Improvement Science for Academics
Alumni Directory
2014 - 2017
About

Haelo is an innovative NHS improvement science centre based in Salford, working with systems, organisations and teams who strive to be the best. Our goal is to tackle the biggest challenges for health and social care.

We design and deliver improvement programmes, build capability and provide measurement and evaluation to our NHS and public sector family. This is supported by significant expertise and a unique offer around digital media, knowledge management and innovation.

At Haelo, we believe passionately that improvement should be fun. Our innovative approach generates energy for change and an appetite for continuous learning. We constantly push ourselves and those we work with to think differently, to test new approaches and to share learning for the benefit of all.

We will work with you to set bold audacious goals and tackle complex problems, using tried and tested methodologies tailored to your needs to enable system wide change. We will help your team achieve the great things that you didn’t believe were possible.

Haelo supports its key strategic partners: Salford Clinical Commissioning Group, Salford City Council, the University of Salford and Salford Royal NHS Foundation Trust, to improve health and care services delivered to Salford, regionally, nationally and internationally.
CMFT Rheumatology

Organisation Team Members

Central Manchester Foundation Trust
Dr. Ben Parker, Consultant Rheumatologist
Karen Kemp, Lead Nurse
Vanessa Reid, Rheumatology Pharmacist

PROJECT
Improving a rheumatology biologics service through the introduction of a Virtual Biologics Clinic: a mixed methods quality improvement project.

SUMMARY
The management of chronic inflammatory musculoskeletal diseases has been revolutionised by biologic drugs; they are designed to inhibit specific components of the immune system that play pivotal roles in fuelling inflammation. They have a high cost (£9000) per patient per annum and there is variation in their provision. The team, based at the Kellgren Centre at Central Manchester Foundation Trust (CMFT) had the ambition of implementing a multifaceted quality improvement project which would: improve patient experience (by reducing treatment delay, standardising the service offered, safer prescribing and increasing the opportunities to participate in research); prove beneficial for The Kellgren Centre (through initiating a ‘biologics database’, increasing efficiencies in the service and increasing support to nurses); the wider healthcare economy (through cost savings to the CCG and generating a growth in research income to CMFT); and positively impacting on the translational research agenda (through increased recruitment to translational studies and integrating research into clinical service). Following the implementation of their Virtual Biologics Clinic (VBC) through weekly MDT meeting, designed for the initiation of biologics therapy across all diagnosis and supported by new systems to facilitate reliable, rapid ‘virtual’ decision making the benefits have been reaped across the trust and MAHSC as a whole.

System map illustrating the new pathway for biologics treatment at The Kellgren Centre, CMFT

Process developments
- Creation of biologics database
- Creation of new initiation paperwork
- Creation of group education sessions
- Recruitment of nurse administrator

Staff Resource
Rheumatology Consultant
Specialist Nurse
Pharmacist
Research Nurse
Following its success there has been a similar service introduced in the gastroenterology service, cost savings to the CCG, and an increase in both research participants and research funding for The Kellgren Centre. The team has presented their work at conferences, scientific meetings and have published their work in ‘Rheumatology’.

CHANGES IMPLEMENTED

New systems were established to facilitate virtual MDT review of all new biologic prescriptions.

Changes implemented included the development and use of a safety checklist, alterations in lab ordering screens, and the development of individual team roles. A biologics database was also developed and funding for a biologics administrator was secured.

PROJECT OUTCOMES

GMMMG biologics pathway was implemented at CMFT.
Significant reduction in delays to treatment.
Annual cost savings of £113,000.
Patients recruited into research increased from 51 in 2012-13 to 96 in 2013-14.

PROJECT UPDATES SINCE COMPLETION OF PROGRAMME

The VBC and all the necessary systems to support it were successfully implemented within six months, and it has been sustained since. As a result, waiting times for therapy were reduced, research recruitment was doubled, and money was saved for the healthcare economy through increased clinical trial recruitment and more effective use of cheaper therapy options.

IMPACT OF PROJECT ACROSS THE NHS

The VBC is embedded within rheumatology and has extended into a ‘virtual DMARD clinic’ with similar systems and outcomes. The VBC concept has also been taken up colleagues in gastroenterology, and is a priority for implementation during the single service development in Manchester. The team was awarded a British Society for Rheumatology Outstanding Best Practice Award in 2016.

ADVICE FOR FUTURE IS4AC TEAMS

Spend as much time as possible understanding the system you operate in as fully as possible, and don’t just map what you think happens. Think hard about who is going to the bulk of the work – data collection, baseline audits, measurement, databases and qualitative interviews all take time and resource.

Chart showing the median treatment delay for all diagnoses. A statistically significant sustained improvement in the average number of days / week treatment was delayed over all diagnoses can be seen eleven weeks into the project’s lifespan.
Access Matters

Organisation
Salford Clinical Commissioning Group

Team Members
Charlotte Aspden, Commissioning Manager
David Pearson, Finance Manager
Dr. Clare Gibbons, General Practitioner
Robin Green, Contract Performance Manager
Neil Turton, Chief Executive
Kate Jones, Practice Nurse
Nick John, Data Coordinator
Andrea Lightfoot, Clinical Commissioning Officer

PROJECT
To reduce the time taken to access a GP consultation.

SUMMARY
In recent years, there have been a number of national and local drivers and policies which have concentrated on the increasing the provision of primary care services in order to reduce inappropriate A&E attendances and reducing pressure on A&E. These initiatives have been supported by some evidence which suggests that there is a link between poor GP access and A&E attendance. In the ‘Five Year Forward View’ the strategy to move services to community based settings was outlined.

AIM
To respond within 2 hours for 100% urgent calls and within 6 hours for 95% of non-urgent calls, 8:00 a.m. – 6:30 p.m. Mon – Fri by April 2015*

Primary Drivers
1. Telephone and I.T. systems that can handle all calls/contacts
2. Receptionists that can appropriately deal with and signpost all calls
3. Clinicians that can meet the response time targets for all the calls allocated to them

Secondary Drivers
1.1 Optimise telephone system capacity, cell–waiting, number of handsets, software, number of call handlers
1.2 Improve patient satisfaction with the method of contact with the practice by offering other modes of communication
2.1 Improve match of call handlers to call volumes via rate
2.2 Increase number of patients who have their query dealt with at the first point of contact
2.3 Set standards for customer contact
2.4 Train call handlers to confidently use simultaneous telephone interpreting service
3.1 Implement safe and effective system for handling calls after 5.30pm
3.2 Improve efficiency of handling clinical administration—correspondence and repeat medication
3.3 Set standards for clinics’ Dr. First sessions
3.4 Improve patient satisfaction with the outcome of the encounter

*To meet the Greater Manchester ‘Hackett Together’ out-of-hospital standards
Locally, the Healthier Together Agenda outlined the need to organise primary care provision to ensure that there is capacity and capability to support additional services (in line with their out of hospital strategy). To address these issues, Salford Health Matters use an innovative approach to appointment allocation; the system used is called Doctor First. The team built on this innovative appointment system to track the number of patients calling, the length of the calls, the time being taken to respond to calls and assess the type of calls being made. Using these data the team was able to optimise the telephone system capacity, increase the volume of patients who have their query dealt with at the first point of contact and improve the efficiency of handling clinical administration.

**CHANGES IMPLEMENTED**

Staff were trained and a centralised telephone handling system purchased. Data were collected in order to assess the number of call handlers needed. Processes were changed for how GPs handled call-backs and results. An improved system to incoming clinical correspondence was established.

The above charts show that following the implementation of the project, there was:

- An average of 87.2% of urgent calls responded to within two hours against a target of 100%
- An average of 96.5% of routine calls responded to within six hours (reduced from a baseline of 98.5%) against a target of 95%.
- An average of 12.1% of calls from clinicians to patients resulting in a failed encounter.

**PROJECT OUTCOMES**

- Implemented and optimised use of telephone system
- Improved patient satisfaction with alternative methods of contacting the practice
- Invested in staff training and development
- Improved efficiency of handling clinical administration and set standards for GPs using the Doctor First telephone system.

**PROJECT UPDATES SINCE COMPLETION OF PROGRAMME**

The project team has committed to continue the project and have benefited from establishing baseline measures. There has been improved staffing and a set of PDSAs that are expected to result in further improvements over time.

**ADVICE FOR FUTURE IS4AC TEAMS**

Ensure the team is set up in a very structured way. Make sure regular meetings are set and everyone is involved throughout the process.
Manchester Acute Kidney Injury

Organisation
Central Manchester NHS Foundation Trust
Dr. Leonard Ebah, Consultant Nephrologist
Prasanna Hanumapura, Nurse Specialist
Dr. Rachael Challiner, Consultant Intensivist

Team Members

PROJECT
To achieve a 10% reduction in the incidence of acute kidney injury across pilot wards.

SUMMARY
Acute kidney injury (AKI), a rapid reduction in kidney function, occurs in up to one in five patients admitted to hospital. These patients have worse outcomes (longer hospital stay and higher risk of death). AKI is estimated to cost the NHS over a billion pounds annually. Basic care in AKI has been repeatedly shown to be wanting; simple tasks are often missed or performed inadequately. Manchester Acute Kidney Injury Team (MAKIT) led a quality improvement programme with the aim of reducing the impact of AKI across CMFT, implementing changes which targeted three primary drivers of: increasing the prevention of AKI; increasing the early detection of AKI and ensuring prompt, consistent and appropriate treatment of AKI. During a three month trial (February to April 2015), improvements were seen across key indicators relating to AKI, indicating that the approach taken could lead to sustained results across a large healthcare organisation.

CHANGES IMPLEMENTED
In February 2015, MAKIT implemented a multifaceted AKI quality improvement programme. This involved bespoke electronic alerts, a priority care checklist, a multipronged awareness and education programme and the use of clinical nurse specialists.

Driver Diagram for MAKIT

Reduce the overall impact of AKI

Primary Driver

A: Improved Prevention

B: Early Detection

C: Prompt, Consistent, & Appropriate treatment

Secondary Driver

1. Risk Assessment
2. Adequate Fluid Management
3. Drug Management
4. High Risk Procedure Pathway
5. Timely Blood tests and review
6. Reliable Notification System
7. Sensitisation Programme
8. Reliable Detection System [ e-alert]

9. Education
10. Nurse led Priority Care Bundle implementation
11. Plan for EPR Decision System
12. 24/7 response
13. Pharmacy led implementation drug review
CASE STUDY

RESULTS

This P-chart shows the incidence of AKI as a percentage of all hospital admissions. There mean was rebased after learning session three of the IS4 programme 2015; this was sustained until April 2016.

PROJECT OUTCOMES

Detection of AKI was improved to 100% recognition of all cases within 24 hours. Management of AKI was improved to 95% appropriate management. Incidence of AKI was reduced by 18%. There was a 22% reduction in length of stay of patients with acute kidney injury. There was a 28% reduction in total number of days spent with acute kidney injury. There was a reduction of 13% in acute kidney injury related deaths.

PROJECT UPDATES SINCE COMPLETION OF PROGRAMME

The programme has been very successful since the end of IS4Ac, with AKI detection now 100% and incidence down by 18%. MAKIT has won several awards including best poster at the British Renal Society and best Project at the CMFT Audit and Risk Fair. Since February 2015 the project has been implemented across the trust and new outcomes were identified. MAKIT has delivered these successfully:

- The incidence of AKI in all (both emergency and elective) admissions averaged 7.3% in 2015 decreasing to 6.5% in the first quarter of 2016-17; an 18% reduction from 2013.
- Hospital acquired AKI averaged around 100 cases per month until the end of December 2014; it was reduced to 87 cases per month in 2015 and to 82 in the first quarter of 2016-17 (15% reduction).
- The most severe form of AKI (stage three) has reduced from an average of 77 cases per month from 2013-14 to 63 per month in 2015-16. In the first quarter of this year (April to June 2016); as of October 2016, it is 46 cases per month.
- AKI Days graph shows a reduction, from 15.6 days for most of 2014 to 10.3 days since Trust wide implementation in February 2015. The difference of four days tallies with the overall reduction in length of stay of the patients with AKI. The current AKI days for quarter two 2016-17 is 8.8 days (33% reduction).
- AKI mortality has averaged 11-12%. The proportion of deaths to AKI cases has not changed significantly because of the concomitant fall in incidence. However, the number of AKI deaths has dropped significantly from an average of 38 deaths per month to 34 deaths per month since Trust wide implementation in February 2015 (11% reduction).

ADVICE FOR FUTURE IS4AC TEAMS

Success hinges on key stakeholder engagement. Dr Leonard Ebah said: “You have to be a salesman, sell to the people with power until you feel they are about to take over your project”.
Manchester Mental Health and Social Care Trust Mental Health
Petra Brown, Chief Pharmacist
Dr. Richard Keers, Lecturer in Pharmacy Practice
Professor Darren Ashcroft, Professor of Pharmacoepidemiology
Jo Aldham, Medicines Management Coordinator
Karen Bennett, Senior Pharmacist
Dr. Richard Drake, Consultant Psychiatrist

PROJECT
To test methods of providing feedback to prescribers on medication errors with a view to implementing the preferred method and reducing prescribing errors.

Driver Diagram MIIND

Develop, implement and evaluate a stakeholder-centred feedback model designed to encourage reflection and learning from in-patient prescribing errors by March 2015. Ensure that the feedback model is used by at least 90% of in-patient prescribers by March 2015.

Explore and develop appropriate model(s) for providing feedback on inpatient prescribing errors by November 2014

Test and refine the proposed feedback model in practice – October 2014 - January 2015

Implementation of preferred model of feedback - January-March 2015

Evaluate feedback model and ensure uptake by prescribers/those responsible for feedback – February-March 2015.

Primary drivers are systems components which will contribute to moving the primary outcome.

Secondary drivers are elements of the associated primary driver. They can be used to create projects or change packages that will affect the primary driver.

• Draft and apply questionnaire and discussion guide to explore stakeholder views (at all grades of seniority) on appropriate feedback model(s) in PDCA cycles (including which professional groups are most suited to provide feedback) – July-September 2014
• Draft feedback model format, and use interviews/ focus groups to refine using PDCA – August-September 2014
• Propose agreed feedback model(s) – October/November 2014

• DATIX medicines incident interrogation to ID prescribing errors. Approach prescribers to test different feedback models
• Prepare and test feedback model resources (e.g. forms to complete) using PDCA cycles
• Explore perceptions of feedback model using individual and group discussion, and questionnaires as part of PDCA cycles

• Use PDCA cycles to design and implement a tool to measure awareness of feedback model
• MIIND team working with medical director/senior consultants to promote feedback model at induction/education meetings

• Review of tool / comments and usefulness
• Perceptions of users on impact on prescribing behaviours
• Review of medication incidents for individual prescribers
• Survey of prescribers/feedback givers for usage
SUMMARY
Medication safety is a priority for all services, and the AHSN and MAHSC business plans include medication safety and the production of safety indicators. Work has already been completed looking at the types and numbers of errors in three mental health trusts, finding that they affected more than 6% of prescription items and that most had the potential to harm patients. Mental health is an area that has not had the same focus on safety as acute medicine. Feedback models have recently emerged as a potentially useful tool to reduce prescribing errors in acute hospitals, but it is not known which model would be suitable for mental health settings. Learning is essential and ways to learn from errors have not been tested in psychiatry. The MIIND team implemented quality improvement methodology with the aim of understanding the most effective method through which to feedback to prescribers; it was thought that by appreciating the best feedback model, prescribers would be more receptive to feedback and therefore result in a reduction in prescribing errors.

CHANGES IMPLEMENTED
The team developed and tested the feedback model ‘MHSC Prescribing Excellence Programme (PEP)’ which was illustrated in their driver diagram. Medication error rates for individual prescriber were assessed and qualitative data on prescriber satisfaction toward feedback process were collected and analysed.

PROJECT OUTCOMES
Although some respondents appeared to favour face-to-face and verbal feedback over written communications, many had no preference.

Prescribers indicated that they would welcome group feedback about prescribing errors and would discuss them with their peers, but felt more strongly that they would prefer individual feedback.

Prescribers preferred to receive feedback on their prescribing errors from pharmacists over nurses and senior medical staff, but did not indicate a preference for the latter two groups. All participating prescribers agreed that they should be made aware of prescribing errors that they and others make, but not all felt that they were made aware of their errors or received regular feedback at baseline.

The team had their work published in the Journal of Clinical Pharmacy and Therapeutics with recommendations for further interventions.
QUIDD-ICH

Organisation
Salford Royal NHS Foundation Trust

Team Members
Dr. Adrian Parry-Jones, Consultant Neurologist
Dr. Kyriaki Paroutoglou, Clinical Fellow in Stroke Medicine
Dr. Mark Massyn, Stroke Registrar
Amanda Cordwell, Support Manager

PROJECT
To reduce the percentage of patients with acute intracerebral haemorrhage who are dead one month after admission to the Greater Manchester Comprehensive Stroke Centre (GMCSC).

SUMMARY
Intracerebral haemorrhage (ICH) accounts for 10% of all strokes. Intracerebral haemorrhage is more likely to result in death or major disability than ischemic stroke. Focussing on their primary drivers of: blood pressure, anticoagulants, early neurosurgery and supportive care, the team performed multiple PDSA cycles which resulted in the creation of a new care bundle, the introduction of a point-of-care INR machine in the Emergency Department and changed the blood pressure (BP) lowering protocol. By the end of the IS4Ac programme, there had been an 8.5% absolute reduction in the percentage of 30 day case-fatalities admitted to the GMCSC.

A driver diagram illustrating the logic model for QUIDD-ICH
CHANGES IMPLEMENTED
The team created and implemented a new acute bundle of care (ABC). A new BP protocol was approved by SRFT and was published on the trust intranet. Criteria for urgent scans were assessed and adapted. Enteral treatment within 24 hours was facilitated by early nasogastric tube if needed. The team ensured that staff were education and raised staff and partner awareness of their new ABC.

PROJECT OUTCOMES
- 30 day case fatality reduced from 34.3% prior to QUIDD-ICH intervention to 25.8% after implementation of QUIDD-ICH
- A new critical care / neurosurgery pathway was developed and implemented from July 2016

PROJECT UPDATES SINCE COMPLETION OF PROGRAMME
The team has made a successful bid to Connected Health Cities call for a large QI project across Greater Manchester stroke pathway including ICH care. They plan to set up local teams to deliver acute bundle at each centre, to establish regular collection of mRS at six months at three hyper-acute stroke units (HASU), and to establish systems in HASUs to effectively deliver bundle. They also plan to develop mobile application, establish daily multi disciplinary team meetings at Salford and continue testing new change ideas at Salford. From early 2017, the team aims to launch acute ICH care bundle at Stockport and Bury. The team has presented their work at the European Stroke Organisation Conference (poster) and accepted for a floor presentation at the UK stroke forum.

ADVICE FOR FUTURE IS4AC TEAMS
Push for more support early in project. Make more effort to ‘sell’ project to colleagues. Ensure weekly meetings happen!

P- chart showing the 30-day case fatality at quarter year points from Q3 2014 – Q1 2016.
PROJECT
To pilot and evaluate the use of cognitive assessment software delivered on tablets in home-based memory clinics.

SUMMARY
There is a growing pressure on Memory Assessment Services (MAS) to undertake more new patient assessments. Over 1200 new referrals are undertaken annually in MAS, primarily within home settings. Digital assessment tools delivered on hand-held electronic devices such as tablets may optimise the efficiency, accuracy and usefulness of remote cognitive assessments. During the IS4Ac course the new tablet based auto-scoring assessment software was introduced and through tests of change, adapted the software process. Data were collected on the time taken to score and prepare the clinical assessment report and indicated that there was a potential to save approximately six hours per week per assessment nurse, assuming an average of five assessments per week. Additionally, the software reduced the error rate of data reporting to 0%. The project found that introducing tablet-compatible assessment software for home-based memory clinics significantly increases the efficiency of the process and may facilitate more rapid turnover of new patient referrals.

CHANGES IMPLEMENTED
An initial survey was conducted to assess MAS clinician attitudes to the introduction of new technology. An analysis of standard paper based assessments was run. A series of PDSA cycles to improve the efficiency and quality of the assessment and report process were completed.

PROJECT OUTCOMES
- Time taken to score and prepare the clinical assessment report dropped by 44%.
- 100% of MAS clinicians surveyed agreed that the technology had not enhanced their practice but it has the ‘potential to be brilliant once it is fully complete’.

PROJECT UPDATES SINCE COMPLETION OF PROGRAMME
Improvement was shown in the pilot but further implementation was not pursued. The team had their project published in the British Journal of Neuroscience Nursing, 2015.

ADVICE FOR FUTURE IS4AC TEAMS
Keep the project manageable. Use the Improvement Guide as your bible!
# Cardiac Infection Device

## Organisation
Central Manchester Foundation Trust

## Team Members
- Dr. Fozia Ahmed, Cardiology Researcher
- Professor Mamas Mamas, Senior Lecturer / Consultant Cardiologist
- Dr. Colin Cunnington, Consultant Cardiologist
- Dr. Muhammed Khan, Clinical Fellow
- Stephanie Smith, Cardiac Physiologist

## PROJECT
To reduce the time to diagnosis of cardiac device infection.

## SUMMARY
Infection is a serious complication of cardiac implantable electronic device (CIED) implantation. Confirmation of CIED generator pocket infection can be difficult when patients present with non-specific symptoms that may or may not be due to infection. The team found that there were a number of issues with the existing system, i.e. once infection had been confirmed, the extraction of the device was mandated, irrespective of its location; antimicrobials were widely used prior to confirmation of infection and there were frequently long delays in patients being listed for pacemaker extraction. Through their quality improvement project the team sought to standardise the investigation of suspected pacemaker infection and implement evidence-based guidelines, reduce the proportion of patients with unconfirmed infection for whom antimicrobials were prescribed and reduce the time from confirmation of infection to extraction.

## CHANGES IMPLEMENTED
The Cardiac Infection team implemented an evidence-based pathway and investigation bundle for the evaluation of suspected cases of infection. Changes included standardising investigation of suspected pacemaker infection, and implementing evidence-based guidelines to Manchester Heart Centre for suspected cases of infection and incorporating infection imaging in cases where the diagnosis was unclear.

## PROJECT OUTCOMES
- 100% increased compliance with infection guidelines
- Average length of stay in hospital reduced from 15.2 to 12.9.
- Time from PET/CT to extraction reduced from 8.3 to 5.4 days.
- Duration of antibiotic prescription reduced from 12 to 4.2 days.
PROJECT UPDATES SINCE COMPLETION OF PROGRAMME
The project was published in the European Journal of Cardiovascular Infection and has since been cited in international guidelines for the diagnosis of cardiovascular infection. Team members have moved on to another improvement science project to deliver an outpatient IV diuretic service to patients with heart failure. This project “heartfailure@home” was shortlisted for the BMJ cardiology team of the year and they were announced as finalists for the 2015 awards. They have since been invited to publish this work in the BMJ Quality Improvement Journal and hope to complete the submission in late 2016.
PROJECT
To accurately diagnose 70% of children under the age of 15 with bilateral cataracts within six months of referral.

SUMMARY
Two thirds of childhood cataracts are bilateral; 50% of these cases are known to have a genetic cause. A prompt diagnosis of these patients is associated with both best visual and general outcomes. Next-Generation Sequencing has been shown to provide a diagnosis in 70% of cases of childhood cataracts in a research setting and has been available on the NHS since early 2014. Using ramped PDSA cycles the team developed a new care pathway which saw the introduction of modern genetic testing into the care and management of paediatric cataracts which resulted in a reduction of 183 days in the average time to results in those undergoing tested. Patient feedback supported the project with a majority of parents stating it was important to have a diagnosis ‘as soon as possible’.

CHANGES IMPLEMENTED
A new care pathway for children with bilateral cataracts supported by the development of new systems to record cataract referrals and patient engagement with Paediatric Ophthalmologists.

PROJECT OUTCOMES
By the end of the IS4Ac programme:
- The introduction of modern genetic testing into care of paediatric cataract
- A new care pathway for children with bilateral cataract
- Dissemination to region and rest of UK
- Ongoing refinement and improvement of NGS test (rate of diagnosis in clinical setting)
- Average time to blood collection reduced from 167 days at the start of the programme to 19 days at the end.
- Average time to results reduced from 296 to 113 days
- Video produced: ‘ICare2c: Genetic Sequencing Improving Patient Care’
- A process map for diagnosing childhood cataracts
The Magicians

Central Manchester NHS Foundation Trust
Professor Bernard Keavney, Consultant Cardiologist
Professor Bernard Clarke, Consultant Cardiologist
Dr. Luigi Venetucci, Consultant Cardiologist
Dr. Emma Burkitt-Wright, Consultant in Clinical Genetics
Sasha Henriques, Genetic Counsellor
Catherine Houghton, Genetic Counsellor
Danielle Koomen, Directorate Manager

PROJECT
To implement a multi-disciplinary clinic for patients with Marfan syndrome at CMFT.

SUMMARY
Patients suspected of having Marfan syndrome required separate clinical genetic and cardiological assessments, resulting in occasional delays in diagnosis. During IS4Ac the team defined key indicators of effective case management; these were used to develop the Aortopathy Bundle of Care (ABC). A multidisciplinary genetic aortopathy team clinic was established. Results demonstrated a 75% absolute increased the proportion of patients whose diagnosis was confirmed and documented according to the chosen criteria and a 75% increase in the proportion of patients who received the appropriate imaging. Data from patients indicated a high-level of satisfaction with the clinic and it was possible to clarify the diagnosis of seven patients that meant that they were discharged from the clinic.

CHANGES IMPLEMENTED
A new clinic was scheduled (facilitated through participation in IS4Ac and support from the trust’s Medical Director). PDSA cycles focusing on small measurable improvements were implemented. The “one, three, all” approach to implementing change was used. An ABC was developed and implemented. Compliance with the new diagnostic criteria and the new clinic’s management and effect on guideline compliance was audited.
PROJECT OUTCOMES
A demonstrable improvement in compliance with international diagnostic criteria and guidelines for management was achieved. The project was published in a peer reviewed journal in early 2016 (Clinical Medicine). The clinic picked up a potentially life threatening complication in one patient with Marfan syndrome, and detected an enlarging aortic root that required surgery in another patient. This was attributed to the fact that guideline mandated scans were implemented as part of the team’s bundle of care.

PROJECT UPDATES SINCE COMPLETION OF PROGRAMME
When the team reconvenes they hope to use their experience to further improve the experience of patients with aortopathy and other integrated cardiac clinics.
Polypals

Organisation
University Hospital of South Manchester and St. Ann’s Hospice

Team Members
Dr. Dai Roberts, Research and Development Lead
Jennie Pickard, Specialist Palliative Care Pharmacist
Dr. Alison Phippen, Associate Specialist in Palliative Medicine
Dr. Morag Ranson, Specialist Interest GP
Dr. Douglas Steinke, Senior Lecturer, Manchester Pharmacy School
Steve Williams, Honorary Clinical Lecturer, Manchester Pharmacy School and Consultant Pharmacist

PROJECT
To reduce the number of medications by in-patients at St. Ann’s Hospice.

SUMMARY
Polypharmacy is prevalent in both hospice and palliative care settings. This leads to an increased risk of drug interaction, an increase in the time taken to administer these medications, a heightened risk of medication error, and an increase in the burden to the patient. Polypals, based at St. Ann’s Hospice in Cheadle used multiple PDSA cycles to test and implement a multi-layered approach to reduce the number of medications taken by in-patients. Specifically, the team focussed on: education of prescribers, targeting commonly prescribed medications and highlighting various dose sizes and options; reducing the number of lines on the current medication sheet; highlighting patients who were prescribed more than 10 separate drugs or over twenty separate tablets. These changes resulted in an overall reduction of number of medications by 16%.

CHANGES IMPLEMENTED
Weekly point prevalence data (number of medications, tablets and liquids) was collected for each patient on one ward (14 beds) for 10 weeks prior to implementing a series of ‘tests of change’, e.g. education and guidelines on the use of paracetamol, laxatives and knowledge of dose sizes. Post implementation, weekly point prevalence data continued for 14 weeks.

PROJECT OUTCOMES
• There was a reduction in number of medications by 16%
• There was a reduction in number of tablets by 30%
• There was a reduction in volume of liquid medicines by 30%
• The team produced a film to promote their work
Concord

Organisation Team Members
University Hospital of South Manchester and The Christie
Mr Keith Pearce, Consultant Cardiac Physiologist
Professor Simon Ray, Consultant Cardiologist
Mr Howard Carter, Cardiac Physiologist
Ms Gayle Hadfield, Cardiac Physiologist
Professor John Radford, Professor of Medical Oncology

PROJECT
To establish on-site cardio-oncology provision at The Christie hospital.

SUMMARY
Prior to the IS4Ac programme, there was limited on-site cardiology service provision at The Christie: guidelines have consistently outlined the necessity of the having specialist cardiology input for the target patient group. During the course of the programme the team performed ramped PDSA cycles which saw the successful implementation of an on-site echocardiogram service at The Christie, an increase in the capacity for the service and the introduction of a new referral pro-forma. This enabled the cardiology / oncology staff to devise a patient-specific, individually tailored treatment plan. Patient feedback data on the satisfaction of the service was requested and evaluated; results indicated a high level of satisfaction of the overall experience of the service. These data were supported by similarly high levels of satisfaction from clinicians, with the service being rated as ‘five star’.

CHANGES IMPLEMENTED
An on-site echocardiography service with steadily increasing volumes was established at The Christie. There were streamlined referral and reporting processes supported by established governance procedure and oversight from University Hospital of South Manchester.

PROJECT OUTCOMES
• On-site echo provision has increased from one session per week to 10 sessions per week.
• Patient and referrer feedback has been excellent.
• Outpatient pathway time and the need to transfer to UHSM for inpatient studies have been reduced.

PROJECT UPDATES SINCE COMPLETION OF PROGRAMME
Improvements have been maintained and the team are working on proposals to add on site cardio-oncology outpatient clinics.

ADVICE FOR FUTURE IS4AC TEAMS
It is very worthwhile but you have to pick your project carefully to be appropriately bite sized. Identify an enthusiastic and self-propelled team and let the people on the ground get on with it with the minimum of senior level interference possible.
**ERAS+**

**Organisation**
Central Manchester Foundation Trust

**Team Members**
- Dr. John Moore, Consultant in Anaesthesia and Intensive Care Medicine
- Mr. Thomas Satyadas, Consultant
- Donna Cummings, Nurse
- Sarah France, Enhanced Recovery Sister
- Jo Hunt, Ward Matron
- Nicola McGill, Critical Care and Surgery Physiotherapist
- Nicola Larkam, Directorate P.A.

**PROJECT**
To improve the five year survival for Manchester cancer patients.

**SUMMARY**
There was a need to reduce the length of stay following major elective surgery at Central Manchester Foundation Trust: to address this, a multi-layered approach was developed which encompassed patient education and the creation and implementation of ICough UK. ICoughUK is a series of simple interventions which have shown to reduce lung complications in patients following surgery. These interventions were supported by a suite of resources and multimedia.

**CHANGES IMPLEMENTED**
ICough UK was developed. Surgical patients were educated their upcoming surgery in preparation sessions led by multidisciplinary ERAS+ teams. These sessions were supported by ICOUGH UK information videos and other multimedia support. The ERAS+ICOUGH pathway was embedded within the critical care nursing and medical team structure.

**PROJECT OUTCOMES**
Since September 2014, a 40% reduction in pulmonary complications has been achieved with the utilisation of ERAS+ in a surgical population of greater than 500 patients within a NHS teaching hospital. There was a reduction in number of tablets by 30%
Pathway innovation was supported by talking to patients and their relatives through sponsored listening sessions.
The team had developed a YouTube channel to promote their work.

**PROJECT UPDATES SINCE COMPLETION OF PROGRAMME**
ERAS+ plan to continue working on similar projects within the Trust and beyond, disseminating improvement skills and expertise both locally and nationally within the NHS. The team won first place in Patient Safety Week Project 2016, were finalists in the 2016 QIC Oncology awards and have been featured as an NHS Innovation Case Study.
Finest

Salford Clinical Commissioning Group
Dr. Mhairi Yates, General Practitioner and Clinical Lead for Innovation (Salford)
Claire Vaughan, Head of Medicines Management
Hannah Ahle, Service Improvement Manager
Chris Tyson, Business Intelligence Manager
Dr. Aisha Awan, General Practitioner
Bridget Armour, Senior Programme Manager
Natalie Thomas, Trainee in Intensive Care Medicine

PROJECT
To ensure that 90% of patients of general practice consultations on Mondays are appropriate for general practice management.

SUMMARY
In general practice, Mondays are subject to a 30% increase in telephone calls from patients; this leads to an uneven distribution of work throughout the week and contributes to low morale as clinical staff struggle to meet demand. The FINEST team used ramped plan-do-study-act cycles to understand and evaluate the nature of ‘Monday’ calls, determine the ‘appropriateness’ of GP attendees and commence a trial of alternative consultation methods. These cycles concluded in the general practice ceasing to offer pre-bookable appointments on Mondays and the introduction of a new pathway which saw a GP triage patients over the telephone. Following this new process, the general practice involved reported more effective demand management throughout the week and clinicians and practice staff reported increased satisfaction and reduced stress.

CHANGES IMPLEMENTED
A demand analysis was conducted and the ‘appropriateness’ of the appointments was determined to understand common themes and reasons for the Monday surge. Following a trial, a telephone triage service, operated by a General Practitioner was introduced; this simplified the pathway for appointments and facilitated an increase in ‘appropriate’ appointments. Staff satisfaction survey and patient surveys were administered and assessed to ensure ‘acceptability’ of the new process with both staff and patients. Various resources for patient education (i.e. information leaflets) were developed.

PROJECT OUTCOMES
- Once the GP doctor telephone triage was introduced, appropriateness of appointments on Monday sustainably rose to 100%
- The team had presented their project as an academic poster
- The team produced a film to promote their project
HARP

Organisation
Central Manchester Foundation Trust

Team Members
Dr. Ismail Mohammed: Specialist Doctor in Nephrology and Dialysis
Catherine McKenna, Sister
Joyappa Subbegowda Ponnappa, Ward Manager
Lorraine Peters, Sister
Jane Alderdice, Renal Dietitian
Joanne Prince, Advanced Nurse Practitioner
Nicola Larkam, Directorate P.A.

PROJECT
To reduce avoidable admissions in haemodialysis patients by 20%.

SUMMARY
Admissions to hospital are frequent among patients undergoing haemodialysis at CMFT; the majority of these are unplanned and potentially avoidable (i.e. due to fluid overload, chest infections, and vascular access problems). Patients with recurrent admissions have doubled the one year risk of death when compared with the ‘general’ haemodialysis cohort (21%). In 2013 admissions attributed to haemodialysis patients accounted for over 2,000 bed days; resulting in a cost to CMFT of £1.5 million per annum. HARP concentrated on reducing ‘avoidable’ admissions in haemodialysis patients through weekly dry-weight assessment. The number of admissions due to fluid overload was simultaneously recorded. For two consecutive months over 95% of patients had weekly dry weight assessments; no admissions due to fluid overload were recorded.

CHANGES IMPLEMENTED
Weekly dry weight assessment by a doctor or advanced nurse practitioner was implemented for all patients attending the HD unit. Dry weight was assessed clinically using clinical surrogates such as intradialytic weight gain (IDWG), BP, ankle oedema etc. The number of admissions due to fluid overload on a monthly basis was recorded.
PROJECT OUTCOMES
- Weekly target weight assessments increased from 17.5% of patients to 98.3%. Pathway innovation was supported by talking to patients and their relatives through sponsored listening sessions.
- Prior to the intervention, approximately two patients (1.3% of patients, 10% of admissions) were admitted every month due to fluid overload. Post intervention, there were no admissions due to fluid overload for two consecutive months.

PROJECT UPDATES SINCE COMPLETION OF PROGRAMME
The team are continuing to monitor the project and rolling out the intervention to all satellite haemodialysis units. They plan to spread and embed weekly dry weigh assessment by Doctor/ANP across units. They also plan to focus on awareness and education, and to plot more process and outcome data. A poster was accepted at Kidney Week, Birmingham June 2016.
QTc Busters

Organisation
Manchester Mental Health and Social Care Trust

Team Members
Katherine Parks, Urgent Care Pharmacist
Michelle Cleary, Urgent Care Pharmacist
Sally Peach, Assistant Manager and Community Practice

PROJECT
To ensure 95% of patients on antipsychotics in the South Mersey Community Mental Health Trust receive appropriate QTc monitoring.

SUMMARY
The life expectancy of patients with severe mental illness in Manchester is significantly less than the national average (16-25 years); this can partly be attributed to the cardiogenic and metabolic side-effects of medications that are used for the treatment of mental health conditions. Antipsychotics can cause QTc prolongation which causes a risk of fatal arrhythmias therefore NICE recommend yearly ECGs to monitor this and help reduce the risk. Manchester Mental Health and Social Care Trust Shared Care Protocol recommends annual ECGs for patients on antipsychotics but a baseline audit showed only approx. 40% of patients were receiving this. The QTc Buster team performed multiple plan-do-study-act cycle, concentrating on their primary drivers of: increasing awareness, improving identification of ‘at-risk’ patients, improving engagement and improving access. By the end of their project the team had seen an increase in the number of patients on an antipsychotic, thereby reducing the potential for harm from QTc prolongation.

CHANGES IMPLEMENTED
The team began an awareness and engagement campaign which saw them visit ten general practices monthly to raise awareness of the potential harm from antipsychotics and send out information to mental health staff. A system which could be integrated with general practice for identifying when patients are due physical health checks has been developed and improved, and a facility tab on AMIGOs was created in order to make it easier to identify when an ECG had been completed.

PROJECT OUTCOMES
- Increases in percentage of clients on an AP in South Mersey who received an ECG in the past year.
- Reductions in number of clients on an AP in South Mersey who have never received an ECG.
- All abnormal QTc measurements were acted upon appropriately – however these were relatively low numbers, approximately 3%.
"IS4Ac taught me that with proper planning, anything is achievable. I now have a toolbag of translational skills that I can pull out when required. I no longer see the problems but look for solutions."

- Fozia Ahmed, Cardiac Infection Screening

"IS4Ac was a gradual growth of understanding regarding a new way of seeing things and applying change principles"

- Iracema Loroi, Manchester Mental Health and Social Care Trust

"I found IS4Ac exciting and so applicable to medicine - more relevant than audit and research"

- Alison Phippen, Polypals

"IS4Ac convinced me that even within a large and complex organisation, focus on small measurable improvements made by a small team can beneficially impact patient care."

- Bernard Keavney, The Magicians

"IS4Ac made me realise that empowering the people actually providing the service to make the changes with the minimum of interference provided the best answers."

- Simon Ray, Concord

"Amazing programme, can’t praise it enough. We have been taught advanced Quality Improvement methodology in a very pleasant and practical manner by very charismatic and influential speakers."

- Team Member QUIDD-ICH

"The programme offers a real chance for you to improve patient care."

- Team member, The Magicians

“…know what the course entails before you assemble your team, it’s not just clinical expertise that is needed!”

- Team member, Sepsis-6

“You will work hard but have lots of fun along the way!”

- Team member, Sepsis-6
Cohort 1

<table>
<thead>
<tr>
<th>Team name</th>
<th>Team lead</th>
<th>Organisation</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMFT Rheumatology</td>
<td>Dr. Ben Parker, Consultant Rheumatologist</td>
<td>Central Manchester Foundation Trust</td>
<td>To introduce a Virtual Biologics Clinic into a single large Academic Teaching Hospital Rheumatology Department</td>
</tr>
<tr>
<td>MMHSC</td>
<td>Dr. Iracema Lorio, Senior Clinical Lecturer</td>
<td>Manchester Mental Health and Social Care Trust</td>
<td>To pilot the use of cognitive assessment software delivered on tablets in home-based memory clinics to foster the efficient and sustainable implementation of the technology on a wider scale.</td>
</tr>
<tr>
<td>SRFT Renal</td>
<td>Dr. David New, Consultant Nephrologist</td>
<td>Salford Royal NHS Foundation Trust</td>
<td>To increase the number of patients participating in their own haemodialysis care to 10% by March 2014</td>
</tr>
<tr>
<td>The Christie</td>
<td>Dr. Fiona Thistlethwaite, Consultant in Medical Oncology</td>
<td>The Christie</td>
<td>To develop and implement a sustainable, live information system that will inform future oesophagogastric cancer service and trial development Cancer</td>
</tr>
<tr>
<td>UHSM</td>
<td>Mark Chapman, Project Manager</td>
<td>University Hospital of South Manchester</td>
<td>To increase the proportion of abdominal aortic aneurysm surveillance patients agreeing to participate in pre-operative exercise training from 40% to 70%</td>
</tr>
</tbody>
</table>
## Cohort 2

<table>
<thead>
<tr>
<th>Team name</th>
<th>Access Matters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team lead</td>
<td>Neil Turton, Chief Executive, Salford Health Matters</td>
</tr>
<tr>
<td>Organisation</td>
<td>Salford Clinical Commissioning Group</td>
</tr>
<tr>
<td>Project</td>
<td>To reduce the time taken to access a GP consultation.</td>
</tr>
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<thead>
<tr>
<th>Team name</th>
<th>MIIND</th>
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<tbody>
<tr>
<td>Team lead</td>
<td>Petra Brown, Chief Pharmacist</td>
</tr>
<tr>
<td>Organisation</td>
<td>Manchester Mental Health and Social Care Trust</td>
</tr>
<tr>
<td>Project</td>
<td>Test different models of feedback about prescribing errors and agree the preferred methods that could contribute to reducing prescribing errors by March 2015</td>
</tr>
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<thead>
<tr>
<th>Team name</th>
<th>PolyPals</th>
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</thead>
<tbody>
<tr>
<td>Team lead</td>
<td>Dr. Alison Phippen, Associate Specialist in Palliative Medicine</td>
</tr>
<tr>
<td>Organisation</td>
<td>University Hospital of South Manchester</td>
</tr>
<tr>
<td>Project</td>
<td>To map the extent of the problems caused by polypharmacy in the palliative field and reduce the number of medications taken by in-patients at St Ann’s Hospice</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Team name</th>
<th>Raptor-D</th>
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<tbody>
<tr>
<td>Team lead</td>
<td>Matthew Barker-Hewitt, Deputy Chief Information Officer</td>
</tr>
<tr>
<td>Organisation</td>
<td>The Christie</td>
</tr>
<tr>
<td>Project</td>
<td>Compile a comprehensive and sustainable database of breast cancer patients, where data items are completed within one month of attendance at The Christie, to help identify trial and treatment inequalities, by May 2015.</td>
</tr>
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<thead>
<tr>
<th>Team name</th>
<th>Team BOB</th>
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<tbody>
<tr>
<td>Team lead</td>
<td>Ben Wilson, Lead Clinical Process Analyst</td>
</tr>
<tr>
<td>Organisation</td>
<td>The Christie</td>
</tr>
<tr>
<td>Project</td>
<td>For 90% of all care plans to be initiated following completion of the electronic admission assessment form within six hours of admission by December 2014.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Team name</th>
<th>The Magicians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team lead</td>
<td>Professor Bernard Keavney, Consultant Cardiologist</td>
</tr>
<tr>
<td>Organisation</td>
<td>Central Manchester Foundation Trust</td>
</tr>
<tr>
<td>Project</td>
<td>To develop a multidisciplinary clinic for patients with Marfan syndrome by the end of 2014</td>
</tr>
</tbody>
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## Cohort 2

<table>
<thead>
<tr>
<th>Team name</th>
<th>iCare.2c</th>
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<tbody>
<tr>
<td>Team lead</td>
<td>Professor Graeme Black, Professor of Genetics</td>
</tr>
<tr>
<td>Organisation</td>
<td>Central Manchester Foundation Trust</td>
</tr>
<tr>
<td>Project</td>
<td>To make a precise diagnosis for 70% of children less than 15 years old</td>
</tr>
<tr>
<td></td>
<td>with bilateral cataracts within 6 months of referral to MREH.</td>
</tr>
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<tr>
<th>Team name</th>
<th>MAKIT</th>
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<tbody>
<tr>
<td>Team lead</td>
<td>Dr. Leonard Ebah, Consultant Nephrologist</td>
</tr>
<tr>
<td>Organisation</td>
<td>Central Manchester Foundation Trust</td>
</tr>
<tr>
<td>Project</td>
<td>To achieve a 10% reduction in incident cases of acute kidney injury</td>
</tr>
<tr>
<td></td>
<td>stages two and three over a one year period.</td>
</tr>
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<tr>
<th>Team name</th>
<th>PregPOC</th>
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<tbody>
<tr>
<td>Team lead</td>
<td>Rachel Pearson, Research Nurse</td>
</tr>
<tr>
<td>Organisation</td>
<td>Central Manchester Foundation Trust</td>
</tr>
<tr>
<td>Project</td>
<td>For 95% of women who undergo pregnancy testing in the Emergency</td>
</tr>
<tr>
<td></td>
<td>Department to have it by point of care blood testing by March 2015.</td>
</tr>
</tbody>
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<thead>
<tr>
<th>Team name</th>
<th>Cardiac Device Infection Screening</th>
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<tbody>
<tr>
<td>Team lead</td>
<td>Dr. Fozia Ahmed, Consultant Cardiologist</td>
</tr>
<tr>
<td>Organisation</td>
<td>Central Manchester Foundation Trust</td>
</tr>
<tr>
<td>Project</td>
<td>To reduce the time to diagnosis of cardiac device infection.</td>
</tr>
</tbody>
</table>
## Cohort 3

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<thead>
<tr>
<th>Team name</th>
<th>Team lead</th>
<th>Organisation</th>
<th>Project</th>
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</thead>
<tbody>
<tr>
<td>ERAS+</td>
<td>Dr. John Moore, Consultant in Anaesthesia and Intensive Care Medicine</td>
<td>Central Manchester Foundation Trust</td>
<td>To improve five year cancer survival for CMFT patients</td>
</tr>
<tr>
<td>Concord</td>
<td>Professor Simon Ray, Consultant Cardiologist</td>
<td>University Hospital of South Manchester and The Christie</td>
<td>Improve cardiology input for oncology patients to meet best practice standards</td>
</tr>
<tr>
<td>FINEST</td>
<td>Dr. Mhairi Yates, General Practitioner</td>
<td>Salford Clinical Commissioning Group</td>
<td>To compare the efficacy of two distinct projects delivering extended access and inform commissioning decisions about roll-out across primary care</td>
</tr>
<tr>
<td>Go-Renal</td>
<td>Dr. Fahdel Shadene, Consultant Nephrologist</td>
<td>The Christie</td>
<td>To reduce harm systemic anti-cancer patients over the age of 70 patients who have been diagnosed with renal and oesophago-gastric cancer</td>
</tr>
<tr>
<td>QtC Busters</td>
<td>Katharine Parks, Urgent Care Pharmacist</td>
<td>Manchester Mental Health and Social Care Trust</td>
<td>To ensure 95% of patients on antipsychotics in the South Mersey Community Mental Health Trust receive appropriate QTc monitoring and referral if appropriate by March 2016</td>
</tr>
<tr>
<td>HARP</td>
<td>Dr. Mohammed Ismail, Specialist Doctor in Nephrology and Dialysis</td>
<td>Central Manchester Foundation Trust</td>
<td>To reduce ‘avoidable’ admissions in haemodialysis patients</td>
</tr>
<tr>
<td>MASH</td>
<td>Dr. Mamta Buch, Consultant Interventional Cardiologist</td>
<td>University Hospital of South Manchester</td>
<td>To establish new structural heart intervention service for patients with mitral regurgitation and heart failure</td>
</tr>
</tbody>
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## Cohort 3

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<thead>
<tr>
<th>Team name</th>
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<tbody>
<tr>
<td>Sepsis - 6</td>
<td>To achieve a 50% reduction in admissions to Critical Care through sepsis by 2018</td>
</tr>
<tr>
<td>QUIDD-ICH</td>
<td>To achieve a 10% reduction in the percentage of patients with acute intracerebral haemorrhage who are dead or severely disabled three months after admission to the Greater Manchester Comprehensive Stroke Centre by June 2016.</td>
</tr>
<tr>
<td>Cancer Genetics</td>
<td>To increase the proportion of patients given risk assessments and screening recommendations at the first appointment</td>
</tr>
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<th>Organisation</th>
<th>Project</th>
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</thead>
<tbody>
<tr>
<td>Sepsis - 6</td>
<td>Dr. Ewa Zasada, Consultant in Anaesthesia and Critical Care</td>
<td>The Christie</td>
<td>To achieve a 50% reduction in admissions to Critical Care through sepsis by 2018</td>
</tr>
<tr>
<td>QUIDD-ICH</td>
<td>Dr. Adrian Parry Jones, Consultant Neurologist</td>
<td>Salford Royal NHS Foundation Trust</td>
<td>To achieve a 10% reduction in the percentage of patients with acute intracerebral haemorrhage who are dead or severely disabled three months after admission to the Greater Manchester Comprehensive Stroke Centre by June 2016.</td>
</tr>
<tr>
<td>Cancer Genetics</td>
<td>Dr. Tara Clancy, Consultant Genetic Counsellor</td>
<td>Central Manchester NHS Foundation Trust</td>
<td>To increase the proportion of patients given risk assessments and screening recommendations at the first appointment</td>
</tr>
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## Cohort 4

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<tr>
<th>Team name</th>
<th>Team lead</th>
<th>Organisation</th>
<th>Project</th>
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</thead>
<tbody>
<tr>
<td>ABC-ICH</td>
<td>Dr Adrian Parry-Jones, Consultant Neurologist</td>
<td>Salford Royal NHS Foundation Trust</td>
<td>10% reduction in death and severe disability after acute ICH by April 2018 in Greater Manchester</td>
</tr>
<tr>
<td>Collaterol</td>
<td>Dr Martin Punter, Consultant Neurologist</td>
<td>Salford Royal NHS Foundation Trust</td>
<td>To refer 95% of appropriate patients with impaired pre-stroke cognition to the MATS service</td>
</tr>
<tr>
<td>ED4D</td>
<td>Dr. Emma Vardy, Consultant Geriatrician</td>
<td>Salford Royal NHS Foundation Trust</td>
<td>To improve delirium screening compliance in the ED to achieve 65% for all patients admitted non-elective admissions by the end of 17/18</td>
</tr>
<tr>
<td>FFS 2020</td>
<td>Mr Julian Gilbody, Consultant Orthopaedic and Trauma Surgeon</td>
<td>Central Manchester Foundation Trust</td>
<td>To redesign the out-patient pathway for musculoskeletal injuries in Manchester Royal Infirmary through implementation of direct discharge protocols for stable injuries in ED and reducing the time to review for 95% of remaining injuries to 72h or less by introduction of a virtual fracture clinic by January 2018</td>
</tr>
<tr>
<td>Inspire</td>
<td>Dr Binita Kane, Respiratory Consultant</td>
<td>University Hospital of South Manchester</td>
<td>To ensure that 75% of patients presenting to ED with acute asthma have an objective assessment of severity within 30 minutes of presentation by May 2018</td>
</tr>
<tr>
<td>OH-MG Central and South</td>
<td>Mr Martin Ashley, Consultant Dental Surgeon</td>
<td>Central Manchester Foundation Trust</td>
<td>To improve the oral health of in-patients in our hospitals</td>
</tr>
</tbody>
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## Cohort 4

<table>
<thead>
<tr>
<th>Team name</th>
<th>optIBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team lead</td>
<td>Dr Mattias Soop, Consultant General and Colorectal Surgeon</td>
</tr>
<tr>
<td>Organisation</td>
<td>Salford Royal NHS Foundation Trust</td>
</tr>
<tr>
<td>Project</td>
<td>80% of adults undergoing elective or expedited abdominal surgery for IBD will complete the five elements of the optIBD clinical pathway by 31 May 2018</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Team name</th>
<th>Sugar Matters</th>
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<tbody>
<tr>
<td>Team lead</td>
<td>Dr Claire Higham, Consultant Endocrinologist</td>
</tr>
<tr>
<td>Organisation</td>
<td>The Christie</td>
</tr>
<tr>
<td>Project</td>
<td>To improve diabetes care at the Christie to above national standards (as defined by NaDIA 2016) Specifically: 75% of inpatient days as “good Diabetes days”</td>
</tr>
</tbody>
</table>

For more information email Haelo at is4ac.haelo@nhs.net