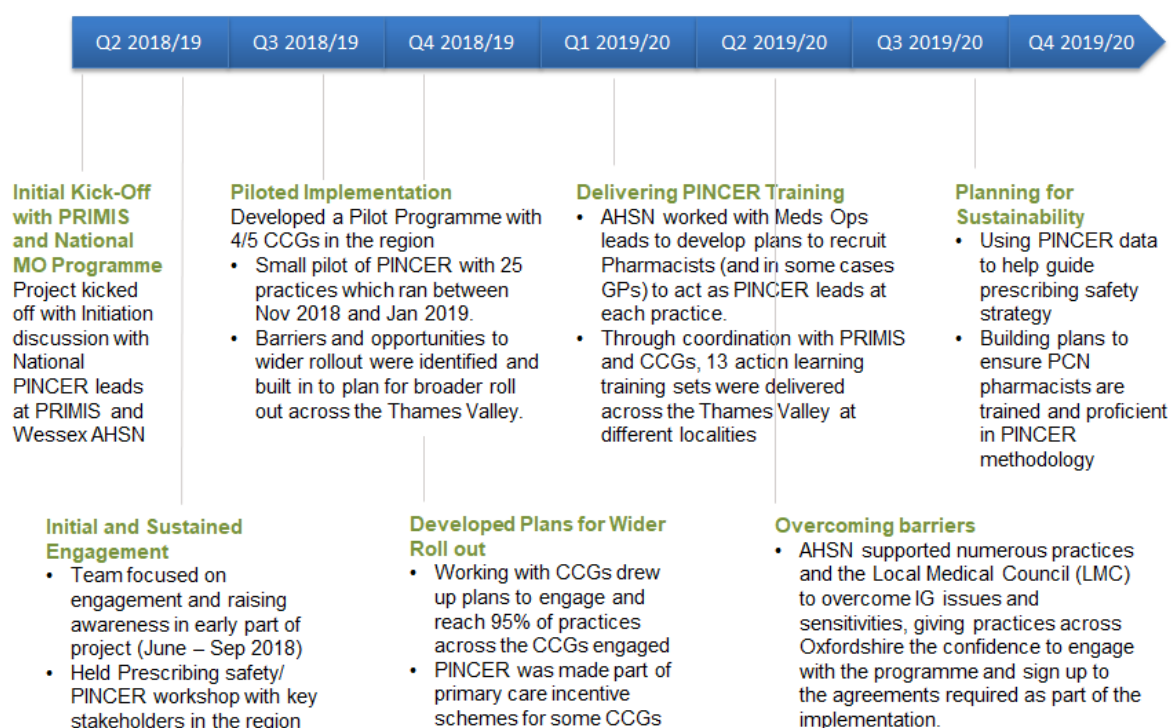
PINCER is a pharmacist-led information technology intervention for reducing clinically important errors in general practice prescribing. It has been shown, in a large cluster randomised controlled trial published in [The Lancet](#), to reduce medication error rates by up to 50%. A published [economic analysis](#) showed introducing PINCER was cost effective, demonstrating an increased quality of life for patients (0.81 Quality Adjusted Life Years per practice) and an overall reduction in costs of £2,679 per practice.

Key Achievements in Oxford AHSN PINCER Project

- 201 practices in the Oxford AHSN region (over 80% of practices) have now fully implemented and are using PINCER to reduce prescribing errors.
- Over 200 Pharmacists and GPs have been trained on Quality Improvement methodology and root cause analysis around prescribing safety.
- Oxford AHSN was the first AHSN nationally to reach its two-year NHSE target and has contributed considerably to the overall national adoption.
- Six months follow up data emerging from early-adopter sites demonstrates that over 80% of practices have seen reductions in numbers of patients at risk in at least five of the PINCER indicators.
- 2 ISPOR posts have been accepted – Sleepio and eMaps

Activities in Q2

- Oxford AHSN has continued to support CCGs and practices to implement PINCER and upload data.
- Oxford AHSN and PRIMIS have delivered 13 Action Learning Set (ALS) one training session and 13 ALS2 training sessions with Pharmacists and GPs and have scheduled ALS three sessions for across the AHSN region.
- Oxford AHSN has worked with CCGs to develop plans for the new models of primary care to ensure that PCN pharmacists receive PINCER training and embed PINCER into PCN working.
- Currently the Oxford AHSN has 210 active practices that plan to implement with 201 having already implemented and uploaded PINCER data.



Activities planned Next Quarter (Q4)

- Now baseline data is available we have strong evidence of areas of need for our CCGs as a region. We plan to set up a Medicines Safety Officer network through which to present and discuss this data.
- Continuing to support practices around IG, QI methodology and action planning to ensure that the expected reductions in medication errors are realised.

Progress against targets

The national target for PINCER in the Oxford AHSN was to have implemented PINCER at 192 practices by end of Q4 2019/20. This has now been surpassed.

National Project: Transfer of Care Around Medicines (TCAM)

Background

The Transfer of Care Around Medicines (TCAM) project aims to reduce the number of patients being re-admitted to hospital due to adverse medication events. Patients at risk of an adverse medication event are identified and referred by hospital pharmacists to community pharmacists through a secure platform called 'PharmOutcomes'. Community Pharmacists can then invite the patient to a review where they are able to address any issues with the medication and re-emphasise the correct way to take the medication.

Metrics

The nationally agreed targets for Oxford AHSN for TCAM are shown below. Although there are no completed scripts yet, the referral target of 453 is achievable but is dependent on: Trust IT issues being resolved within timescales; the rate of referrals made by the Trusts; and the 'conversion rate' attained in community pharmacies. Analysis of outcome data across the AHSN Network suggests the target is achievable and we are cautiously optimistic.

Table shows 2019/20 target and position at Q2.

National Programme	Measure/goal	2019/20 Plan	Q2 Position	Comment	Status
TCAM	Number of acute Trusts using TCAM	2	0	We have identified an IT solution for Buckinghamshire Healthcare. The IT work is nearly complete and is in the testing phase. The IT solution at Royal Berkshire is relatively straightforward however local IT support contracting agreements are slowing development which is now predicted to be completed in Q3. Integration of IT should also be relatively straightforward at Oxford University Hospitals, but the work needs to be coordinated with their Trust-wide IT	
TCAM	Number of completed	453	0	There is the potential to achieve the cumulative referral target by 31/03/20 if two trusts go live; the first by	

Progress made during Q2

The focus has turned to implementation at two of our trusts and we have continued to work on stakeholder engagement and the development of implementation plans for the remaining three sites. Sites that do not have an electronic prescribing and medicines administration (EPMA) system need to identify and implement an IT integration solution.

Whilst the focus is on implementation, we have been aware of some of the implementation barriers and sought to address these with the support of the National Lead, Clare Howard. Concerns expressed included the New Pharma Contract and the number of MURs that would be reimbursed. Having insight into how

others are managing these challenges has been helpful. It also helps to flag to the central team how the decisions in other areas of NHS impact implementation.

Progress by Trust is highlighted below:

Buckinghamshire Healthcare

As mentioned in previous reports, TCAM requires integration to Trust systems and works best where the EPMA is already installed. There are three key aspects for this implementation (1) development of the IT solution that enables integration to the PharmOutcomes system for secure transfer of patient information to a Community Pharmacist (2) change management and support for Trust Pharmacists/staff (3) change management and support for the LPCs and Pharmacists in the community.

In Q2, progress has been made in solving the IT integration requirements that will enable transfer of discharge information to PharmOutcomes. Oxford AHSN has worked with the Trust to get the IT solution in place that includes an implementation plan with the aim of 'going live' in November. Change management activities are also moving forward for both internal Trust staff and through collaboration with the LPC. We are cautiously optimistic that Buckinghamshire Healthcare are well on their way to actively start using the system.

Oxford University Hospitals

The Cerner EPMA system which launched in 2018/19 has now been embedded and the Trust is able to engage with the TCAM project. Discussions with the Trust's Clinical Informatics team have confirmed that PharmOutcomes can be fully integrated with the EPMA relatively easily. The Trust is determining when the integration can be scheduled into their IT team's work schedule. An implementation plan will be developed in consultation with both the Trust and the LPC.

Royal Berkshire

The Cerner EPMA system which was launched in November 2018 has been embedded into practice and the Trust is able to engage in TCAM. There is strong clinical interest but some concern over the costs of the IT support caused by local contracts between the Trust and Cerner. A project plan and implementation timeline have been agreed with the Trust and LPC and we continue to work to this with the expectation of going live in early Q4.

Milton Keynes University Hospital

The Trust Pharmacy and IT teams are fully engaged with and keen to progress the TCAM project. The Trust uses Cerner EPMA and therefore the IT integration should be relatively straightforward. The Trust pharmacy team is designing their workflow after which the IT team can continue to develop the IT solution.

Frimley Health

Frimley Health does not yet have an EPMA system. A technical solution has been identified by the IM&T

department and funding offered by the Oxford AHSN to implement this solution.

Next Steps

- Complete testing at Buckinghamshire Healthcare.
- Run community pharmacist training event in Buckinghamshire.
- Sign MOU with Royal Berkshire.
- Sign MOU with Milton Keynes University Hospital.
- Continue engagement with Oxford University Hospitals and Frimley Health.

National Project: ESCAPE-pain

Background

ESCAPE-pain (enabling self-management and coping with arthritic pain using exercise) is an evidence-based group rehabilitation programme for people over 45 years with hip or knee pain. The programme integrates education, self-management and coping strategies with an individualised exercise regime. It can be delivered in both the health and leisure sectors by physiotherapists and fitness instructors. Each programme consists of 12 sessions run over six weeks, with typically 12 patients per session. The national programme is running for two years and is due to end in March 2020.

Q2 Update

This quarter unfortunately did not see any courses held. This was due to the three active leisure sites having difficulty recruiting participants. As such, there was a focus on ensuring the information about the course was disseminated within the local areas. This included the development and printing of bespoke flyers for each centre, which were distributed to the local GP practices. All three sites have plans to run a course in Q3, pending enough numbers of participants. During this quarter, Park Club Willowbrook advised that the ESCAPE-pain facilitator will be leaving the centre at the end of October. A replacement has been found, however this individual will not be able to undergo the training until November at the earliest. The Oxford AHSN will fund this training.

Q2 saw continued engagement with the health sector, leisure sector, local authority and public health. The Buckinghamshire Musculoskeletal Integrated Care Service (MusIC) advised a decision regarding the programme is on hold pending a system-wide review of the MSK landscape and service provision. Ravenscroft Physiotherapy in Milton Keynes was due to commence a pilot of the programme in Q2 but due to operational issues this has been delayed. The start date is now planned for Q4, with training to be undertaken in Q3.

Engagement with commissioners and providers within East Berkshire last year did not result in uptake of the programme due to satisfaction with the current service provision. However, this quarter saw a re-engagement with these organisations who are now interested in the potential of ESCAPE-pain across the region. An initial telephone call and meeting were held at the end of Q2, and further follow-up discussions will be held in Q3. However, implementation if it does occur, will be from 2020/21.

Many individual leisure centres were contacted during Q2, which resulted in a few positive meetings.

Three leisure centres are actively considering the programme and further engagement will take place during Q3.

The annual outturn for 2019/20 is 80 participants completing the course. This is a challenging target and due to both the delay in Ravenscroft Physiotherapy starting the pilot and difficulty recruiting participants to the active leisure sites, it is unlikely this will be achieved.

Activities for next quarter

Q3 will focus on the following:

- Training for Ravenscroft Physiotherapy
- Discussions with East Berkshire commissioner and providers regarding potential implementation
- Follow-up meetings with interested leisure sites
- Continue to contact leisure centres to discuss the programme
- Engage with Park Club Willowbrook to schedule training for the new facilitator

Local and International Projects

The projects reported below have been initiated either through partner priorities (fall prevent projects, Wiresafe, prostate cancer), national awarded funding via bids (Innovate UK – Sleepio/Atrial Fibrillation), workforce development funding from Health Education England (HEE) or international funding (EIT Health - eMaps).

Requirement	Project	Start	End	Status
Local	Frailty - Bone Health Management in Primary Care (recently added.	Sept-19	June-21	Start Q2
Local	Heart Failure (detect and treat - Novartis)	May- 18	Dec-20	Ongoing
Local	Sleepio (Innovate UK)	Apr-18	Dec-20	Ongoing
Local	Falls Project 2/Phase 2: FallSafe Bundles	Jan-17	Mar-19	Completed
Local	Patient Safety – Wiresafe	May-17	Jun-19	Completed
Local	Atrial Fibrillation project - Reducing AF-related stroke through coordinated primary/ secondary care.	Nov-18	Dec-20	Sep-20
Local	Innovation Course cohort 6 (Buckinghamshire New University/Oxford AHSN)	Sep-18	Jun-20	Ongoing
Local	Polypharmacy	Jan-20	Mar-21	Planning
International	eMaps – Market Access Tool	Jan-17	Dec-19	Ongoing

Local Project: Excellence in Heart Failure

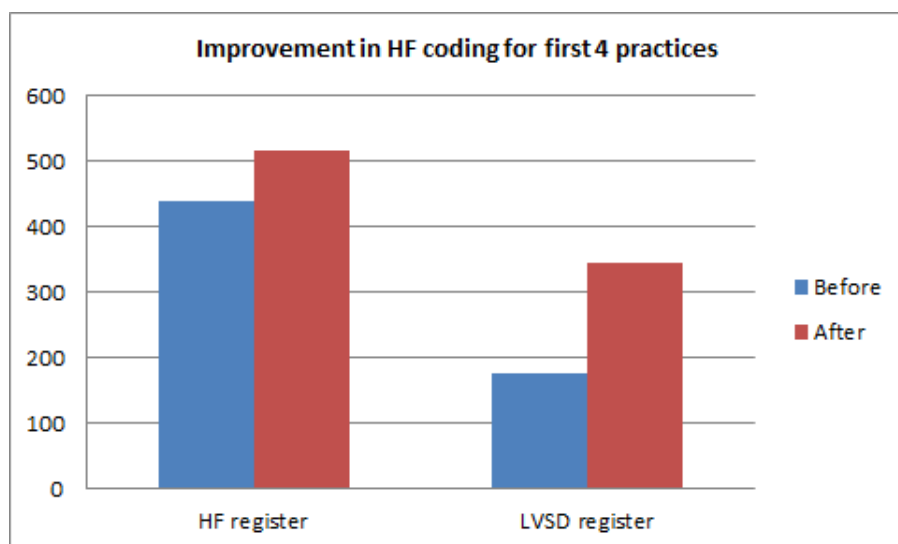
Background

The Excellence in Heart Failure project is being delivered in primary care in Buckinghamshire and includes code cleansing to increase recorded prevalence of heart failure and medicines optimization to improve quality of life and reduce hospital readmission. The project is delivered through a joint working arrangement (JWA) between Oxford AHSN and Novartis. Through this JWA Novartis have appointed

Interface Clinical Services to support practices in running clinical audits.

Progress in Q2

Four practices have now completed their audit cycles and showed significant improvement in the number of patients on the heart failure register and the number of patients coded with Left Ventricular Systolic Dysfunction (LVSD).



- 344 patients have received a note review to date
- 152 of these patients went on to be reviewed face to face
- 85 patients received a pharmacological intervention, the majority of which were up titration of an existing medication
- 40 patients were recommended for specialist review

A further 13 practices are signed up to the project.

Toolkit

Oxford AHSN has signed a JWA with Novartis to develop an implementation toolkit to support adoption and spread of Excellence in Heart Failure. Work on the toolkit is underway and in Q2 contact was made with several sites across the country who are running similar projects. The aim is to present amalgamated data from all projects to show the impact at scale of medicines optimisation in heart failure.

Activities for next quarter:

- Continued delivery of project
- Encourage further sign up in Buckinghamshire through sharing early results
- Finalise toolkit

Local Project: Innovate UK Funded

Sleepio

Sleepio is an online Cognitive Behavioral Therapy-based support programme that helps users with insomnia which affects one in ten adults. It aims to improve sleep without recourse to medication through a fully automated, interactive web-based tool.

Innovate UK is funding a project providing free direct access to Sleepio to all 2.7 million adults living or working in the Thames Valley (Berkshire, Buckinghamshire, Milton Keynes and Oxfordshire) from October

2018 until autumn 2019.

This is the first large-scale NHS rollout of direct access digital medicine. Any adult can access the programme without needing a GP referral or prescription.

This initiative is being led by the Oxford Academic Health Science Network (Oxford AHSN) in partnership with Big Health (the company that developed Sleepio), major employers, GP surgeries and other primary care professionals.

Activities in Q2:

- A communications project has been developed with a public relations specialist to reach a wider audience using social media and other channels to increase the number of people within the Thames Valley accessing Sleepio; preferably those with poor sleep who are more likely to engage with the CBT-based element of the course. This aspect of the project has also involved public and patient involvement; including an Expert by Experience session to gather the views of local people with sleep issues to ensure that the messaging and language of the campaign are authentic.
- Commissioner Engagement – A final draft of the paper “Determinants of and barriers to adoption of digital mental health at scale in the NHS” will be submitted to BMJ Innovations shortly.
- GP Engagement – The nine GP surgeries in Buckinghamshire have continued to recruit and engage patients. The Swan Practice and Meadowcroft Surgery have engaged with the most patients over the course of the project (193 and 189 respectively). In Q1, Meadowcroft recruited 136 patients, The Hall Practice recruited 103, and The Swan recruited 99. MJOG communications have increased the number of patients engaging with Sleepio where these have been issued. Interestingly, the number of patients being referred by practices other than the nine engaged with the project is increasing; 388 compared with 185 in Q3 and 267 in Q4 in the previous year (i.e. following the project launch).
- Population Engagement - For the duration of the Sleepio project, the web-based tool will be made available to anyone (over 18 years-of-age) within the Oxford AHSN geography. Following the official launch on World Mental Health Day - 10 October 2018 - large employers and third sector organisations (particularly those supporting carers, mental health issues, and long-term conditions) are being sought to engage with the project and roll-out Sleepio.
- Nine large local employers are now rolling out Sleepio to their staff (Buckinghamshire Healthcare, Oxford Brookes University, Oxford Health, Oxford University Hospitals, Oxfordshire County Council, TXM Group, Unipart, University of Buckingham, and West Berkshire Council). In Q1, the number of Thames Valley-based employees accessing Sleepio was 3,390; compared with 2,009 from the previous two quarters after the project’s launch on World Mental Health Day (10 October 2018).
- Presentations to several groups have been given; including GP Psychiatry Study Days and Health Hospitals events which have raised awareness of the availability of Sleepio to clinicians and patients alike. Third sector organisations such as Oxfordshire MIND, Restore, and Archway have also been approached to engage with their clients. Presentations also given to brand partners at the Westgate Centre (retail complex) and at Oxford Science Park.
- Media engagement to coincide with Mental Health Awareness week has been sought locally. Case studies have been featured on local radio (BBC Oxford and Jack FM) as well as articles within the national press (Guardian, BBC News etc.), as well as regular articles in stakeholder newsletters. This will be expanded over the coming quarter in partnership with Good Relations and the communications project. This also involved an interview with the Financial Times.
- A survey – issued to around 1,000 individuals in the Thames Valley – developed from expert by experience forum. The results from the survey will help generate media stories with a local

perspective and to be combined with online and other media channel promotion.

- Since the project's launch over 7,800 individuals have accessed Sleepio from the Thames Valley. The majority of those (just over 50%) individuals are Oxford-based.

Activities for Next Quarter

GP Engagement:

- Continue to utilise alternative communication routes, such as MJOG, to raise awareness with relevant and clinically appropriate patients registered with data partner practices.

Population Engagement:

- Continue to develop and implement digital communications project in conjunction with digital design agency – following Invitation to tender process – including input from those with lived experience to be rolled out by August 2019.
- Greater focus on universities, organisations and services supporting those recovering from physical health issues and rehabilitation, and large employers (particularly those with Mental Health First Aiders and/or employee wellbeing champions).

Local Project: Elastomeric Devices

Background

Elastomeric devices are small, single use pumps used to administer medication such as IV antibiotics or chemotherapy and can be used in patients' homes. As the pressure on hospital beds is significant, Trusts are keen to explore alternative ways to treat patients safely and effectively that either can facilitate an earlier discharge from hospital or prevent an admission to hospital. Elastomeric devices could be used to support both the discharge of patients who would otherwise remain in hospital purely to receive IV antibiotics, and to support the prevention of admissions for such patients.

This project is initially being run with OUH, to provide support to the pharmacy and clinical teams to develop and embed this service to enable a greater number of patients to benefit from this model of treatment.

Q2 Update

OUH continued to run the pilot. The aim was to use the device with 25 inpatients however, the team achieved 18 inpatients. The data collected was sent to the Oxford AHSN for analysis and the results of which will be presented at an internal meeting during Q3.

Activities for next quarter

Q3 will see the decision being made as to whether OUH is able to use the device in people's homes, thereby facilitating earlier discharge for certain cohorts of medically stable patients.

Local Project: Healthy Ageing

Background

Healthy ageing is a key priority for health and social care and has been highlighted in the NHS Long Term Plan. This incorporates a wide spectrum of health needs, such as the management of patients who are classed as frail, but also enabling people to age well and live well into older age such as providing greater

awareness of and the necessary steps for successful management of long-term conditions.

The Oxford AHSN has identified a need for a greater awareness of bone health and the appropriate management of osteoporosis to prevent fragility fractures. This project is also being deployed by four other AHSNs who are collaborating to deliver the “Northern Bone Health Programme”.

The Oxford CIA team will be initiating a local project with GP practices to ensure patients with osteoporosis are managed in accordance with NICE guidelines and are optimised on treatment. The project will also include an educational component for both patients and clinicians.

Q2 Update

Initial discussions have taken place with PRIMIS to understand if the current osteoporosis tool can be amended to incorporate the measure identified within the Oxford AHSN’s project plan. Discussions will continue within Q3 to determine if collaboration is feasible.

Local project-Syncope

Background

Syncope, or transient loss of consciousness, can arise due to highly varied causes with significantly different degrees of seriousness. Investigation of syncope can follow different paths depending upon the clinical suspicion of the underlying cause(s). Accordingly, following investigation, a patient experiencing syncope may ultimately be managed by any of number of different teams or services. Identification and investigation of syncope can at times be complicated by apparently more urgent conditions warranting attention, such as fractured neck of femur.

All the above can lead to variation in practice within a service and between Trusts. Equally, it can result in delays in the more serious causes of syncope being identified and escalated.

The annual number of syncopal episodes is hard to quantify because patients may suffer with other contemporaneous events (such as fractured neck of femur), the significance of which may be recorded as the primary reason for attendance at hospital.

Interest from local stakeholders

Oxford AHSN is currently scoping the interest from Trusts across the region. Trusts have reported that syncope pathways are an area that they would like to work on, particularly given the impact on the emergency department.

Innovation

This has yet to be fully worked up but will be developed with interested local stakeholders, potentially with the support of relevant industry partners. Innovation is likely to focus on ensuring that NICE guidelines are effectively applied across the whole syncope pathway. This would have the following benefits:

- Serious causes identified more efficiently
- Reduction in unnecessary admissions

Innovation and Technology Payment (ITP) 2019/20

NHS England (NHSE) launched the third wave of ITP products during quarter 1. The ITP aims to reduce financial and procurement barriers to enable the uptake of products that are evidence-based, cost-effective and market ready innovations and that demonstrate the potential to deliver significant patient outcomes and savings to the NHS.

The four themes supported by the ITP in 2019/20 are:

- Non-invasive vagus nerve stimulation for cluster headaches
- Diagnostic placenta growth factor-based test for the rule-out of preeclampsia in pregnancy
- High sensitivity troponin assay for the identification of myocardial infarction
- Absorbable hydrogel spacer to reduce rectum radiation exposure during prostate radiation therapy

There are two further themes that are being supported through the Evidence Generation Fund (EGR). These will have a more limited rollout to evaluate their potential benefits:

- Digital app to support emergency mental health assessment
- Interoperable personal health record
-

The technical guidance summarises the products, eligibility criteria and data requirements. The Oxford AHSN is working with the relevant organisations to support the adoption of these products, as outlined below:

Product	Comment
GammaCore	We have prescribers using gammaCore in Firmley Health (based out of Stoke Mandeville) and Oxford University Hospitals. We continue to seek engagement with other Trusts in our region.
Placental Growth Factor (PIGF)	BHT and OUH have adopted MKUH is due to go-live on 1 November 2019 FHFT: discussions ongoing RBH: discussions ongoing
High sensitivity troponin (HST)	Most Trusts within the region follow a HST rapid rule out pathway and as such it has been agreed with the national HST lead that the Trusts in the Oxford AHSN region will not be targeted for implementation as part of the ITP. Discussions are in progress with FHFT to understand if the rapid rule out pathway is routinely followed; once clarified, if necessary, an approach will need to be agreed with the national lead before proceeding
Hydrogel spacer (SpaceOAR)	There is a limited number of procedures (400) available via the ITP and as such a small number of Trusts have been identified to implement this product. Currently no Trusts within the Oxford AHSN region have been selected for implementation via the ITP.
Digital app to support emergency mental health assessments (S12)	A select number of STP/ICS regions have been selected to implement this product via the ITP. No sites fall within the Oxford AHSN region.
Personal Health Record (PHR)	This programme of work is being led by NHS Digital and Innovation Agency. The Oxford AHSN falls within NHS Digital's South East region. NHS Digital is engaging with organisations within this region to identify a suitable site.

myCOPD

Background

The treatment of COPD (Chronic Obstructive Pulmonary Disease) is complex, with different inhalers needing to be used in different ways. This has the potential for poor treatment compliance leading to poor outcomes and potentially wasted prescribing. Improving self-management for patients with COPD is a key priority for the NHS, as good symptom management is essential to stabilise the disease and prevent

exacerbations.

myCOPD is an integrated online education, self-management, symptom reporting and pulmonary rehabilitation (PR) system. It focuses care on behaviour modification and self-management of COPD to increase the knowledge and skills that patients need to treat their own illness. The system includes a self-management plan and inhaler diary, a COPD Assessment Test (CAT), a pulmonary rehabilitation program, online education tutorials, weather and pollution forecasts, and symptom reporting.

Patient licences have been made available at a CCG level to those CCGs who indicated their interest in and intention to implement the product. Through the Innovation and Technology Payment (ITP) programme, NHS England will fund the cost of the patient licences with licences covering the patient's lifetime.

Q2 Update

Within the Oxford AHSN region, Milton Keynes CCG and Berkshire West CCG have licences allocated via the ITP. Both CCGs had a demonstration meeting with the company during the quarter and agreed to implement the licences within the COPD pathway.

Berkshire West CCG is finalising the contract and anticipates a start date within Q3. Milton Keynes CCG is seeking approval for funding to cover the training and implementation support costs.

Activities for next quarter

Quarter 3 will focus on gaining the necessary financial approval within Milton Keynes and progressing implementation plans with both Berkshire West and Milton Keynes CCGs.

Patient Safety Devices

Background

Since 2017/18 the CIA team has been working with two NHS Innovation Accelerator (NIA) Fellows to implement three patient safety devices (Non-Injectable Arterial Connector (NIC); PneuX; WireSafe™) within critical care and operating theatres. The devices provide engineered solutions that significantly reduce the possibility of human error and improve the safety in providing care to critically ill patients. Two of these devices (NIC and PneuX) were provided to Trusts at zero cost via the Innovation and Technology Tariff (ITT). The WireSafe™ project closed at the end of 2018/19.

Q2 Update

Due to the work undertaken during the previous two years, there has been limited activity during the quarter. However, one additional site did commence using the NIC during Q2.

Activities for next quarter

CIA will attend an AHSN Network workshop on the NIC during Q3.

UroLift

Background

UroLift is a minimally invasive treatment for benign prostatic hyperplasia which can be undertaken as a day case, as an alternative to TURP or laser. There are several patient and health economy benefits including:

- Preservation of sexual function

- Rapid symptom relief
- Improved bed capacity
- Improved theatre capacity due to shorter procedure time compared to TURP or laser

Q2 Update

Four Trusts in the Oxford AHSN region are offering UroLift. Following confirmation that the business case for Milton Keynes Hospital has been approved, there has been contact between the company and clinical team to schedule the necessary training.

An application to the Pathway Transformation Fund (PTF) was made by Buckinghamshire Healthcare Trust during the quarter, and it was one of four Trusts nationally to be awarded funding for UroLift. The PTF aims to remove pathway barriers to enable the implementation or the increased use of UroLift, such as providing funding for pathway redesign or training. This funding will enable the Trust to consider option to streamline the pathway for men with Benign Prostatic Hyperplasia and potentially work towards a one stop assessment clinic.

The table below summarises UroLift activity by Trusts in the region:

Trust/Activity	UroLift Procedures						Status
	2018/19				2019/20		
	Q1	Q2	Q3	Q4	Q1	Q2	
Oxford University Hospitals	6	13	3	7	9	2	
Royal Berkshire	5	5	12	5	6	5	
Buckinghamshire Healthcare	0	0	0	0	3	1	
Milton Keynes University Hospital	0	0	0	0	0	0	Business case approved; training to be completed
Frimley Health: Frimley Park Hospital	15	26	17	20	17	17	
Frimley Health: Wexham Park Hospital	0	0	0	12	8	5	

Activities for next quarter

Quarter 3 will focus on the training for the clinical team at MKUH to enable the first list to be scheduled. Work will commence with BHT on the PTF workstream.

Polypharmacy

Background

Polypharmacy, the concurrent use of multiple medications by one individual is an increasingly common phenomenon that demands attention. It remains a significant issue for many and there can be an increased

risk of drug interactions and adverse drug reactions, together with impaired adherence to medication and quality of life for patients. Whilst it is well recognised that the problems around Pharmacy are multifaceted, often described as a “Wicked” problem, there have been some interesting initiatives trialed at other AHSNs which show signs of having impact. The Oxford AHSN is exploring with stakeholders the current landscape and areas that need to be addressed to develop and evaluate some approaches in the region.

Q2 Activities

- The Oxford AHSN brought together CCG Meds Ops leads for a Polypharmacy workshop to discuss current data around problematic polypharmacy and to discuss current approaches and initiatives in play
- Oxford AHSN has also conducted some discovery work to take stock of work being done, locally, nationally and internationally around this to identify innovations that may have an impact
- Initiatives with the most support included:
 - Providing training and education to PCNs around polypharmacy and deprescribing
 - Exploring the role of shared decision making around Polypharmacy and the use of a “Medicines Communication Charter” through the Me and My Medicines campaign
 - Using ePACT2 and prescribing data to create searches for primary care around polypharmacy patients that need to be reviewed (PINCER model)

Activities next Quarter:

- Oxford AHSN will be developing a set of proposals to take to the wider Medicines Optimisation network for decision and approval of direction to follow.
- We hope to initiate selected initiatives by the start of 2020

The Adopting Innovation and Managing Change in Healthcare Settings Programme

Background

The Adopting Innovation and Managing Change in Healthcare Settings Programme is designed to help healthcare professionals identify and introduce new ways of improving patient care and to teach them about innovation adoption/quality improvement and managing change within health care settings. The programme is a collaboration with Bucks New University and Oxford Academic Health Science Network with the programme sponsored by Health Education England.

Activities in Q2

29 NHS Staff has joined the seventh cohort which commenced last September 2019. Similarly like the previous cohorts, the cohort consists of NHS staff from different backgrounds and settings which is a continuing trend for the programme.

After a successful module one, Cohort six will now commence their Module two in September 2019. During Module one, the students were introduced to clinical innovation and change management. Students were taught about reviewing the evidence base, building and writing a business case, how to measure change and understanding sustainability. The students also presented their initial project outlines at the Poster Day in May. This was attended by the Director of Clinical Innovation Adoption and the CIA team from the Oxford AHSN who provided feedback and support. The quality and standard of the projects is exceptionally high in this cohort.

Activities for next quarter

The programme is being updated to reflect the current NHS environment which focuses on systemic

changes and integration of healthcare services. The Intention is to start the Eight cohort with a primary care focus. CIA team and Bucks New University will meet to update the programme and curriculum. Sustainability of the programme will also be explored.

Breakdown of NHS Staff engaged with the programme

Organisation	Cohorts						Totals
	1	2	3	4	5	7	
Berkshire Healthcare NHS Foundation Trust	1	5	2	0	2	7	17
Great Western Hospitals NHS Foundation Trust	2	3	0	1	2	0	8
Milton Keynes University Hospital NHS Foundation Trust	1	1	0	0	0	0	2
Oxford University Hospitals NHS Foundation Trust	21	4	4	12	8	6	55
Oxford Health NHS Foundation Trust	1	3	4	6	4	4	22
Royal Berkshire NHS Foundation Trust	1	0	0	0	0	1	2
Buckinghamshire Healthcare NHS Trust	0	8	5	1	9	4	27
Frimley Health NHS Foundation Trust	0	0	4	1	0	7	12
CCGs/GPs/NHSE	0	1	1	3	0	0	5
Cohort six (February 2019)							33

eMaps

Market Access Tool Innovators and Entrepreneurs- Now launched!

eMaps is an online platform to support the life science Industry and innovators to understand how the NHS and other health sectors work in other countries. Its' primary purpose is for preparing to access markets.

The digital platform provides advice and information on key areas of market access including clarifying and testing value proposition, regulations and compliance, pricing and reimbursement, market structure, stakeholders and overall pathways for market access. Information has been developed for UK, France, Spain and Denmark and work started during Q4 on Germany, Italy, Portugal and the US. The modules give information about digital, medical technology and drugs within country's markets. This is an EIT Health KIC funded activity that is of benefit to the UK Life Science Market and others across the world.

Activities in Q2

This quarter saw us launch to market our first three modules on eMAPs

1. UK – Digital health
2. UK - Medical Devices and Diagnostics and
3. UK – Biotech. These modules are now available for subscribers to access.

Working on the development of other country modules continues...

Activities with German partners commenced during the last quarter with regular scheduled bi- weekly meetings taking place alongside the US, Portugal and Italy. These include reviewing of content development, progress of modules, timeline overview and video production update. Some draft content has been submitted by the German partners (all Bio Tech) and by the Italian partners (MedTech and BioTech). All US content has been submitted with Digital Health and MedTech now signed off and ready for upload on to the platform.

A promotional video has been commissioned and storyboarded ready for production and to be used in the upcoming communications activity. Social media copy has been prepared for the various channels

(LinkedIn, Twitter, Newsletters, Vimeo). A public market readiness assessment tool has been created for social media activity to link to. Search Engine Optimisation terms have been set out and initiated on the back end of the platform database.

Activity in Next Quarter

- Continue to develop, review and publish content for the German, Italian and Portuguese modules.
- Capturing video case studies to supplement module learning content.
- Executing the marketing strategy and plan for eMAPs to increase awareness of the platform and hopefully:
 - Search Engine Optimisation continual development
 - Social media campaign (LinkedIn and Twitter)
 - Promotional video and marketing quiz
- Poster on eMAPs accepted at annual European congress at the International Society for Pharmacoeconomics and Outcomes Research – November 5, 2019.
- Portugal promotional activity 6 November-7 November 2019

Data Management for CIA and other Oxford AHSN programmes

Quarter 2 – Data Update

Project	Data Activity	Purpose
Emergency Laparotomy	A&E Stoke Mandeville Hospital data deep drive: Produced data on average waits, examining time to surgical review, time to first antibiotics and time to theatres. Also investigated sepsis patients/suspected sepsis patients, NCEPOD (National Confidential Enquiry into Patient Outcome and Death) urgency and predicated mortality.	Sustainability activity to gte a better understanding of Q1 requirements
Emergency Laparotomy	ELC September conference preparation	Data packs produced for the six trusts for the September conference. Dashboard now available which will cover most of the data pack information required in the future.
Prostate Cancer	Preparation of an application for prostate cancer data from Public Health England	In preparation for pathway analysis for quality improvement and introduction of innovation (s).
Heart Failure	Data request preparation from CSU	This was related to non-elective admissions for Buckinghamshire Healthcare NHS Foundation Trust to ascertain number of heart failure patients being admitted.
Elastomeric Device	We have been discussing data requirements and analysis with the	The goal is to save bed days and potentially avoid re-admissions.

Project	Data Activity	Purpose
	Pharmacy Clinical Services Manager at the Oxford University Hospitals. The Elastomeric IV Pump is used to deliver intravenous antibiotics. A pilot has been undertaken in 25 hospital patients at the John Radcliffe.	

Strategic and Industry Partnerships

Creating the Innovation Exchange for the Oxford AHSN

The aim of the Strategic and Industry Partnerships (SIP) programme remains to support the development of partnerships between academia, industry and the NHS across the development pathway for new products and services. This now covers new medicines, diagnostics, medical technologies, and digital health innovations. In practice, the activities of the SIP Programme connect very closely with the other Oxford AHSN programmes but focus on two crucial stages in the pathway - the concept of a new innovation and evidence gathering for business model generation. The activities of SIP were restructured during 2018/19 to deliver the four core functions that form the basis of the new Office for Life Sciences model of working as an Innovation Exchange and have been further refined for 2019/20 business plan. The Local Implementation Plan was updated during September, re-submitted to the Office for Life Sciences and subsequently approved. The Self-Assessment Quarterly report was RAG rated Green for the last quarter (JAH).

1a. Needs definition - Providing additional capability for helping innovators understand healthcare needs and priorities of the local health footprint

Having conducted needs analysis in the local area in the past quarter, it was understood that healthy ageing of the population was a key priority, especially for Oxfordshire. This was identified from the release of the Oxfordshire Healthy Ageing Plan 2019/2024 by Oxford County Council. Consequently, to ensure efforts were coordinated on our local health footprint, connections were made with Public Health England's accountable individuals for South East London, who also shared a priority to support the ageing population on our footprint. It has led to this priority being communicated amongst the innovator community, published on our Innovation Exchange portal as a 'call' for offerings – services and systems, as well as direct engagements with several companies. The companies with which we engaged focused on digital interventions to better care for the elderly population, providing independence as well as earlier alerts after life-threatening events. They were supported in refining their products, establishing clear value propositions, as well as guidance in funding and grant applications.

In addition to the above, impromptu support continues to be provided to commercial companies, SMEs and entrepreneurs, so they understand the priority needs of the moment, ensuring they provide services and products which are user-centric, with clear value propositions and of financial interest to commissioners.

The "Healthy Ageing" call had two submissions through the on-line Innovation Exchange, neither of which really met the brief. The submissions are in the process of being reviewed for local support, and if they are not of interest to our region, they will be directed to the AHSN Network Innovation Exchange (<https://www.ahsnnetwork.com/new-innovation-exchange-digital-gateway>) or NICE HealthTech Connect (<https://www.healthtechconnect.org.uk>) depending on what kind of support they require.

In September at NHS Expo, the AHSN Network has launched a new digital gateway for innovators, streamlining access to vital support from teams of experts across the country who can help companies deliver innovation for the NHS and care sector. The new Innovation Exchange digital gateway is specifically tailored for innovators, providing insights from NHS teams on the big challenges they face, case studies sharing innovator success stories and links to key players in the health innovation sector. Businesses can

find all the AHSN Network's top advisors in our new directory as well the latest national and regional funding opportunities from a wealth of sources, all in one place. The digital gateway is part of a wider AHSN-coordinated approach to identify, select and support the adoption of innovations which have the potential to transform the lives of patients. The AHSN Network Innovation Exchange podcast is also newly available via the new portal and on iTunes.

HealthTech Connect is a new online resource provided by NICE to help identify and support new health technologies as they move from inception to adoption in the UK health and care system. HealthTech Connect is a clear and simple point of entry for companies developing health technologies to access support and potential routes to national evaluation programmes. As well as helping national organisations like NICE, that have a responsibility for developing guidance on the use of health technologies in the NHS, better identify and track technologies that offer novel benefits, HealthTech Connect will also enable transformative technologies to be identified and fast tracked through relevant processes within the Accelerated Access Collaborative.

We have had feedback that the communications around the Oxford AHSN Innovation Exchange were lost a little against the communications for the Accelerator programme, and other initiatives that were occurring around the launch of the call. This will be reviewed for the next call, and access to FluidReview will be made more obvious to people who wish to submit to it. We are in the process of creating an open call, and a future call on "Tackling Childhood Obesity in Primary Care". In support of the newly launched AI fund, an Innovation Exchange call will be launched for market ready AI innovations particularly those aimed at reducing workforce issues.

We have also contributed to the AHSN Network Innovation Exchange, highlighting our local successes and challenges. We were only allowed a limited number of projects to highlight but have been granted access to update the Oxford AHSN page on the site. RU and ARA will look at projects and challenges that we can highlight for sharing with other AHSNs, as well as optimising our Oxford AHSN page with regards to SEO.

1b. Needs definition - Identifying the evidence requirements for innovative medicines, medical technologies, diagnostics and digital products.

The Treatment Resistant Depression product assessment project is proceeding well with key opinion leader interviews being conducted and considerable clinician and payer insights collected and collated. There are further interviews scheduled and planned towards a revised project delivery date in the next quarter. The questionnaires are eliciting interesting responses which will provide the project sponsor with valuable insights for market access and product uptake of a potentially pathway disruptive innovation. Overall, the project is progressing well in a field where there is considerable pressure on practitioners, which impacts the availability of clinicians for interview scheduling. Milestones have been achieved against a revised schedule agreed with the project sponsor.

The Oxford AHSN was represented at the Novo Nordisk Cities Changing Diabetes (CCD) project which seeks to support agencies to reduce the health and financial burden of diabetes and obesity. Both diabetes and obesity are national and regional priorities. Directly following the meeting, Oxfordshire CCG and a Consultant Diabetologist have requested input from Health Economists at the Oxford AHSN to use existing NHS data and current evidence around efficacy to develop opportunities for new technologies to support clinical improvements.

The Oxford AHSN is also partnering with Roche Diabetes Care to undertake research across Clinical Commissioning Groups (CCGs) within the Buckinghamshire, Oxfordshire and Berkshire West (BOB) Integrated Care System (ICS) to identify evidence-based needs in diabetes management pathways that

could be addressed through implementation of their Integrated Personal Diabetes Management (iPDM) system. The first part of the research sought to identify points on the pathway where the components of the iPDM could enhance care. The second part of the research was to determine whether CCGs would be open to reimbursement through outcomes-based contracting as a form of risk share.

Oxford Cancer Biomarkers are offering a genetic testing panel, **ToxNav** <https://oxfordbio.com/product/toxnav/>, that detects 19 single nucleotide polymorphism (SNP) variants. When altered, the detrimental SNP variants result in deficient activity of the dihydropyrimidine dehydrogenase (DPD) enzyme. In patients being treated with fluoropyrimidine chemotherapy, this deficiency can lead to toxicity and adverse drug reactions / events.

5FU (5-fluorouracil)/capecitabine has been a cornerstone of chemotherapy used to treat multiple types of cancer for over 40 years. It has been well documented that 5FU/capecitabine can lead to varying levels of toxicity in individuals, with 30-40% of patients treated experiencing severe side effects such as neutropenic sepsis, hand-foot syndrome and diarrhoea. Furthermore, 0.5-2% of patients will die as a result of treatment.

The risk and effect of toxicity cannot be predicted from physiological factors alone. Due to the complicated pharmacokinetics of 5FU, the effective dose of the drug can be difficult to determine in individual patients. ToxNav helps clinicians to identify patients who are at risk of severe toxicities before they happen. Once a patient's genotype has been determined, they are stratified into one of four clear groups.

Using current guidelines and a literature search, the Oxford AHSN is utilising its Lean Assessment Process to map an example of the current fluoropyrimidine treatment pathway and propose an alternate pathway involving the ToxNav genetic testing panel. An information document and questionnaire protocol will be used to interview key stakeholders from various Trusts and settings within the NHS are being identified and facilitate the production of a business case along with budget impact that will be developed. Nadia Okhai is conducting this project as part of her Health Education England funded MSc in Genomic Medicine.

1c. Communicating local priorities

Senior Programme Manager (ARA) and Digital Marketing Manager (RU) are focused on outbound communication of local needs and priorities via the appropriate media and play a key role in communication and diffusion with other AHSNs. The Innovation Exchange portal has been launched and is linked from the main Oxford AHSN website. The Oxford AHSN pre-accelerator workshops took place, with over 30 attendees. We have invited 20 SMEs to pitch for a place on the full programme, starting 7 October 2019.

In the last three months there has been a big push on increasing the number of tweets posted on the Strategic and Industry Partnerships programme Twitter feed. New Twitter images and statistics have been created, with a focus on all programmes we are working on.

Three **case studies** have been created this quarter:

1. Sensyne - Oxford AHSN expertise fed into the development of a commercial strategy and investor roadshows, which raised £60m. £5m is being invested back into patient care and research through Oxford University Hospitals and the University of Oxford.
2. Physiomics – Oxford AHSN conducted two studies to evaluate the acceptability and potential barriers for the personalised oncology treatments apps developed out of Virtual Tumour in the NHS.

3. Consentricare - Through the Bucks HSC Ventures programme, the SIP team provided a Lean Strategyer workshop to help direct Consentricare’s future customer discovery, develop their value proposition and further their product development.

The second national AHSN Network economic growth magazine – ‘The Innovators’ - has been published



and included:

1. Consentricare – see above
2. Physiomics – see above
3. Sensyne – see above
4. Ufonia - The SIP team has been involved in the project since its early stages and worked closely with Ufonia to explore their potential customer base, value proposition and business model via Strategyer workshops, and to clearly articulate them and the clinical challenge that they are looking to solve.

Meetings / events attended:

- BioCity meeting in Nottingham
- AHSN network communications forum
- Accelerator branding workshop
- Pre-accelerator market discovery
- Health and care innovation expo
- Technology for marketing conference

Impact evaluation

Visitors to website and breakdown of visitors by category

	Sessions	New users	Bounce rate
July	266	210	68.8%
August	129	102	62.79%
September	176	114	69.89%

Strategic and Industry Partnerships Twitter (@SIPoxfordahsn)

	Impressions	Engagement rate	Link clicks	Re-tweets	Likes
Jul	19,500	0.7%	36	46	37
Aug	9,200	0.3%	17	18	13
Sep	14,800	1.1%	16	38	55

Meetings held with local NHS partners to assess needs

There has been significant amount of engagement with stakeholders in the past quarter, at all levels of the regional health system. To begin with, with the formation of **Primary Care Networks (PCN)** in July 2019, we have engaged with several to understand the initial relationships between practices in PCNs and the challenges they foresee, not limited to funding.

A typical primary care network will support 30-50,000 patients. Each network will be made up of practices nearby one another. Together they will get increased funding for new staff from NHS England. Once staff have been recruited, the networks will start to take on new services. These services will offer patients more care closer to home and in the community.

The BMW PCN (Aylesbury and Vale Central, Buckinghamshire) is one such example incorporating Meadowcroft Surgery, Whitehill Surgery and Berryfields Medical centre. They have organised regular data meetings, to establish how best, together, they may utilise patient data, for improved patient care. For example, with asthma reviews and diabetic recalls, to be able to 'level-up' as opposed to the current focus of efforts on those with diseases that are stable. This PCN seeks and is open to collaboration with external parties to further support this objective of theirs.

Through engagement with the Deputy Director for Strategy at the Royal Berkshire, a broad need has been identified, to ensure patients referred requiring diagnosis are 'in the right place with access to the right equipment/diagnostics' for a diagnosis. This includes a diagnostics strategy for the future, to ensure in the years ahead they can comfortably meet their required diagnostics standards. Challenges exist with A&E attendance and management, with significant current spending and a need to close the financial 'gap', to be sustainable for the future. Lastly, workforce is likely their biggest challenge, and a need to tackle constraint and difficulties with recruitment especially in specialist areas such as radiology, oncology and

gerontology.

At a regional level, we have attended workshops with Buckinghamshire, Oxfordshire and Berkshire West (BOB) Integrated Care System (ICS), inputting into their digital plan, concurrently identifying areas over the next five years they will require support and collaboration with to ensure delivery of their digital strategy plan, which spans from digital transformation in primary care, community and within secondary care.

2. Innovator support and signposting – Senior Programme Manager (ARA), supported by members of the SIP team, is focused on helping companies to develop innovative solutions that meet healthcare needs; directing companies to local resources; supporting health partners to innovate by triaging of novel innovations that have the potential to fit with NHS need; and supporting the development of viable business models and strategies for company growth. Meetings and signposting SMEs has continued this quarter, with over 35 face-to-face meetings being held, as well as on-going email support for 39 smaller companies.

Signposting enquiries have been rather low over the summer period, picking up again in September. Most of the signposting emails have been redirected towards the national Innovation Exchange website and HealthTech Connect, as they have not been of regional interest or have required more support than we have had the capacity to support. RN has been asked to send Company Engagement forms to all companies who engage with us through the SIP and info emails before forwarding them to ARA, to provide a quicker and smoother response.

ARA and FH are also still engaged in the weekly HealthTech Connect calls with the AHSN network, providing feedback and support to companies that engage with the AHSN Network through that mechanism. These calls are also a good mechanism to keep track of what areas other AHSNs are focusing on, to enable better signposting of SMEs towards AHSNs with an interest in their innovations if required.

The Market Access team is a delivery partner in an Innovate UK funded grant with **Osler Diagnostics** <https://www.chch.ox.ac.uk/news/research-and-academia/professor-jason-davis-osler-diagnostics-innovate-uk-grant>). A Point of Care (POC) testing device is being developed for use in the Emergency Department (ED) for measuring critical Cardiovascular Disease (CVD) biomarkers. The device is intended to deliver test results for up to five biomarkers in 20 minutes from a finger prick of blood using a single disposable cartridge. This device tests for high sensitivity cardiac Troponin (hs-cTn), D-dimer, Brain Natriuretic Peptide (BNP), creatine kinase myocardial band (CK-MB) and C-Reactive Protein (CRP). The test device is designed to help ED clinicians diagnose patients rapidly, this will aid faster ruling out (discharge) or referral and help in better patient management decisions in the ED. This will lead to improving patient experience and outcomes. The proposed multiplex CVD biomarker device intends to cost-effectively speed up the diagnostic process in the current care pathway within the ED. A feasibility study was conducted using our Lean Assessment Process (LAP) methodology to explore the utility of the POC testing in the care pathway for patients presenting with suspected myocardial infarction patient and chest pain at ED. The work involved conducting an in-depth literature review, developing a clinical pathway map of the care pathway, and preparing a participant information document and a semi structured interview questionnaire. Key stakeholders were identified and interviewed, ranging from emergency consultants, junior doctors, nurses to point of care managers. All the semi-structured interviews were conducted face-to-face and audio-recorded after agreeing this with interviewees. The recordings were reviewed and thematically analysed to obtain the information required to understand the to understand where in the care pathway

this product may be utilised, the barriers to adoption and adjustments required for the device implementation in the care pathway. The final report was prepared and submitted. The result of the LAP feasibility study suggested that stakeholders are more inclined towards using hs-cTn as the cardiac biomarker of choice for POC testing in the ED for ruling out MI. Based on the findings of LAP study, an early economic model was developed to compare the indicative cost savings from the use of a hs-cTn biomarker POC test versus standard laboratory care testing for patients presenting with chest pain at ED within the NHS in England.

Members of the Market Access team are conducting an Innovate UK funded feasibility study and economic evaluation to assess the usability and benefits of using **LiverMultiScan** (LMS) developed by Perspectum Diagnostics (<https://perspectum-diagnostics.com/products-and-research/livermultiscan>) for monitoring disease progression of autoimmune hepatitis (AIH) patients in the care pathway. AIH is usually diagnosed using liver biopsies and is routinely monitored with blood samples and/or liver biopsy every twelve to twenty four months. Liver biopsies are seen to be the gold standard for determining liver pathology and histology, but they are invasive and expensive procedures. LMS is a non-invasive technique, enhancing MRI images to quantify liver fat and iron. Additionally, it can help measure and correct MRI-T1 maps (cT1) of the liver for the presence of hepatic iron overload. These measurements may improve patient outcomes and management. This study aims to explore the utility and potential use of LMS in the diagnosis of patients with suspected AIH. After an initial literature search, the clinical pathway was mapped and key documents prepared. The first being a participants' information sheet containing all the information about the new technology, the aim and objectives of the study proposed use of LMS in the care pathway. The second document, an interview protocol, consists of semi-structured interview questionnaires, human factor tools and clinical pathways for discussion. After document approval, key stakeholders were identified and interviewed. A feasibility study report will be prepared based on the qualitative and quantitative questionnaires and statistical analysis and delivered in the next quarter. A hypothetical economic evaluation will be conducted to explore the costs of implementing the LMS care pathway for monitoring of AIH patients. Identified resources will be valued in monetary terms using appropriate UK unit costs. Sensitivity analysis will be conducted to test variability of different parameters.

Members of the Market Access team are conducting an Innovate UK funded feasibility study and economic evaluation for **POCKIT Diagnostics** (<https://www.businessweekly.co.uk/news/startups/pockit-full-potential-miracles-stroke-victims>) using our Lean Assessment Process methodology to assess the usability and benefits of developing a novel blood- based point-of-care (POC) diagnostic for stroke subtype diagnosis to enable rapid treatment for stroke patients with Large Vessel occlusion (LVO) in the care pathway. There are two main types of stroke: ischemic, due to lack of blood flow, and haemorrhagic, due to bleeding. Untreated LVO in acute ischemic stroke is associated with poor clinical outcomes. Current treatment of stroke patients is dependent on diagnosis via computerised tomography (CT) scan to the head. CT is highly accurate for detection of brain haemorrhages but less accurate for detection of ischemic stroke or LVOs. In case of a negative result from CT, a further magnetic resonance imaging (MRI) scan is performed to confirm ischemic stroke. If LVO is suspected, patients are transported to the nearest centre where a further procedure, called CT angiography, is performed. The new POC test device combines blood biomarkers that are highly specific for stroke subtypes. Using this ultra-rapid immunoassay detection will identify stroke patients with LVO within twenty minutes. This POC test may help in reducing the time of diagnosis and speeding the treatment for LVO patients resulting in improved prognosis. The aim of this study is to understand the clinical usability, advantages and economical constraints that such a blood test could offer in various clinical settings. After the literature search, the clinical pathway mapping was performed, and

interview documents were prepared to assess the utility and the barriers to adoption of this POC test in the stroke care pathway. Stakeholders have been identified and interviews are being conducted. After the completion of the feasibility study, an early economic evaluation will be conducted to explore the value proposition for the POC test in the stroke care pathway. Identified resources will be valued in monetary terms using appropriate UK unit costs. Estimated costs will be compared between across pathways.

The Market Access team are a delivery partner in an Innovate UK Digital Health Catalyst funded grant with **Ufonia** (<https://www.businessinnovationmag.co.uk/software-and-ai-companies-secure-major-funding-to-develop-technologies/>) and are preparing for a barriers to implementation study and health economic assessment of autonomous virtual clinical follow-up calls after cataract surgery using Ufonia’s AI system. In the UK a 50% growth in cataracts is predicted by 2035 contrasting with estimated growth in consultant numbers of just under 10% from 2014-2023. As it stands consultants make follow-up calls to patients after surgery. Automating follow-up offers the chance to reduce the £25m in direct healthcare costs spent by the NHS on cataract follow-up as well as alleviating most of the follow-up responsibility placed on consultants. Additionally, there are thought to be significant health costs from delayed identification of complications, as well as unnecessary review for those that are well. The Oxford AHSN will conduct a literature search to inform the mapping of the current pathway after cataract surgery as well as analysis and research of operations (analysis of operational constraints and requirements e.g. changes to clinical practices, training needs, financial impact and forecasted cost benefits of its use) to understand how Ufonia’s technology could be incorporated into this care pathway and determine the potential barriers to implementation. Stakeholder workshop(s) will be organised to engage with clinicians and payers on their perception of the technology in the proposed pathway and testing the hypothesised barriers to implementation from the literature search and operational investigations. A literature search will also be conducted to inform the health economic model to allow for the examination of cost-savings. A health economic evaluation plan will be prepared by end of December 2019. Once data has been collected from the clinical evaluation, the health economic evaluation will be conducted. After the feasibility and health economic assessments have taken place, an outline business case will be prepared for presentation to commissioners.

Impact Evaluation

Month	Project Benefits	Company Details	Number of companies into OLS database
Jul	€2,793,524 EIT Health grant with Biomerieux for risk stratification in septic patients in ICU €1,293,582 EIT Health grant with Roche Diagnostics for transforming flu management in Europe	Binding Sciences Penlon Icentia Dr-Julian Healthy.io Perspectum Balsamee Alaxo Micrima Cortech Digi.Me Sarim Ather (OUI)	15

Month	Project Benefits	Company Details	Number of companies into OLS database
		Phew! ExForces.Net FujiFilm	
Aug	0	AWS (Amazon Web Services) Phew! Kandu Cartezia Deltex Medical Magic Bullet MyData.MyPower Astra Zeneca AlphaMed Binding Sciences Bushido Health Manuelle Debunne (unnamed company from Oxford Brookes) FujiFilm Cortech Total Mama Lug Healthcare Oxin	17
Sep	0	6XW Icentia Alaxo GeneFirst TotalMama Manuelle Debunne (unnamed company from Oxford Brookes) TBAT Innovations Nova Biomedical Cortech Hemcheck Phew!	23

Month	Project Benefits	Company Details	Number of companies into OLS database
		R-Outcomes MyWay Digital Health Kandu Binding Sciences Balsamee Oxin Roche Diagnostics Cotswold Health Technologies Clinerion HeartFlow Urolift	

3.Evaluation in real world setting – The SIP team is supporting the generation of a real-world evidence package that can demonstrate system (including health economic benefit), patient and clinical benefit for diagnostics.

A point of care (POC) service evaluation of the Abbot iSTAT and Horiba MicroSemi at **Brookside clinic** in Earley, Reading, has drawn to a close. In total, diagnostic tests were run for 107 separate patients, with >1 test being performed per patient in some cases according to diagnostic needs. The record forms have been collated to allow analysis of the impact of the tests on the clinical decisions made and the value to the service and patient, compared to current practice. Both health economic analysis to determine financial impact and qualitative analysis of the comments made is underway; staff at the clinic are very positive about the value of the tests in supporting their local clinical and patient management decision making and in the “softer” benefits e.g. reassurance for the patient. A report and business case will be written to allow a funding bid for permanent adoption of the tests. Lumos Diagnostics have developed a novel point of care test, **FebriDx**, (<https://www.rpsdetectors.com/febridx-3/>) that can distinguish whether an acute respiratory tract infection (ARTI) is clinically significant, of bacterial origin or of viral origin. The single use test detects C-reactive protein (CRP), an acute-phase inflammatory protein elevated in the presence of a clinically significant infection and Myxovirus resistance protein A (MxA), an intercellular protein that becomes elevated in the presence of an acute viral infection. The test has a rapid turn-around time of ten minutes and can be used in primary care or other areas where patients enter the health service. The test has the potential to deliver improvements in service efficiency, reducing referrals to secondary care due to diagnostic uncertainty and by reducing inappropriate antimicrobial prescribing, aligning itself with the UK five year action plan for antimicrobial resistance.

Four sites have been identified and approached to conduct a service evaluation and assess the impact of the test where the FebriDx test is considered to have the potential to deliver clinical benefit. Training on the use of the device and appropriate data capture has been delivered to two GP sites. Sites have been provided with posters, outlining the test procedure and consumables for use. Documents have been assembled for a care home site that is linked to one of the participating GP sites. The community inpatient wards and rapid response and triage service have been identified as having the potential to implement the test. Clinical governance approval is being sought at this site.

Over the past quarter, significant efforts have been made to define an end-to-end reimagined cancer pathway, which may sit outside of the two weeks wait pathway for urgent referrals and the vague symptoms pathway. It incorporates structured processing of patient data according to phenotype, from which a sophisticated algorithm may assign risk scores to patients. These patients sensitively and ethically may be pro-actively approached for consultation, before for some referral to a rapid diagnostics centre, meeting the recommended 28 days faster diagnostics standards. Several workshops have been held, with industry, local and charity partners, to ensure there is a coordinated approach and buy in for an application to Innovate UK for grant funding, to deliver this work stream, led by Oxford AHSN. Efforts will continue to formally submit a bid, but even unsuccessful, the approach will be kept the same, if not the scope somewhat reduced to cater for Oxford AHSN available capacity in steering an evaluating the project, in the form of a joint working agreement.

Progress has been made, in meeting the need to tackle **asthma management** and reviews in primary care. By bringing an industry partner together with Berkshire West Clinical Commissioning Group, a joint working agreement is in the draft stage, which includes the utilisation of digital attachments to inhalers, so patients may have greater insights in terms of their usage and meeting their recommended regimes. In addition, this project will provide greater insights (e.g. in diagrammatic fashion) for specialist asthmatic nurses during their asthma reviews with patients, so those who are poorly self-managing may be prioritised with further and more personalised support and guidance. This project has the capability to deliver significant wider system benefits, such as; encouraging self-management, promoting behaviour change, opening capacity, reducing primary care demand, and medicines optimisation. Efforts continue to finalise the joint working agreement, with presentation to the governance board in October, with hopeful launch in the next quarter. The Oxford AHSN is conducting a cost consequence analysis study for **Wokingham Community Hospital** to evaluate the benefits and cost of care of implementing Point of Care testing (POCT) across the community care hospitals in Berkshire Health NHS Foundation Trust. A business plan will be written based on the analysis for all the five community hospitals for the implementation of POCT in the community hospital care pathway. Currently on all the Community Health wards (except Wokingham), all blood samples are sent to the pathology department at the local acute trust. This can often be a timely process and lead to a delay in diagnosis and appropriate treatment whilst waiting for sample results. All urgent bloods are couriered to the acute trust at Wexham Park Hospital for the East wards and Royal Berkshire Hospital for the West wards. At present, at the Wokingham community hospital QuikRead go and i-stat Allinity are being used at the point of care. QuikRead go CRP is a fast and simple rapid test for quantitative determination of C-reactive protein (CRP) in whole blood, serum and plasma. The test gives reliable results within minutes and speeds up the path to the diagnosis of infection. The I-stat Allinity is an advanced, easy-to-use, portable system that delivers real-time, laboratory quality blood test results at the point of care. It is used for venous blood gases and urea and electrolytes. With the new proposed process, the blood samples can be taken and tested immediately, and the results can support clinical judgement with a timely diagnosis and appropriate treatment which could both reduce patient length of stay, unnecessary transfer to the local acute trust and improve patient experience. Smaller samples are required from the patient for POC testing, which is advantageous when taking bloods from deteriorating patients. A cost consequence model will be created for the analysis to evaluate the total cost and benefit of implementing the both the POC device at the Wokingham community hospital based on the real-world data collected for 3 months. The analysis is being performed around the availability of data and the report will be prepared around the analysis. Based on the Wokingham study, a business case will be produced for the POC to be implemented at other community hospitals in their care pathway.

A new project has been initiated that follows on from the work that the Oxford AHSN did with the Royal Berkshire Hospital and Roche Diagnostics over the 2017/18 flu season, where the Roche LIAT was implemented in the ED. The LIAT is a POC PCR-based test, and requires a nasopharyngeal swab from an infected patient, with minimal sample preparation. The machine then provides a result (Flu A positive/Flu B positive/Negative) within 20 minutes. The evaluation yielded positive results - a cost saving of £199 per patient tested, mainly from reduced length of stay and reduced transmission of flu to staff (an indicator of improved infection control). The evaluation also showed a more rapid time to treatment and increased antiviral use. The staff were well engaged and positive about the test, and this has now been procured for coming flu season.

Based on this encouraging evaluation, and with the funds available from EIT Health, the Oxford AHSN is now looking to evaluate this in the Berkshire Out of Hours Service (Westcall) and the rapid response teams who are responsible for the care homes in the region. The EIT flu kick off meeting occurred in Newcastle late September, where the AHSN shared the protocol and results of the project that we conducted over winter 2017/18. We also held a key stakeholder meeting with the community Rapid Response and Treatment Team (RRATT), the Berkshire West Clinical Commissioning Group and the Berkshire Surrey Pathology Service. The placement of three of the four available machines has been tentatively agreed, along with additions and amendments to the Royal Berkshire Hospital ED protocol. Metrics and potential outputs have also been tentatively agreed, subject to the data being relatively easy to access.

A meeting is to be held early Q3 with WestCall, the Berkshire Out of Hours Service, to bring them up to date on the project, and determine where would be best to site the machine we have provisionally reserved for them. Logistical and IT related issues are also being discussed. Training dates for the limited number of staff that we intend to use the test will be determined shortly.

4. Adoption of innovation and diffusion

Head of Evaluation and Transformation (GC) is leading the adoption and diffusion locally of breakthrough diagnostic products evaluated through the Innovation Exchange activity. Programme Manager (ML) leads the gastroenterology programme including delivery of an industry-funded programme for **Inflammatory Bowel Disease (IBD)** using TrueColours, or similar software, as a patient reported outcomes measure for Ulcerative Colitis and Crohn's and supports the regional roll out of faecal calprotectin testing.

Following the roll out of the TrueColours (TC) platform in Oxford in June 2018 the **IBD Programme** has continued successful recruitment and training of patients with Ulcerative Colitis and Crohn's Disease. This real time digital data collection technology is now a component of clinical care in the Oxford IBD service. Each patient, with Ulcerative Colitis (UC) and Crohn's Disease seen by the Oxford IBD service is offered the chance to register with the TrueColours IBD programme. Once registered, the patient receives email prompts that link to independently validated questionnaires. There were 100 IBD patients recruited for the period from July to September, totalling 750 patients recruited for the period from June 2018 to September 2019.

Oxford AHSN has continued providing ongoing support to clinicians using TC-IBD in the outpatient clinics and has been working with the IBD service to further validate the TrueColours UC (TCUC) Escalation of Therapy or Intervention (ETI) calculator in an IBD outpatient clinic setting to support the IBD service demand and capacity management. Work has continued towards the RAINBOW (ReAl time data moNitoring platform for patients with inflammatory BOWel disease) project official sign off. Discussions have commenced with Sian Rees (Director of PPIE for the Oxford AHSN) regarding support available to

improve patients' relationship. Discussions have continued with Oxford University Hospitals NHS Foundation Trust and the TC-IBD software developers on the options available for the integration of TC-IBD with the local ePR system (Cerner Millennium).

In July Hampshire Hospitals NHS Foundation Trust successfully approved the upgrade of the InfoFlex PMS v5 platform in Winchester in July. Work began on obtaining official quotations for the additional IT costs associated with hosting the IBD service. A payment plan was agreed with Professor Simon Travis and Dr John Gordon. Work began on setting up a project team to support the implementation and successful roll out of the InfoFlex platform and ongoing work to integrate data collection with Infloflex IBD PMS v5. Continued data collection (as a one-off version) for the baseline survey (ICHOM) commenced with an anticipated target of 200 patients. Currently has been collected data on 75 patients with Ulcerative Colitis. The progress report for Year 2 Contract for Medical Educational Grant was agreed with Janssen and discussions took place about the preliminary interest to continue funding in Year three.

Following the **Faecal Calprotectin (FCal)** Testing network meeting in London (facilitated and organised by Yorkshire and Humber AHSN) in May 2019 where the guidance document on capturing and measuring the benefits of adopting the new pathway was issued, the support team preliminary met to discuss the document and agree on the next steps in obtaining the data. We have continued re-establishing contacts with the key stakeholders across the CCGs, primary and secondary care in the South East region and developing an understanding of the focus and clinical priorities in the localities. Following the introduction and roll out of the new FCal testing across 7 GP Practices in Buckinghamshire CCG in January 2019, work has continued for establishing key contacts to initiate the 6 months review meeting. Request for data on activities (seven GP practices in Buckinghamshire CCG) was submitted to the Commissioning Support Unit and various alternative ways of data gathering are being considered.

A team of scientists at the University of Leicester in partnership with Mologic (<https://mologic.co.uk/copd-conference/>) are developing this innovative technology which could "hugely improve" the quality of life for people who suffer from the serious lung condition called **Chronic Obstructive Pulmonary Disease (COPD)**. A team from the NIHR Leicester Biomedical Research Centre has been working alongside Mologic to further develop the Headstart[®] urine test, which alerts people with COPD that they are about to suffer a life-limiting lung attack. The condition makes it hard to breathe because of narrowing airways and damage to the lungs. COPD sufferers are prone to lung attacks which can mean their symptoms worsen and lead to hospitalisation and even death. In the UK, three million people are living with COPD and each year the condition causes 115,000 emergency admissions to hospital and 24,000 deaths. The project is funded by Innovate UK which awarded the team £2 million through the Small Business Research Initiative (SBRI).

The second test is a blood-based biomarker test to differentiate the aetiology of the COPD exacerbation to enable stratified treatment (RightStart). Using current guidelines and literature search, the Oxford AHSN is utilising its Lean Assessment Process to map the COPD exacerbation treatment pathway and propose an alternate pathway involving the RightStart testing device. The information document and questionnaire protocol have been developed and approved by the company. Interviews with key stakeholders from various Trusts and settings within the NHS are being conducted.

Supporting the Innovation National Networks through SIP

The activities of SIP have also been restructured to align with the four of the nine Innovation National Networks (INNS) under the NHS England re-licensing process and our shared priorities across the AHSN network are:

1. Stimulating economic growth through the Innovation Pathway and the Innovation Exchange

Oxford AHSN led a collaborative AHSN network project underway to evaluate opportunities to support the depression pathway in terms of pathway redesign and funding; outcomes measurement and service redesign. Manchester HIN, West Midlands, Imperial, and Eastern AHSNs are involved and other AHSNs have been invited to join the project.

2. Transforming digital health and maximising the potential of artificial intelligence (AI)

a/ Primary care

Over the past quarter the opportunities and possibilities to improve population health outcomes and to reduce wider system pressure and stress through the effective utilisation of artificial intelligence, have become more and more evident.

Our focus has been upon maximising the opportunities that exist with predictive analytics – solutions that have the capabilities to risk stratify a population, according to high risk and most need. By doing so, it enables us to provide most support and guidance to the 20% of the population that account for 80% of the costs. The benefit for the wider system is that with encouragements, behaviour change and disease self-management from a position of awareness, this population group may utilise fewer health services, as well as having fewer unplanned events.

However, we are under no disillusion of the complexities that are involved – ethics, governance and regulatory. These all must be managed effectively with right collaborative partners.

Global successes have shown the realisation of such initiatives. For instance, through partnership with Microsoft Azure, the Apollo hospital group has created a programme of health which predicts CVD risk amongst the Indian population.

If we may be able to join up and with access to the data collected by LHCREs we may be able to form collaborations and partnerships with the wider innovator ecosystem, to:

- Upstream, better structure and organise the data available, e.g. according to phenotypes
- Downstream, the structured data may have algorithms trained and validated upon, e.g.
- Identification of high-risk patients for certain cancers
- Identification of those patients who are not adhering to their recommended regimes
- Identification of those who are likely to suffer from stroke or CVD

Healthcare delivery in the primary and community sector will be transformed. Patients may be proactively approached with the risk of disease and connected with screening and diagnostic centres based in the community setting for confirmed diagnosis or not. If not, these patients may return to primary care and placed on preventative regimes, to prevent onset or at least delay disease. For those positively diagnosed, they may enter secondary care, knowing that treatment may begin in earnest.

This approach enables us to be able to diagnose earlier, with the earlier access to life-saving medications for greater prognoses, as well as place patients onto preventative regimes, such as access to anticoagulants.

Clinician time may be better managed, with fewer stable patients being seen by practices in the primary care sector and more time dedicated for the high risk and those of most need.

AI in the form of; data science application to structure and organise patient data and predictive analytics to stratify populations is the first step to transforming primary care health management. Disease areas, we currently have focus upon are; cancer, asthma and diabetes.

b/ Secondary care

Secondly, AI must be positively utilised to support the workforce constraints in secondary care. We desire to identify those systems that have the potential to support and reduce the workload. Our strategy includes an example, that is radiology. At present a specialist radiologist requires 30 minutes to provide a report following a scan (CT, MRI etc). If a system could be possible, to support radiologists, with certain elements of their reporting to even reduce the time taken for reporting to 20 minutes, it equates to one extra report per hour, consequently, avoiding delays in patient diagnoses and time to treatment.

Another area is for secondary care is utilising population risk analytics, to identify patients likely to be frequent attenders at A&E and other unplanned services. If these patients could be proactively identifying, and provided with support, evaluating the impact on A&E, and what level of capacity is opened.

By working towards the above approaches, maximising the use of artificial intelligence, we may transform healthcare delivery, provide greater awareness for patients, knowledge and concurrently, manage our workforce by creating new roles as well as new ways of engaging with the patient population.

3. Working with researchers and research funders

In September, led by Oxford AHSN CEO, Professor Gary Ford, a research led workshop was held at the University of Oxford, bringing together Oxford AHSN and NIHR ARC Oxford and Thames Valley participants. The objective of the Digital/AI workshop was to align efforts:

- To improve patient self-management
- For a clear understanding of relevant technology and its clinical effectiveness
- To identify and breakdown the barriers to use of technology, so adoption may be encouraged

Outputs from the workshop, included, key enablers for adoption and financial considerations, including the available options for technology funding and the desirable budget impact from a commissioner's perspective.

Finally, because of the workshop Oxford AHSN and the Oxford ARC have clear knowledge of where they sit in the innovation pathway and how we may come together to support one another in our respective fields.

- Oxford ARC; in pursuing needs related research activities
- Oxford AHSN, in tackling real world evaluations, following successful clinical studies or academic research.

In due course all outputs, including workforce, mental health and multi-morbidity, will be synthesised to be distributed widely, enabling the wider innovator community to be aware of relevant priorities as well as key learning.

4.Supporting clinical and commercial innovators

In the first licence period the Oxford AHSN helped to establish two regional innovation hubs aimed at supporting the creation and development of new innovations that would be better aligned with the needs of the NHS. The priority for 19/20 is the establishment of a multidisciplinary accelerator programme.

Bucks HSC Ventures is funded by the European Regional Development Fund grant. The grant is match funded by five delivery partner organisations; Buckinghamshire New University, Buckinghamshire Healthcare NHS Trust, Buckinghamshire County Council, Buckinghamshire Clinical Commissioning Group and the Oxford AHSN.

Bucks HSC Ventures ran a summer workshop programme of three two-day events to help develop new Health and Social care innovations focusing on best start in life, prevention and age well. Following a successful graduation of the first cohort in May, 16 applications have been received to be part of the Bucks HSC Ventures programme. This is a six-month accelerator programme with monthly workshops/events, each with a separate topic starting in October. Six small and medium-sized enterprises have been selected for the second cohort, which are shown below:

- Binding Sciences
- P2P Health
- Glissanda
- DermaSight
- Active Needle Technology
- Good Boost Wellbeing

TheHill is a digital health community funded by the European Regional Development Fund as part of the Innovation Support for Business programme. The Innovation Support for Business programme is a three-year 5.2 million programme which supports Oxfordshire entrepreneurs and businesses. TheHill is hosted by Oxford University Hospitals NHS Foundation Trust and supported by other partners including the Oxford AHSN, Oxfordshire Local Enterprise Partnership, University of Oxford, Oxford Brookes University and Oxford Health.

TheHill runs a small to medium sized enterprise support programme within The John Radcliffe Hospital, Oxford University Hospitals by providing bespoke support which include calibrating and signposting to partners across the ecosystem, workshops, one to one support, introductions and networking events. Activities this quarter were:

- 10 July 2019- Patient Engagement workshop
- 11 September 2019- Venturefest -The innovation Showcase was supported by TheHill
- 23-27 September 2019- Market Access Accelerator
- 24 September 2019- TheHill Social Mixer- Meet the Market Access Accelerator participants

TheHill will be running a business model workshop in October 2019 and social networking event in November 2019.

Following the departure of Nicki Bromwich this quarter, Guy Rooney will join TheHill programme board and Samir Khan will develop a programme of support through the Oxford AHSN for companies engaging with TheHill. Ashley Aitken will join Bucks HSC Ventures programme board.

The Oxford AHSN Accelerator and Scale-Up programme

The Oxford AHSN Accelerator and Scale-Up programme offers a unique launch pad for entrepreneurs and their ventures at every stage, from idea to market. This programme in its formative year is fully funded by the Oxford AHSN, and co-delivered with BioCity, and is targeted towards innovators in the South Oxfordshire and Berkshire regions primarily, but also the wider Oxford AHSN network. Our aim is to facilitate cross-sector exchange of ideas and collaboration, mainly to aid innovator's access to fast-track routes to funding for commercialisation and impact at-scale across the wider health ecosystem.

A cohort of 25 start-ups participated in our Market Discovery Pre-Accelerator event at the University of Reading. Individual start-up pitches and stories were heard and concepts of Customer Widescan, Lean Business Canvas and Customer testing/validation were shared. The cohort also got an opportunity to share learnings and commercial cues with key leaders and experts from the AHSN-NHS-industry ecosystem. The

cohort (see Table 1) will pitch for a limited number of places on the Accelerator programme after testing their hypotheses.

Table 1: Business Summary of start-up candidates

Category	Start-up	Summary
DRUG DISCOVERY	Avida Biotech	Affordable, thermostable anti-viral products to prevent Dengue, Chikungunya and Zika.
	BioInsight Technologies	Contract Research Organisation (CRO) offering experimental models of angiogenesis (blood vessel formation) in Ophthalmology and Oncology.
	OMMTech	CRO specialised in experimental validation for therapeutic target validations.
	PolymathsAI	Model-informed drug discovery system augmented by AI
DIAGNOSIS	Avenna	Precision medicine (PM) tools for early detection, stratification and treatment personalisation for chronic inflammatory diseases (CIDs) of the bowel and joints.
	CanSense	Non-Invasive and inexpensive test for the early detection of Cancer using Spectroscopy and AI.
	CFT Needs	Point of care (POC) anti-microbial resistance testing for urinary tract infections.
	Mendelian	Machine learning and knowledge reasoning-led diagnosis of rare disease conditions.
	Oxford Immune Algorithmics	AI and academic excellence-led POC and at-home medical tests for immunological function/conditions
	Agile AI	Automated A&E triage system using AI and machine learning.
DELIVERY OF CARE	Apprise Medical	Enabling junior doctors to develop their clinical skills and experience as a virtual tutor.
	AlphaMD	App for real time recordable GP consultation (face-to-face).
	DocLink	A text-messaging App platform to connect people with their doctors seamlessly, for advice and follow up consultation
	HIGOE	Cloud based multi-faceted platform for providing customised role-based training for complex digital health software such as Electronic Patient Records.
	TRIM	A digital market place for health data transactions.
DIGITAL PATIENT WELLNESS	Breathe Happy	A digital platform for 1:1 coaching on improving mental health and wellbeing through physical/mindfulness activities.
	CardioCrown	Smart accessible technology to revolutionize current treatment and management of cardiovascular diseases.
	Cotswold Health Technologies	Gait-Thaw is a wearable vibrational tool for correcting and monitoring the problem of gait freezing in people with Parkinson's Disease.
	NEPESMO	Smart CE-marked digital solution for the personalised prediction of acute exacerbations of Chronic Obstructive Pulmonary Disease (COPD), allowing patients to identify exacerbations early and intervene promptly.
	Say Anything	A writing-oriented digital solution for mental and emotional wellbeing of new parents susceptible to post-natal depression.

The final cohort of eight will be meeting the Oxford AHSN-BioCity mentors and experts on a once-per-week basis to report their progress, pick inspirations from domain experts and story-tellers and refine their value proposition whilst sequentially adapting it with insights developed across the phase. Subsequently, these candidates will pitch their final value proposition to a panel of partners from the AHSN-NHS-industry ecosystem in November 2019 and will be eligible to apply for funding routes.

The Eastern AHSN has agreed in principle to strategically collaborate on designing and delivering a joint Accelerator Scale-up programme in 2020 that could be an umbrella initiative targeting the untapped

regions in the OxBridge arc of the golden triangle. Also, we have been engaging an array of companies and investors early in the design and delivery of the Accelerator.

Supporting the Accelerated Access Collaborative (AAC)

The Accelerated Access Collaborative (AAC) aims to make the NHS one of the most pro-innovation health systems in the world and has six priorities: single front door for innovators, demand signalling, single horizon scanning approach, world-leading testing infrastructure, stronger adoption and spread and agreed funding strategy. These priorities will remove common barriers to adopting innovations. As part of the stronger adoption and spread workstream, the AAC is supporting seven late-stage rapid uptake products as part of Rapid Uptake Products programme: HeartFlow, Placental growth factor (PIGF) based testing, PCSK9 inhibitors, High sensitivity troponin tests, Quantitative faecal immunochemical tests, Cladribine and UroLift. The Oxford AHSN has two members of staff working at NHS England for a period of six months to support the AAC process. The key activity is supporting the delivery plan and project management of three of the seven technologies including maintaining the action plan and ensuring key documents for the products are produced by the stakeholders. This also involves coordinating and organising the development of a communications strategy for Cladribine and the core brief for the faecal immunochemical test. Each of the seven technologies has a relationship manager from NHS England and a lead Academic Health Science Network (AHSN). A further activity is mapping and planning outpatient and public involvement work and for each product on the Rapid Uptake Products programme. Working with industry, the relationship manager from NHS England and the AHSN leads, the AAC is developing workshops and supporting materials to ensure active patient and public involvement.

National spread and adoption of **Placental Growth Factor (PIGF)-based testing** for suspected pre-eclampsia continues to be driven by the AHSN network, led by Oxford AHSN. All AHSNs report very positive reception by Trusts for adoption of either the Roche Elecsys ratio test or the Quidel Triage PIGF test, with many planning to adopt testing regionally across maternity and lab networks.

Given the very rapid speed of adoption, it is expected that close to 40% of all maternity services in England will have adopted or be very close to adoption of a PIGF-based test into standard clinical practice by the end of the 2019 calendar year (nine months into the 18-month ITP funding window). This translates to >250,000 women being able to benefit from the availability of PIGF-based testing for suspected PE.

In response to a call to apply for pathway transformation funding (PTF), twelve applications were made in the quarter by adopting Trusts and their supporting AHSNs for Phase 1 AAC / PTF funding. PTF is provided to help overcome financial barriers arising from adoption of an ITP funded product. Eight of these applications were successfully awarded and contracts have been issued to allow the Trusts to receive their payments as soon as possible. Phase 2 funding was announced in mid-September with a closing date of the end of October, and a higher number of funding applications are expected for PIGF adoption projects than for Phase 1.

Publicity for PIGF-based testing for suspected pre-eclampsia received another boost in the quarter, with the presentation of one of the first UNIVANTS of Healthcare Excellence awards, for partnership and cooperation across disciplines to transform healthcare delivery. This award was for the work undertaken by Roche Diagnostics, Oxford University Hospitals NHS Foundation Trust and Oxford AHSN for initial adoption of the test into standard clinical practice at the Oxford John Radcliffe Hospital (<https://www.diagnostics.abbott/int/en/univants-healthcare-excellence>).

ITP support is offered for Trusts adopting a 1- or 3- hour (**High Sensitivity Troponin (HST)**) pathway for troponin testing for suspected heart attacks. The national targeting list does not currently include any Trusts in the Oxford AHSN region as most sites currently follow a one or three hour pathway. Clarification is

still being sought on the exact pathway being followed at Wexham Park to be able to assess their possible inclusion in the targeting list.

Faecal Microbiotic Transplant (FMT) -is a third-line treatment for the treatment of recurrent C.Difficile infection, is also supported under the 2019/2020 ITP funding programme. Due to the very low numbers of patients expected to be eligible for treatment (single digits per Trust per year), the objective of the project is to alert Trusts in the region to the availability of funding for the product and to help them to get it onto their formulary, should they desire to use it. The key stakeholders in each trust have so far been identified and initial discussions held; responses are generally positive with action plans to audit / confirm current numbers of likely patients and to make the application for listing on the formulary underway.

Research & Development (R&D)

The R&D programme supports the development of capability, capacity and collaboration across the NHS and the Universities to make the region a more attractive place for research to improve healthcare locally and nationally. The R&D Oversight Group meets three times annually with no meeting this quarter.

In response to the national NHS Research Needs Survey, the AHSN and CLAHRC organised a regional stakeholder event. This took place on 5 September 2019 and was the key consultation event in our region.

The workshop was attended by over 80 people from a wide variety of background across the NHS and research communities in Berkshire, Buckinghamshire, including Milton Keynes, and Oxfordshire and included ten public members. The event was co-chaired by Prof Richard Hobbs, CLAHRC Director, and Director of the NIHR ARC Oxford and Thames Valley (OxTV) and Prof Gary Ford, AHSN Chief Executive (Implementation Lead for the NIHR ARC OxTV). Dr Sam Roberts, Chief Executive, Accelerated Access Collaborative, and Director of Innovation and Life Sciences, NHS England/Improvement, delivered the keynote address. Parallel workshops to discuss key issues relating to the priority themes which emerged from the national research and innovation needs survey formed the centrepiece of the workshop: Workforce, Mental Health, Multimorbidity, Digital and AI.

The workforce session was led by the AHSN, with input from Health Education England, while the other three were led jointly by the AHSN and CLAHRC. In addition, there were two Q&A sessions during the workshop including a panel discussion with Fiona Wise, Executive Chair of the Bucks, Oxon and Berkshire West Integrated Care System, joining representatives from each of the parallel sessions. The workshop was the first joint meeting between the AHSN and ARC. Others are planned to ensure research priorities align with NHS needs on a continuing basis.

Building directly on work from the CLAHRC in three of its five major research themes, the Oxford and Thames Valley (OxTV) ARC will research major chronic multimorbid disease, patient determined needs, utilising public health as well as patient level interventions, and reducing healthcare variation. The partnership between the ARC and AHSN will be enhanced and sustained by an Implementation Manager with responsibility for stewardship of the extended network.

Workforce

Research supervision for Social Work MSc candidates whose dissertations include evaluation or implementation. This arrangement will complement the social work expertise in Buckinghamshire New University. In all ARC and AHSN projects we will review workforce implications of any proposed workplans and assess the impact on workforce during implementation. The potential impact of any work on workforce development and productivity will be a key framework used by the AHSN in selecting innovations for regional spread and adoption.

Mental health:

Mental Health across the Lifecourse, a second new theme in OxTV ARC, will enable local and national mental health service providers to provide rapid, effective support for mental health problems through development and evaluation of psychological interventions and by establishing innovative and scalable clinical decision support tools.

Multimorbidity (MM)

The AHSN will identify interventions targeted at improving outcomes in people with MM such as improving bone health, feasibility of measuring burden of MM in the target population and impact on disability associated with MM in our real world evaluations. The ARC Patient Self-Management theme will develop and test a series of interventions in patient self-management and prevention of chronic disease and MM including optimisation of the NHS Health Check across the Thames Valley, and development of an intervention for self-management of MM in pregnancy. The ARC community health and social care improvement programme brings together research teams with expertise in population health, musculoskeletal conditions improvement and in the investigation and evaluation of long-term conditions, to develop interventions that alleviate the burden of disability and health inequality in MM and to investigate the impact of clusters of disease involving the musculoskeletal system conditions in MM in older people.

Digital and AI

The ARC has a new digital health theme, helping generate the knowledge the NHS needs to harness the potential of digital tools and electronic data for patient benefit. This will be allied to major new investments in digital health in the Thames Valley and Surrey Local Health Care Records and will complement existing strengths in the University of Oxford Big Data Institute. In addition to specific research projects, this theme will cut across the other themes and connect with the implementation team on the use of digital interventions. This is an area of huge interest to public health in local councils and support application to the Social Care Digital Innovation Programme around older people and self-care. The AHSN will expand its Accelerator programme to support development of high value digital products for spread across the NHS and social care systems in the region.

Patient & Public Involvement, Engagement & Experience (PPIEE)

Collaborate
Improve networking
Support researchers
Increase recruitment
Engage patients
Improve communication
maintain engagement
Agree definitions

Team Development

We are delighted that our team has now consolidated with the appointment of our new PPIEE Coordinator, Laurie Kenny, and our Lead Lay Partner, Douglas Findlay.

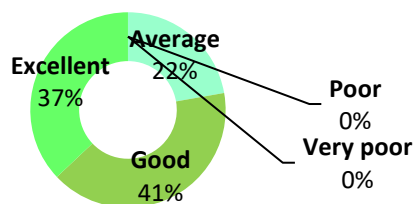
Training and Development

Recording and impact workshop below



We launched our [Working Together](#) recording and impact checklist at a workshop in Aylesbury. The event attracted a range of staff and lay people and overall feedback was very positive, in line with previous workshop feedback.

Overall rating of the workshop



Supporting Quotes

"I am passionate about my patients. Towards the end of a 7-month research project, I realised that the idea I had for my project was not in the patient's best interest. What I thought patients wanted was not what they actually wanted" -**Researcher**

"Most patients don't think about research – it's only when they or somebody around them needs it. It would be good to make everybody realise that everybody can be involved in research, that people are the future of the NHS whoever they are" -**Lay Associate**

"Co-production should be done in a meaningful way and as equals" -**Lay Associate**

Supporting Programmes

Local

We continue to work with AHSN colleagues to embed patient and public involvement in our projects, for example discussions with the IBD Steering Group to develop their approaches to PPI and working with the ELC and heart failure project to plan focus groups that will help inform our understanding of experience and what matters patients. Using our impact tool is proving to be a useful way to embed thinking about PPI into local projects.

Local work to develop approaches to PPI and rapid uptake products (RUPs) has led to work with NHS England exploring ideas around patient pull in innovation. Interviews with RUP national leads and a series of patient focused workshops are further developing this thinking.

Regional and National

We are delighted that Guy Boersma, Chief Officer of the Kent Surrey Sussex AHSN, has agreed to be the new PPI champion amongst the Chief Officers. He joined our quarterly meeting in September. As part of the AHSN PPI Network we are working on an agreed set of principles for good PPI, which will include a statement on payment for lay partners.

As part of the patient and public involvement work across the AHSN we have supported the prioritisation process for new national programmes and local work for research and innovation prioritisation with our newly designated ARC.

Building on our national workshop with Patient Safety Collaborative colleagues, we are working jointly to collect case studies and good practice on patient and public involvement in patient safety, alongside developing a series of webinars.

Stakeholder Engagement and Communications

The second quarter of 2019/20 saw the Oxford AHSN continue to consolidate its reputation for supporting the spread of innovation at pace and scale. Every day we share our experience, expertise and connections to meet the needs of our partners across the NHS, industry and research.

In September we co-hosted a workshop to clarify priorities for future research and innovation with the new NIHR Applied Research Collaborative Oxford and Thames Valley. We were delighted to welcome Sam Roberts, Chief Executive of the Accelerated Access Collaborative at NHS England/Improvement, as our keynote speaker. She joined about 80 people in discussions which will shape future work programmes relating to workforce, multi-morbidity, mental health and digital/AI.

Also, in September, 52 people from across our region and beyond came to the fourth meeting of our regional emergency laparotomy collaborative (ELC). This network brings together multi-disciplinary teams from all five acute NHS trusts in Berkshire, Buckinghamshire, Oxfordshire and Milton Keynes which perform emergency surgery. They are working to reduce variations in outcomes, quality of care and metrics. ELC is one of [seven national programmes coordinated by the AHSN Network](#).

Other important events this quarter included three workshops focused on market access for SMEs ahead of the launch of our new Accelerator programme, a patient and public involvement workshop looking at record-keeping and measuring impact, and ongoing support for regional clinical networks led by our Patient Safety and Clinical Improvement programme.

We published a summary brochure highlighting some of the Oxford AHSN's key priorities in 2019/20. This was also created in an [online format](#). Linked to this we launched a smartphone app – find and install it by searching for 'Oxford AHSN' on Apple or android.

We continued to strengthen our partnerships with other AHSNs – individually across a wide range of projects, and collectively with all AHSNs through the national programmes (see ELC above) and key events. The AHSN Network had a strong presence at the NHS Health and Care Expo in September, setting the agenda across a wide range of topics relating to improving health and generating economic growth. AHSN Network publications this quarter included:

- the [second edition of 'The Innovators' magazine which featured a number of Oxford AHSN industry partnerships](#)
- a [care homes report which included case studies on our award-winning Good Hydration! programme and dementia training](#).

An independent national stakeholder survey of all AHSNs took place in Q2. Follow-up interviews are ongoing, and the final report is due to be published in Q3.

The continued success of our collaborations with NHS organisation, industry partners and other AHSNs was reflected in an international award for our work on diagnosing pre-eclampsia in pregnancy. See list of all our latest awards below. More details [here](#).

Our regular monthly newsletter now has more than 1,400 subscribers. Sign up here:

<http://j.mp/OxfordAHSNnews>

In Q2 we also published a [special edition devoted to primary care](#) – the second in a series of one-off updates to reflect the growing wealth of projects led by the Oxford AHSN and its partners. The Oxford AHSN Twitter account (@OxfordAHSN) passed 5,000 followers in Q2.

Our web content is regularly updated at:

www.OxfordAHSN.org

www.patientsafetyoxford.org

www.clinicalinnovation.org.uk

www.healthandwealthoxford.org

Collectively these websites had around 20,000 page views in Q2.

Key publications 2019/2020

Paediatric enteral feeding at home: an analysis of patient safety incidents	Archive of Disease in Childhood, BMJ Journals, June 2019 https://adc.bmj.com/content/early/2019/06/14/archdischild-2019-317090
Reducing urinary tract infections in care homes by improving hydration	BMJ Open Quality, July 2019 http://bmjopenquality.bmj.com/cgi/content/full/bmjog-2018-000563
Randomized interventional study on prediction of preeclampsia/eclampsia in women with suspected preeclampsia	Hypertension, August 2019 www.ncbi.nlm.nih.gov/pubmed/31401877/

Awards won 2019/20

Sepsis identification Winner, Best Emerging Solution, HSJ Patient Safety Awards with Imperial College Health Partners and the Patient Safety Measurement Unit	https://www.oxfordahsn.org/news-and-events/news/sepsis-identification-tool-wins-national-patient-safety-prize/
Safer prescribing of anticoagulants in primary care Winner, Royal College of Pathologists Excellence Awards with Oxford University Hospitals and Oxfordshire Clinical Commissioning Group	https://www.oxfordahsn.org/news-and-events/news/patient-safety-initiative-wins-national-prize/
Improving the safety of mothers and babies using angiogenic biomarkers for pre-eclampsia Winner, Univants of Healthcare Excellence	https://www.diagnostics.abbott/us/en/univants-healthcare-excellence

Appendix A - Risks Register & Issues Log

Risks Register

#	Prog	Risk	Description of Impact	Likelihood	Impact	Time	Mitigating Action	Owner	Actioner	Date	Date mitigated	RAG
1	Oxford AHSN Corporate	Failure to establish culture of partnership and collaboration across the region	Insufficient engagement of clinicians, commissioner universities and industry.	Low	Med	> 6 -12 mon	Stakeholder and communication strategy for the AHSN Each project has an engagement plan, including patient involvement. Appointed a new Medical Director.	AHSN Chief Executive	Programme SROs	06Sep 13	Ongoing	AMBER
2	Oxford AHSN Corporate	Failure to sustain the AHSN	Programme activities cease	Low	Med	> 6--12 mon	NHS England has re-licensed all AHSNs. NHSI has confirmed funding to March 2023. NHSE taking over OLS commission. Actively pursuing industry partnerships and grants.	AHSN Chief Operating Officer	AHSN Chief Operating Officer	31Jul 14	Ongoing	AMBER
3	Oxford AHSN Corporate	National Programmes delivery	Reputation Protect breach of Contract.	Med	Med	>6 12 mon	Robust engagement plans in place. Six of seven programmes on track to deliver.	AHSN Chief Operating Officer	AHSN Chief Operating Officer	19Feb 18	Ongoing	Amber

Issues Log

#	Programme	Issue	Severity	Area Impacted	Resolving Action	Owner	Actioner	Date	Status	Date Resolved
1	Oxford AHSN Corporate	Lack of awareness by local partners and national stakeholders of progress and achievements of the AHSN	Min	Engagement	Overarching comms strategy. Level of engagement monitored across all programme and themes. Website refreshed regularly visits per month increasing. Twitter followers and newsletter subscribers increasing. Oxford AHSN stakeholder survey. Quarterly report sent to all key stakeholders. Electronic Newsletter to stakeholders. Oxford AHSN organise and participation stakeholder events. Participation in ICS and STPs.	AHSN Chief Operating Officer	Head of Communications	19Jan 18	90% complete	Ongoing
2	Oxford AHSN Corporate	Sourcing clinical data provider failed to deliver	Med	Evaluation, QI, Monitoring business cases	Assess three alternative providers.	AHSN Chief Operating Officer	AHSN Chief Operating Officer	18Oct 19	10% complete	Ongoing

Appendix B - Oxford AHSN case studies published in quarterly reports 2013-2019

Quarterly report	Case study summary	Programme/Theme
Q2 2019/20	Adoption and spread of a quality improvement programme to prevent cerebral palsy in preterm labour (PReCePT)	Patient Safety and Clinical Improvement
	Preventing prescribing errors with PINCER	Clinical Innovation Adoption
	Feasibility study for introducing a new rapid point-of-care HIV test into sexual health clinics	Strategic and Industry Partnerships
Q1 2019/20	Healthcare tech company's expansion and Stock Exchange listing enabled by Oxford AHSN expertise	Strategic and Industry Partnerships
	Oxford AHSN support enables AI company to leverage £700,000 of grant funding	Strategic and Industry Partnerships
	The Oxford AHSN assists Fujifilm in real-world evaluation of point of care flu test	Strategic and Industry Partnerships
Q4 2018/19	Learning together through a regional patient-centred event to improve sepsis support and information	Patient Safety and Clinical Improvement
	Improving detection and management of atrial fibrillation	Clinical Innovation Adoption
	Understanding the impact of a new model of urgent care within a GP practice	Clinical Innovation Adoption
Q3 2018/19	AHSN-led collaboration brings multi-million-pound investment to Buckinghamshire and supports SMEs to meet health and social care needs	Strategic and Industry Partnerships
	Better diagnosis of pre-eclampsia improves patient safety and reduces burden on maternity services	Strategic and Industry Partnerships
	Patient forum helps improve NHS services for people with anxiety and depression	Mental Health
Q2 2018/19	Healthcare tech company's expansion and Stock Exchange listing enabled by Oxford AHSN expertise	Strategic and Industry Partnerships

Quarterly report	Case study summary	Programme/Theme
	Unique point of care blood test speeds up clinical decision-making improves quality of care and reduces costs	Strategic and Industry Partnerships
	AHSNs come together to create new sepsis identification tool	Patient Safety and Clinical Improvement
Q1 2018/19	Spreading best practice in dementia through webinar programme	Mental Health
	Establishing networks to improve patient care in early inflammatory arthritis	Clinical Innovation Adoption
	Supporting life science companies and entrepreneurs to access healthcare markets	Clinical Innovation Adoption
Q4 2017/18	Showcasing developments in NHS MSK, falls, fracture and frailty services	Clinical Innovation Adoption
	Improving detection and management of AF	Clinical Innovation Adoption
Q3 2017/18	Digital Health Roadmap published to guide digital health developers	Strategic and Industry Partnerships
	Reducing urinary tract infections in care homes by improving hydration	Patient Safety
	Stillbirth prevention - Oxford Growth Restriction Identification programme saves a life	Patient Safety/Best Care: Maternity
Q2 2017/18	Point of care test evaluation points the way to quicker diagnosis of common childhood illnesses	Strategic and Industry Partnerships
	Oxford AHSN insights on digital health feed into key report on Oxfordshire's tech cluster	Strategic and Industry Partnerships
	Defining and measuring suspicion of sepsis	Patient Safety
Q1 2017/18	Improving patient outcomes following high-risk surgery through better use of technology	Clinical Innovation Adoption
	Improving return rates to psychiatric wards	Patient Safety
	The Hill – putting innovation at the heart of healthcare in Oxford	Strategic and Industry Partnerships
	Improving the care and life chances of young people who develop psychosis through effective early intervention	Best Care (Early Intervention in Psychosis)

Quarterly report	Case study summary	Programme/Theme
Q4 2016/17	Digital health initiative leads to better monitoring and fewer hospital visits for women who develop diabetes during pregnancy	Clinical Innovation Adoption
	Better data sharing through regional information governance framework	Informatics
	Catalysing innovation and driving economic growth in Buckinghamshire	Strategic and Industry Partnerships
	Lives of more premature babies saved through improved referral pathways	Best Care (Maternity)
Q3 2016/17	Promoting workforce health and wellbeing through our Get Physical initiative	Corporate
	Improving detection and management of atrial fibrillation (AF)	Clinical Innovation Adoption
	New standard measures to improve care for patients with IBD developed by international collaboration	Wealth Creation
	Leading together – patients and professionals take a collaborative approach to solve health issues	PPIEE
	Better network-wide data sharing improves patient care	Best Care (Maternity)
Q2 2016/17	Digital survey results	Wealth Creation
	Imaging patient info films	Best Care
	Sustainability project	Wealth Creation
Q1 2016/17	Bicester healthy new town	Wealth Creation
	Children’s immunisation	Best Care
	Perinatal SHaRON	Clinical Innovation Adoption
Q4 2015/16 (annual report)	Memory clinic accreditation update	Best Care
	Meds optimisation CBT programme	Best Care

Quarterly report	Case study summary	Programme/Theme
	AWOL project	Patient Safety
	J&J collaboration	Wealth Creation
	CAUTI project	Clinical Innovation Adoption
Q32015/16	EIP data-based approach	Best Care
	Leading Together programme starts	PPIEE
	Get Physical event review	Corporate
Q22015/16	Targeted medicines support	Best Care/Patient Safety
	Memory clinic accreditation	Best Care
	IPC stockings	Clinical Innovation Adoption
	Alumni Summit review	Wealth Creation
Q12015/16	A&D recovery rates	Best Care
	Pre-term birth location saves lives	Best Care
	In2vu data visualisation	Informatics
Q42014/15 (annual report)	GDM remote monitoring	Clinical Innovation Adoption
	IOFM benchmarking	Clinical Innovation Adoption
	Sustainable energy	Wealth Creation
Q3 2014/15	Developing patient leaders	PPIEE
	CFT – heart attack test	Wealth Creation
Q2 2014/15	Memory clinics	Best Care
	Managing acute appendicitis	Best Care / Patient Safety (PSA)
	A&D recovery	Best Care
Q1 2014/15	Dementia network launch	Best Care
	Medicines optimisation launch	Best Care

Quarterly report	Case study summary	Programme/Theme
	Wealth creation explained	Wealth Creation
	GDm remote monitoring	Clinical Innovation Adoption
Q3 2013/14	App development route map	Wealth Creation
	2023 Challenge	Wealth Creation

Updated: October 2019