The Health Education England Extended Surgical Teams Pilot: Year 2 Progress Report

Building on the professional development of the extended surgical team

This report has been supported by:

The Association of Surgeons in Training (ASiT)

CoPSS

Confederation of Postgraduate
Schools of Surgery

The Confederation of Postgraduate Schools of Surgery (CoPSS)

The Joint Committee on Surgical Training (JCST)

Front page:

Left picture:
Extended surgical team Barking, Havering and Redbridge University Hospitals NHS Trust

Right picture:
Speakers at Future Surgery 2022

Contents

Summary 4
Foreword 5
Executive summary 6
Background & introduction 7
Pilot site achievements 9
It's not all rosy 27
Equality, diversity and inclusion in extended teams 32
Retention in extended teams 34
Expanding professional capability 35
SAS doctors and their role in the extended surgical team 42
EST – year 3 46
Communication and outputs 47
Conclusion and recommendations 48
Annex of documents 49
Appendices 50

Summary

1. **The extended surgical team continues to function in a variety of settings, both emergency and elective.**

2. **The extended surgical team is safe and offers opportunity for improving pathways and efficiency in acute settings.**

3. **Extended surgical team members are keen to access opportunities for further professional development.**

Foreword

I am delighted to be sharing this second-year report of the HEE Extended Surgical Team pilot. Last year's report demonstrated that the extended surgical team could work safely in a variety of both elective and emergency surgical settings, and showed the positive response from trainees, patients and NHS staff. This report focuses on how we retain valuable team members through further professional development, facilitating access to shared teaching and leading the development of multi-professional supervision, while being attentive to the need to improve equality, diversity and inclusion. At a time of huge pressure on surgical services and on individual doctors in postgraduate training programmes and their supervisors, it is encouraging to see real progress with the development of the wider surgical team to help meet the challenges of both service and training recovery and provide a model for the future. I would like to thank all those who have continued to work so hard and so positively to make this pilot a success.

Professor Sheona MacLeod
Deputy Medical Director, Education Reform Honorary Professor, University of Nottingham and University of Leicester

---

I am extremely pleased to report on a second productive year in the extended surgical team project, with all pilot sites continuing to develop their training and workforce model to the benefit of patients and learners. In the last 12 months we have seen some of the pilots looking into new areas of the hospital to utilise the EST model, and valuable lessons being learned around how an EST can be structured and how it can function if you wish to retain staff. Going forward, it is a pleasure to continue the project for a third year, recruiting new sites that are selected because issues with training have been recently reported. We will also be exploring the use of multi-professional supervision in the EST setting to add to the other national project exploring this area of practice.

Dr Paul Sadler
Postgraduate Dean, HEE Thames Valley & Wessex Regional Postgraduate Dean for HEESE

I am delighted that the Health Education England Extended Surgical Team pilot has completed a second year. Our healthcare landscape remains challenging for a number of reasons, some related to the pandemic and others not. Surgery, in particular, faces significant issues around both service and training. The unique skills and flexibility provided by the extended surgical team have added value to the sites in which they work and improved the care of their patients. It is apparent that multi-professional teams will be key to post-pandemic recovery in surgery. We hope this report will enable the good practice seen in the pilot sites to be replicated throughout the NHS. Working with the teams in this pilot has been a pleasure. The energy and enthusiasm of every member of the virtual community – despite NHS pressures – is inspirational.

Miss Gill Tierney
Head of School of Surgery, HEEM Honorary Professor, University of Nottingham

---

Executive summary

This report has been written by the Health Education England Extended Surgical Teams (HEE EST) project team with input, modification and comment from the extended surgical team (EST) pilot community and the Association of Surgeons in Training (ASiT). The Joint Committee on Surgical Training (JCST) and Confederation of Postgraduate Schools of Surgery (CoPSS) have also contributed. The project team consists of HEE staff, surgeons, and EST members. The personnel in the Medical Education Reform Project Team changed in this second year of the pilot and we welcomed two new HEE team members. All other personnel were unchanged and a health economist was not commissioned for the second year of the pilot.

The extended surgical team is a trained multi-professional team supporting the entire surgical care pathway. It is made up of consultant surgeons supported by doctors in training, as well as staff and associate specialist (SAS) doctors, complemented by an EST comprising, for example: advanced practitioners (APs), physician associates (PAs), prescribing pharmacists, and surgical care practitioners (SCPs). Members of the EST's core clinical skills are developed in-role, generally with 80 per cent service and 20 per cent training job plans, which enables the most advanced and experienced EST members to function clinically at the equivalent level of a core trainee.

The pilot started in 2020, involved eight sites across the NHS in England, and has been evaluated to enable shared learning and adoption at scale. Novel service developments in the pilot continued in year two and are highlighted in this report.

The pilot sites, lead clinicians and extended teams within sites were unchanged. The network met bimonthly online, as in the first year. The network forum was an opportunity to share best practice and discuss particular challenges. Progress reports from sites were submitted and collated throughout the year. There was a dedicated email address for queries arising between network meetings.

Recognising that staff retention in these specialised roles can be a challenge, a specific aim of the second year was to investigate the reasons for this and to focus on solutions. Two main strategies were adopted to improve the situation and encourage retention. One strategy was to enable further professional development for the extended team members. A second strategy was to facilitate access to shared online clinical teaching with core surgery trainees. The assessment of the impact of these two strategies will form part of the year three report.

Background & introduction

The HEE EST pilot commenced in September 2020. It was aimed at new 'extended' surgical teams, which include consultants, doctors in training and SAS doctors, but the focus of this pilot was the role of the other, non-medical practitioner team members.

The year one report of the HEE EST pilot was well received. The pilot demonstrated that the extended surgical team could work in a variety of surgical settings, both elective and emergency. The pilot demonstrated that the extended team was acceptable to trainees, patients and the wider staff within the NHS. The pilot showed that the extended team was safe and, in specific settings, could contribute to the efficiency of pathways. Commendation from Sir David Behan was shared with the sites, all of whom were keen to build on the achievements of the year one experience.

With this aim, a second year was commissioned with monies allocated from within the Medical Education Reform Team budget (sat within Directorate of Education & Quality in HEE). Clear aims for the second year were to build on the established teams, continue innovation and discover potential solutions to the common reasons for failure of such teams. Two key areas for this second year were the professional development of the EST and the use of digital technology in education.

Site	Specialty	Elective / emergency	EST	MPS pilot
East Suffolk and North Essex NHS Foundation Trust – Ipswich Hospital	T&O	Both	ACP	No
Manchester University NHS Foundation Trust – Wythenshawe Hospital	General surgery	Emergency	ACP	Yes
Hull University Teaching Hospitals NHS Trust	Cardiothoracic and plastic surgery	Elective	SCP/ACP	Yes
Countess of Chester NHS Trust – Countess of Chester Hospital	General surgery	Emergency	ACP	No
Barking, Havering and Redbridge University Hospitals NHS Trust – King George Hospital & Queen's Hospital	General surgery, T&O, ENT	Emergency	ACP	No
Bolton NHS Foundation Trust – Royal Bolton Hospital	General surgery	Emergency	ACP	Yes
Leeds Teaching Hospitals NHS Trust – St James's University Hospital	General surgery	Emergency	ACP	Yes
University Hospitals of Birmingham – Heartlands/Solihull	General and vascular surgery, urology, ENT	Both	ACP	No

Table A: EST pilot sites, including multi-professional supervision (MPS) sites

Members of the EST project team:

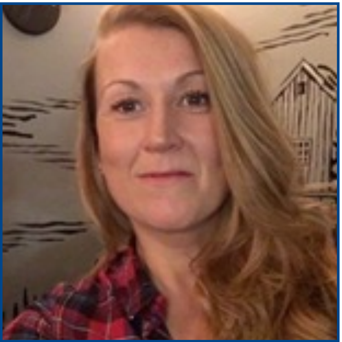
Paul Sadler
Postgraduate Dean HEE Thames Valley and Wessex, Regional Postgraduate Dean for HEE South East

Miss Gill Tierney
Head of School of Surgery HEE East Midlands, Honorary Professor University of Nottingham, President Association of Surgeons Great Britain and Ireland

Clare Sutherland
Associate Postgraduate Dean Interprofessional Learning, HEE, East Midlands

Sara Dalby
Cheshire and Merseyside Integrated Care System

Becky Shaw
Medical Education Reform Programme Team, HEE



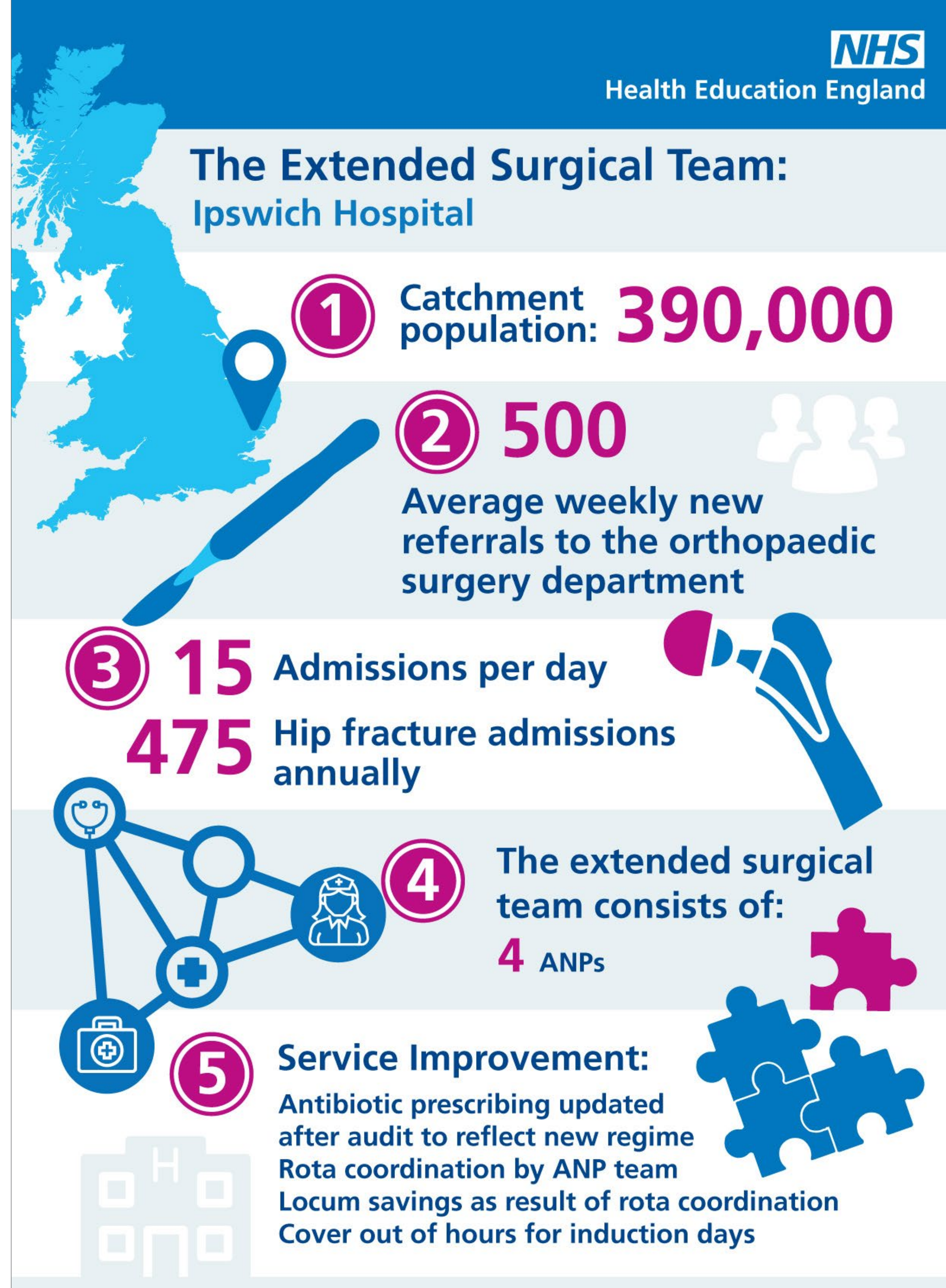
Kate Atkinson
Medical Education Reform Programme Team, HEE

Jenna Harrison
Medical Education Reform Programme Team, HEE

Fuad Abid
Associate Postgraduate Dean for SAS Doctors at HEE, West Midlands

Mr Martin King
General Surgery Registrar NIMDTA ADEPT Clinical Leadership Fellow President, Association of Surgeons in Training

Pilot site achievements



East Suffolk and North Essex NHS Foundation Trust – Ipswich Hospital

In the trauma and orthopaedic (T&O) department, we now have four advanced nursing practitioners (ANPs). The rotas are constructed such that, at junior doctor changeover times, the ANPs are allocated the twilight and night shifts to improve patient safety. The ANPs oversee the junior doctors rota in conjunction with an administrator, which has led to fewer predictable rota gaps and so a decrease in locum agency cover.

ANPs have conducted an audit on trust T&O antibiotic prophylaxis and a subsequent quality improvement project, which has resulted in laminated guidelines in all T&O theatres. Despite junior doctors sickness of three per cent, there has been no sick leave in the EST group.

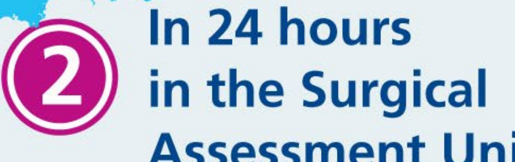
Allocation of the EST has facilitated junior doctors attending their weekly teaching. The development of the EST job plan now has two hours per week for study and reflective practice embedded in it.

Tim Brammar (Pilot Site Lead), Consultant T&O Surgeon, East Suffolk and North Essex NHS Foundation Trust

The Extended Surgical Team:
Wythenshawe Hospital

1 Catchment population: 450,000

Beds: 792



2 In 24 hours in the Surgical Assessment Unit:
- 26 Patients seen
- 2 Patients admitted
- 24 Patients managed ambulatory

3 Core surgical trainees work a 1 in 12 full shift

4 The extended surgical team consists of:
- 5 ACPs
- 1 Physician associates
- 1 StR level trust grades

5 **Service Improvement:**
Ambulatory Care Unit is completely embedded to include Plastics patients, ongoing estate redevelopment for a plaster room and specific ENT facility. Offers opportunities for upskilling of ANPs and increased footfall through the unit

Manchester University NHS Foundation Trust – Wythenshawe Hospital

Sarah Duff (Pilot Site Lead), Consultant General and Colorectal Surgeon, Manchester University NHS Foundation Trust

The surgical ambulatory care unit (SACRU) is now a completely embedded unit – if staff leave, the trust will demand that it continues. The HEE EST pilot has supported the unit to develop from infancy to becoming completely established. It has transformed the way we work to treat emergency and the trust has recognised that.

Year two has brought some challenges to the Wythenshawe site. We lost a senior ANP who moved trust, and a physician's associate. The loss of the senior ANP meant that the opening hours of SACRU had to reduce.

However, there have been developments and significant achievements.

1. We are currently open 8-6 Monday to Friday and 8-2 on Saturday.
2. We have appointed a new full-time experienced ANP who is about to start independent practice and be counted in the numbers of staff. This will allow extended working hours to return back to 8-8 in the week by the end of 2022.
3. Our trainee ANP has completed her first year of the course and an additional trainee has been recruited and started work, starting the ANP course in September 2022.
4. SACRU has been extended to the plastic surgery team who see patients on SACRU on Saturday. This commenced on 29th October with the aim of improving patient experience and reducing unnecessary waits in the emergency department.
5. The trust has introduced an electronic patient record, Hive. One of the ANPs has been a Hive superuser and has cascaded the training to the whole ANP team. This has been good but also a challenging learning curve. Hopefully this will give us more ability to audit practice/throughput in the future.
6. The introduction of Hive has improved the experience of urology patients in SACRU as it has allowed remote assessment and ordering of tests by the urology team.
7. There is a close working relationship between the Hive team to improve same day emergency care working.
8. Two of the ANPs have volunteered to get involved in the multi-professional supervisor pilot and will be attending the training.

The Extended Surgical Team:

1 Tertiary services catchment population **1.25 million**

2 **2** tertiary service surgical departments:

Plastic Surgery
Cardiothoracic Surgery

3 **1,052** Average monthly new referrals to the plastic surgery department

4 Annual average procedures:

750 Cardiac surgeries
750 Thoracic surgeries

5 The cardiothoracic extended surgical team consists of:

2 Qualified ACPs
3 Trainee ACPs
5 Surgical Care Practitioners

The plastics extended surgical team consists of: **2** Surgical Care Practitioners

6 Service Improvement:

Trauma tertiary surveys implemented in Cardiothoracic Ward Castle Hill Hospital. In the first 4-week period the results demonstrated **9 out of 13 patients** had a survey completed

Hull University Teaching Hospitals NHS Trust

During 2022, trainee EST members have continued to develop in their training role, developing clinical competency within plastic and cardiothoracic surgery. Achievements to share for the year are:

Karen Jarvis
(Pilot Site Lead),
Corporate Lead
Advanced Practice,
Hull University
Teaching Hospitals
NHS Trust

Cardiothoracic:

- Improvement to the ward-round format and template to improve efficiency with an average saving of 1.5 hours per day.
- Consistent allocation of junior surgical trainees to theatre (20 sessions per month).
- Trainee ACP successfully completed the ALS instructor course.
- Successful ARCP of all EST members.
- Completion of PICC line placement training for team members.

Plastic surgery:

- Completion of the academic programme, due for completion in September 2023.
- Approved patient group directions for the use of local anaesthesia.
- Developing specialist interests within the specialty.
- Agreement to undertake non-medical prescribing in September 2023.

General achievements at HUTH:

- Developed an effective working group to review and develop junior doctor and non-medical workforce role rostering. This involved reviewing contractual differences, reviewing utilisation of the e-rostering software and payroll capabilities, and reviewing and implementing effective co-rostering of medical and non-medical staff within a surgical specialty.

Members of the extended surgical team at Hull University Teaching Hospitals NHS Trust

NHS
Health Education England

The Extended Surgical Team:
The Countess of Chester Hospital

1 Catchment population: **496,000**
Beds: **410**

2 Each day in the Surgical Assessment Unit:

- **11** New emergency general surgical referrals seen
- **61%** SAU referrals managed on an ambulatory basis
- **11** Patients seen in review clinic
- Unwell patients from ED go straight to ward

3 Core surgical trainees work a **1 in 8 full shift**

4 Surgical registrars work a **1 in 9 full shift**

5 The extended surgical team consists of:

- **2** ACPs
- **3** Trainee ACPs
- **2** Physician associates

6 Novel services include:

New Same Day Emergency Centre with ACPs and PAs supporting the emergency general surgery service streamlining patient care

7 Service Improvement:

The EST support has allowed surgical trainees increased surgical training opportunities

Countess of Chester NHS Trust – Countess of Chester Hospital

The second year of the extended surgical teams (EST) pilot at the Countess of Chester Hospital NHS Foundation Trust has seen two staff members complete their advanced care practitioner (ACP) training, and the appointment of two further trainee ACPs to join another ACP in training. This will ultimately provide five ACPs who, along with two physician associates (PAs), will support the emergency general surgical service. The trust has appointed a lead for ACPs, who has helped to support the training and transition to advanced practice for the ACPs.

Nicola Eardley (Pilot Site Lead), Consultant General and Colorectal Surgeon, Countess of Chester NHS Trust

By the time of the publication of this report, the trust will have opened its new same day emergency centre (SDEC), which will support the assessment and management of patients presenting with acute surgical conditions. The EST, along with medical staff, has been instrumental in developing standard operating procedures and pathways for the SDEC, and the radiology department has been fully supportive in creating a policy to allow the ACPs to request a range of imaging investigations (radiographs, USS, CT, MRI). At present the PAs can only order tests that do not involve ionising radiation (USS, MRI) due to IRMER regulations, but we expect this will change at some point in the future. We have piloted having the ACPs acting as co-ordinators for taking acute surgical referrals from GPs and the emergency department in order to streamline/co-ordinate referral processes.

Sunanda Roy Mahapatra, RCS Tutor, Countess of Chester NHS Trust

The development of the EST has had many benefits, even though it is still be developed. The patient benefits will hopefully be realised further as the team matures and the service transfers to the new SDEC. In the shorter term we have already seen the benefits to surgical training. Having the EST seeing patients in the surgical assessment unit (SAU) has increasingly allowed core trainees to attend emergency theatre lists, and has taken some of the workload pressure off the trainees. The PAs have been able to support the ward rounds, resulting in improved continuity of care, extra help with the workload and support for Foundation doctors to attend formal teaching. The PAs have also provided invaluable assistance in the operating theatre. Consultant workforce expansion has not been accompanied by the same expansion in surgical trainees, so the PA theatre support is essential to allow service provision while not distracting from core/specialty trainee theatre opportunities. A longer term aim is to have members of the EST on the "SHO" (core trainee/FY2) on-call rota in order to support night and weekend working, reducing rota gaps and locum spend and increasing the time spent in elective work – including elective operating and clinics. Looking to the future, the EST will be instrumental in auditing practice and outcomes to continually develop the service.

NHS
Health Education England

The Extended Surgical Team:
Barking, Havering and Redbridge University Hospitals

Catchment population: **850,000**

Beds: **900**

In 24 hours in the Surgical Assessment Unit:
- **60** Patients seen
- **25** Patients admitted
- **15** Patients managed ambulatory

Core surgical trainees work a **1 in 9 full shift**

The extended surgical team consists of:
- **9** ANPs
- **19** FY1s
- **6** CSTs
- **4** Doctors Assistants
- **2** Trainee ANPs
- **12** CST level trust grades
- **19** Surgical registrars

Novel services include:

ACP run elective inpatient wards, post-op **wound clinic**, ACP **independent endoscopy** lists, 7 day a week **'hot clinic'**

Service Improvement:

ANP introduced to run elective cross-specialty inpatient wards:
- free capacity for Core Trainees to attend theatre / training
- patient care surveys for overall impact - rated 9.2 out of 10 by HCP and 5 out of 5 by patients

Conclusions - We are increasing ANP visibility to surgeons and patients so they are more aware of their role and contribution

Barking, Havering and Redbridge University Hospitals NHS Trust – King George Hospital & Queen's Hospital

We have seen nearly double patient flow through our COVID-secure surgical hub as we recover from the effects of the pandemic (appendix 3). Despite this significantly increased volume, we have maintained standards such as: (a) discharge summaries complete prior to 13:00, and (b) average discharge times before 16:00. This has meant beds are free to receive new postoperative patients and patients aren't held in recovery. The discharged patients are going home at an appropriate time, without extensive delays waiting for discharge letters and medication. In addition to this, we have been able to successfully implement a number of high-volume, focused operative weeks in orthopaedics, general surgery (hernias), and gynaecology including endometriosis complex joint cases, known as 'perfect week', to tackle and reduce the backlog of patients awaiting surgery due to the COVID-19 pandemic. This has been promoted locally and nationally[1] and has been praised by Professor Neil Mortensen, president of the Royal College of Surgeons, Dec 2021[2,3]. This work has also been showcased in a report by the Royal College promoting surgical hubs[4].

Mr Richard Boulton (Pilot Site Lead), Consultant Colorectal Surgeon, Barking, Havering and Redbridge University Hospitals

Ultimately the value of ANP within the framework of postoperative surgical care has been recognised as integral to the successful bid to confirm government funding to expand the surgical hub at King George Hospital, which will include two new theatres, upgraded staff facilities and double the number of recovery beds[5].

I can confirm that none of our senior house officers (including six core surgical trainees) have been required to cover the roles of our ANP, and they have therefore been able to continue to attend theatre and have the most competitive logbooks in our region in part thanks to this. They all achieved ARCP Outcome 1 and progressed in training during this pilot period. This has previously been highlighted in progress reports with quotes such as:

"Having ANPs on the ward has enabled the core trainees and FY1s to be released from dedicated ward duties and attend elective theatre lists. Trainees have been able to attend elective theatres twice a week on average, with rotas matched to their clinical supervisors' lists. This consistency of training experience has been of huge benefit to trainees through a return to more of a traditional firm structure."

1 https://www.bhrhospitals.nhs.uk/news/our-perfect-week-sees-250-patients-get-the-surgery-they-need-in-just-seven-days-including-natasha-31-who-had-a-total-hip-replacement-2629/#:~:text=We%20held%20a%20'Perfect%20Week,to%20the%20Covid%2D19%20pandemic
2 https://www.bhrhospitals.nhs.uk/news/innovative-work-to-reduce-waiting-lists-praised-by-leading-doctor-3329
3 https://www.thetimes.co.uk/article/the-case-for-surgical-hubs-is-overwhelming-hkzzz567s?gclid=Cj0KCQiA37KbBhDgARIsAIzce15mPhMzG6S5Q0L18v6C1RQUbtCSum3eRqW66QEqMpqmdBYU03jRE80aAolXEALw_wcB
4 https://www.rcseng.ac.uk/about-the-rcs/government-relations-and-consultation/position-statements-and-reports/the-case-for-surgical-hubs/
5 https://www.bhrhospitals.nhs.uk/news/work-to-get-underway-on-14m-expansion-of-king-george-hospital-surgical-hub-including-two-new-theatres-3876

Barking, Havering and Redbridge University Hospitals NHS Trust – King George Hospital & Queen's Hospital - Continued

"As a core surgical trainee, it has been difficult to juggle theatre exposure with ward responsibilities in the past. The presence of ANPs has permitted me to get more time in theatre without interruptions or being recalled to the ward for routine jobs. This has been so valuable as I try to make up for lost theatre time during the COVID-19 pandemic."

Other healthcare professionals' verbal feedback includes:
"An extremely valuable part of the surgery team. Being permanent or long-term staff, they are able to guide the junior doctors and help in their induction as well."

"They are key professionals during rotation of junior doctors, helping them to learn their tasks and guaranteeing continuity of care."

"Friendly, approachable. Excellent support for junior team."

Mr Boulton has been nominated for the ASiT Swann-Morton Silver Scalpel 2023[6], promoting excellence in surgical training.

Members of the EST at Barking, Havering and Redbridge University Hospitals NHS Trust

6 https://twitter.com/ASiTofficial/status/1591166659519471616?s=20&t=R7Q1owuTp9xA_cbFKPuLqw

The Extended Surgical Team:

Royal Bolton Hospital

3

In four months to **October 22** our ACP's assessed **1131 patients** and achieved same day discharge for **96%**

5

The extended surgical team consists of:

4 ACP's + **2** trainee ACPs in acute care

6

Implementation of CNS follow up with a **cost saving of £50 per patient**, a long term relationship with a small number of CNS's for patients rather than changing rotational doctors and increased capacity for other pathways

Bolton NHS Foundation Trust – Royal Bolton Hospital

James Pollard (Pilot Site Lead), Consultant Colorectal & General Surgeon, Bolton NHS Foundation Trust

Following recruitment to the extended role ANPs in acute care, we now have two trainee ANPs in addition to the four existing members of staff.

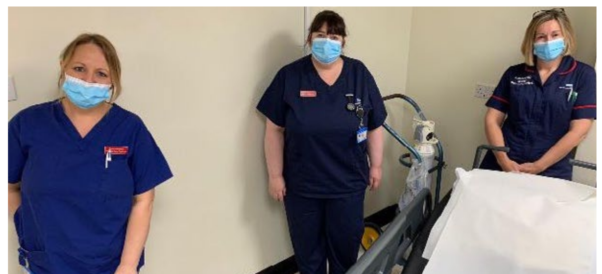
Continued development of an extended outreach role into emergency department is facilitating patient flow and reducing time to decision-making through pro-active identification of surgical patients. An audit of 1,330 patients presenting via emergency department to the acute service showed a 74 per cent same-day discharge rate. The rate of discharge and time to decision-making were both reduced when compared to pre-pilot data.

One ANP has taken the opportunity offered through the pilot to become an EST supervisor.

In year two, colorectal specialist nurse follow-up of cancer patients began. Clinics with 10 slots are being delivered to reduce demand on consultant clinics. Each slot represents a cost saving of approximately £50 and allows consultant slots to be used to see new patients. This increases capacity in urgent and routine pathways. Every two follow-up slots can be converted to a new patient slot. It supports development of a long-term relationship with a small number of clinical nurse specialists (CNSs) for patients.

The role of one colorectal CNS was extended with support from the EST to develop new two-week-wait direct-to-test pathways. It is estimated that these changes will increase the proportion of referrals going direct to test from 15 per cent to 75-85 per cent. This would equate to approximately 200 clinic slots per month to support other pathways. The development phase is complete and we are currently seeking governance sign-off before implementation.

Colorectal CNSs and acute ANPs have used EST funding to access training and education to expand their roles. Positive feedback has been received in relation to increased job satisfaction and feeling valued.



Members of the EST at Bolton NHS Foundation Trust

The Extended Surgical Team:
Leeds Teaching Hospitals

1 Catchment population: **780,000**

Beds: **2,500**

2 **7 hospitals:**

Leeds General Infirmary, St. James' University Hospital, Seacroft Hospital, Wharfedale Hospital, Chapel Allerton Hospital, Leeds Children's Hospital, Leeds Dental Institute

3 **Daily EGS unit patient numbers:**

- **37** Ambulatory Surgical Centre
- **50** Surgical Assessment Unit
- **75%** GP referrals managed on ambulatory pathway

4 **The extended surgical team consists of:**

4 qualified ACPs + **1** rotational trainee ACP, **5** EGS Trust grade fellows on LST rota/supporting elective hub services, **2** EGS research/trust grades on HST rota

5 **Services include:**

ACPs led LA abscess pathway, virtual ward and follow up EGS training week including SIM sessions and SHO level theatre lists

6 **Service Improvement:**

100% conversion of EGS fellows to national training numbers 2021-2022 cohort

Leeds Teaching Hospitals NHS Trust – St James's University Hospital

Adam Peckham-Cooper
(Pilot Site Lead)
Consultant Emergency General Surgeon,
Leeds Teaching Hospitals NHS Trust

Following the success of the year one pilot, Leeds Institute of Emergency General Surgery has embedded, consolidated and expanded the extended surgical team delivering emergency general surgical services in Leeds. We now have four qualified ACPs working within the team who work independently within our ambulatory surgical clinic (ASC), managing surgical GP referrals with a focus on keeping patients out of hospital and conducting local anaesthetic procedures. In addition, they continue to provide acute ward round support during the week and weekends on a rotational 1:4 basis, supporting and educating the FY1 team.

As part of advancing their roles further, we are due to launch a full virtual ward pathway, in partnership with Leeds Community Healthcare (LCH) NHS Trust and community partners, which will allow us to manage a range of patients at home in a monitored fashion. We are hoping to have approximately 20 surgical patients on this ward by mid-2023. The ACP team has been instrumental in developing and driving some of these pathways. In addition, we are delighted to have three members of our ACP team taking part in the EST multi-professional supervision pilot and further utilising their experience and professionalism.

Aligned with the EST project, we continue to have a successful 'EGS fellow' programme. We now employ seven trust-grade fellows at FY3 level and two at CT3 level (an expansion of three from year one). Along with the ACP team, these doctors support our EGS activities, including rapid access lists, emergency theatres, elective and acute clinics, and off-site elective hub activities. Funded from a business case focusing on reducing locum spend to fill rota gaps at both LST and HST level, this team is employed on more formalised job plans designed to optimise chances of success for formal training pathway applications. Fellows are guaranteed a day of CPD, one elective list and two clinics a week, and they are encouraged to complete workplace-based assessments in each session.

The 2021-2022 cohort celebrated a 100 per cent success rate in terms of conversion to formalised training programme jobs at core or higher surgical training level, and has halved our locum spend for financial year 2021-2022.

We are looking to expand the team to six full-time ACP equivalents as trainees qualify within the trust, and with further experience the roles will evolve and expand further. The EST project in Leeds has undoubtedly been a huge success and delivered a dynamic, flexible and complementary team, supporting the delivery of services across the trust.

NHS
Health Education England

The Extended Surgical Team:
University Hospitals Birmingham

1 Catchment population: 1,030,000

Beds: 2,700

2 4 hospitals: Queen Elizabeth Hospital, Heartlands Hospital, Solihull Hospital, Good Hope Hospital

The EST works across 2 of the sites - Solihull and Heartlands

3 In 24 hours in the Surgical Assessment Unit: 46 Patients seen across urology, GS and vascular, 19 managed ambulatory

4 The extended surgical team consists of:

- 1 EST lead/clinical Educator
- 4 qualified sACPs and 1 trainee
- 13 Physician Associates

5 sACPs based in EGS at BHH

PA are speciality based at BHH and cover 1 week in 12 at Solihull green site

6 Service Improvement:

Improving patient pathways via ACP working in SAU and Hot clinic re-writing the post pandemic pathways revisions for Renal stones/Ureteric Colic, Biliary Colic, and the abscess pathway

University Hospitals of Birmingham

Mark Gannon (Pilot Site Lead), Vascular Surgeon, University Hospitals Birmingham

The EST Pilot is based at Birmingham Heartlands Hospital and Solihull Hospital, which are parts of University Hospitals Birmingham. The second year of the EST pilot has seen continued growth and development of the physician associates (PAs) and surgical advanced clinical practitioners (sACPs) teams. As the PAs and sACPs have become more experienced, there has been development in their roles and development of the clinical and professional infrastructure around them. There are four fully trained and qualified sACPs in post, with one in training, and 13 PAs, with funded recruitment plans to expand to 20 PAs and nine sACPs. The EST clinical educator lead has been successful and we plan to appoint a lead PA to work on professional and pastoral aspects of the growing EST. The sACPs who were training have successfully completed their clinical and master studies, and as they qualify the capacity to train the following cohort improves. The sACPs focus on emergency surgery working in SAU and surgical ambulatory emergency care. The PAs spend their first year rotating through the surgical specialties, becoming orientated in vascular surgery, urology, colorectal surgery, upper GI surgery, ENT and emergency surgery, before taking longer term roles embedded in a surgical specialty. Six PAs have embedded roles and the others are still on rotations. While the primary function of the PAs is to work alongside doctors in training and provide safe ward cover and emergency care, the PAs who have embedded roles are developing specialty elective roles, for example in endovenous services, ENT clinics, pelvic exenteration pathway development, and Bariatric clinics.

In each specialty, a curriculum is developed by the clinical and education lead for urgent and non-urgent pathways. This happens in ENT, vascular, urology, UGI and colorectal surgery. There is also a multi-professional education programme, and specific courses are being developed in acute surgical care and theatre practice.

The EST has been involved in a review of ambulatory and same-day emergency services, and the ACPs have written post-pandemic pathways for biliary colic, renal stones and abscesses. The senior sACPs are involved in the day-to-day deployment of the EST and the doctors in training, to ensure safe staffing of the wards and to facilitate training time for the doctors.

University Hospitals of Birmingham – Continued

As the EST professionals have grown in experience, they have been involved in teaching and assessment roles in surgical practice at the local universities that train and assess PAs and ACPs, as well as in the trust where they teach specialist and advanced practice development.

Our first two surgical PA students started recently and there will be regular surgical placements beginning in the new year.

Induction programmes for doctors in training at all grades receive a major contribution from the EST, embedding from the outset the multi-professional approaches and the ways in which they integrate. The embedded PAs have also created bespoke induction packages to help settle new doctors into their respective specialties.

The EST has provided considerable flexibility and responsiveness, which has helped safeguard surgical training by covering unexpected rota gaps, backfilling during protected teaching time, and working additional supporting shifts at weekends in response to trainee feedback.

The EST was funded following a surgical workforce review. In light of the success of the EST, similar reviews have been taken in acute medical specialties, which is leading to the development of an extended medical team in which the PA workforce will trial a 48-hour working week.

It’s not all rosy…

The HEE EST pilot team is conscious of the need to work closely with key stakeholders. It was apparent, during national presentations by members of the pilot team, that trainees felt it important to have the opportunity to give “real-world” feedback on the benefits and challenges of working with extended team members in surgery.

There were anecdotes of difficulties depending on the stage of training of the trainee and the longevity of relationships with the EST members in the team. Occasionally the surgical trainee felt excluded, as the consultant trainer and extended team member had worked together for many years prior to the rotation of the trainee. There was also concern that EST members and trainees may be “chasing” the same learning opportunities. It is important to recognise that open communication and a culture where everyone can speak up to identify and resolve issues early in an attachment leads to a productive working environment for all. This issue was discussed with ASiT who, after tabling as a council agenda item, provided the following anonymised examples, which we hope will guide and help towards the establishment of functional teams in the future. We are grateful to ASiT for providing this priceless and honest insight.

Martin King (ASiT) and Gill Tierney at the Future Surgery event, November 2022.

General surgery registrar

Within our department we have a surgical nurse trainee. For me personally, I have found her to be extremely useful to have as part of the team. Particularly within surgery, she is able to hold the camera whilst I perform the operation, including complex cases (such as right hemicolectomies and anterior resections). This also means that the consultant can be out of the theatre, providing me with the opportunity to work through the case independently but knowing they are nearby if I need them.

I can then take her through basic suturing/wound closure. Ideally, I would prefer to be teaching the SHO, but they are often in clinic or CEPOD (confidential enquiry into perioperative deaths) and aren't interested in holding a camera for a registrar who takes longer performing a case than the consultant.

She has known me for many years (she was a scrub nurse before) so we have a brilliant and trusting working relationship. It has been really good for me to be pushed on to the next step of not having a surgeon assisting me, but equally not having a total novice, so I'm learning to direct her as my next cognitive layer.

As much as I found having her as part of the team beneficial to me, I do worry that she is taking the place of an FY1 who would be invited to theatre more often if she wasn't around. There is no doubt she will also be wanting to do the emergency cases that we all want as junior trainees. I don't think she would take them from the core trainees but I do wonder if she does from our eager FY1s.

Core surgical trainee

At our hospital we have EST members acting as trauma co-ordinators. The value they add to the team is that they will hold the trauma referral bleep, meaning all referrals are directed through them providing continuity of care and institutional memory. This frees up core surgical trainees to see clinic patients and attend theatre without the burden of holding the regional referral bleep. The trauma co-ordinators are also able to support the junior doctors in an educational role, sharing their knowledge and experience with them.

On the flip side, this does also take away from the core surgical trainees taking the referrals, which is a key skill in itself. The compromise was reached by alternating the bleep responsibilities between the trauma co-ordinators and SHOs with support to both roles, particularly with regards to the logistics of triaging the referrals (which clinic, which consultant etc).

We also have surgical care practitioners who are being assigned theatre training lists and weekend waiting lists. This is taking away training opportunities as often these lists include patients with ASA1/2 patients. This has led to core surgical trainees struggling to get their numbers and core skills signed up. This has been escalated to a consultant level. Unfortunately, no solution has been found and there is a lot of pressure to deal with the backlog of elective cases over training.

On an individual level, the SCPs are very happy to let the trainees lead on lists but this is being done on their own volition. If an SCP is already assigned to a list, a trainee doesn't get assigned. Registrars have had more success with the weekend initiative lists, as they raised the issue successfully with the consultants that these lists should be registrar lists at a minimum.

Core trainee

In my local hospital we have ward-based ACPs who are invaluable and an incredible source of education for juniors. I had them on my general surgery placement during core surgical training (CST) and they were fantastic.

My experience of physician associates was different. There appears to be a general view amongst doctors that they were originally brought in as permanent members of staff to deal with rota gaps, especially on wards to support juniors. However, my experience has been the opposite, and perhaps that's where the confusion lies. Unfortunately, the PA who I encountered during one of my T&O placements was never on the ward and was instead scheduled (by herself – she was allowed to create her own rota) to be in theatre assisting with trauma and elective cases (priority over CSTs), in clinic as a reg, and seemed to have lots of annual leave in comparison to us as CSTs. This meant the wards were exclusively (under)staffed by junior doctors, including CSTs, who would have to try to attend theatre or clinics in their own time.

Having had both experiences, the extended surgical team – when used effectively – can be beneficial to trainees, particularly in areas where there is a need and multiple rota gaps. If competing with surgical training and provided with privileges that no doctors can attain (such as managing their own rota) then in my experience it hasn't really worked.

Core trainee

My local T&O team has loads of ANPs who are very supportive in essentially organising the whole trauma list and coordinating with consultants in relation to the patients that need to come in. This takes off a lot of pressure from the junior members of the team to sort the admin side of work.

This allows more junior levels to go to theatres as they are able to hold the fort on the wards and, if needed, escalate appropriately. They are also providing another pair of skilled hands when covering busy weekends on call where there can be close to 100 T&O patients on the ward with one doctor to look after them.

Personally, there have been no major issues that I can think of. Sometimes their opinion can be different to yours and can create a bit of friction. They also have super tight connections with consultants and may be an issue if the ANPs labelled you as someone they don't see as a 'good doctor'.

Paediatric surgery reg

In my current hospital we have one ANP who is the glue that keeps the team together. She knows how the systems run as well as the hospital in general, how the bosses like to work, and she is also a fantastic bridge between the nursing team and the doctors. She helps with the fiddly jobs and procedures (such as rectal suction biopsies, issues with lines, and gastrostomies) and acts as another SHO including the ability to prescribe. In paediatrics, even a small job can take twice as long so it's really useful to have someone skilled and proficient like our ANP. She has also been able to teach these skills to junior doctors and even as a registrar they are still important to learn. The only negative is that we as doctors can sometimes end up giving her all the jobs rather than spreading them to our SHOs because we know she will get the work done and it is something we have to be conscious of.

In a previous hospital, while a core trainee, we had a member of the theatre staff starting her training as a surgical care practitioner (SCP). In paediatric surgery we often don't have FY1 doctors, so the SHOs including myself as a core trainee must then ensure all the ward jobs are complete. So, it can already be challenging to get to theatre. To improve this whilst I was there, I developed a weekly rota trying to ensure appropriate numbers on the ward, but also which days you would be assigned to a list/clinic so that it didn't become a free-for-all or actually more likely that nobody would go to anything. Then it felt initially like the SCP trainee would be able to go to whatever lists they wanted or needed. The SCP's issue was the fact they were also working as a member of the scrub team, so their pressure came from the fact they had to assist in so many cases while still working almost full time in their current job role. I think my consultant handled the situation very well before it really caused an upset between myself and the SCP and directed her to me, knowing I managed the weekly rota for the SHOs, to sit down and work out what lists she could attend or what she needed so that she was incorporated into the rota rather than her just turning up to a list on the day and causing a problem. Sometimes we went to cases together and sometimes she would assist me, or we would divide first and second assistant for the list that day. I think having been able to discuss things together we could appreciate what each other's requirements and roles were, therefore making our relationship better and more understanding. She felt incorporated into the team.

Equality, diversity and inclusion in extended teams

An awareness of equality, diversity and inclusivity is essential in any healthcare setting, to promote the highest standards of practice for the benefit of patients and staff. Our patients come from every walk of life and, therefore, to treat them effectively, so should our teams.

Inclusion is about the choices we make, language we use in the clinical setting and our behaviour in the clinical environment. It is essential that our teams are respectful towards – and able to communicate effectively with – patients from backgrounds different to their own. HEE is aware of the benefits that equality, diversity and inclusion can bring. There is a well-recognised positive effect on the quality of care delivered and the wellbeing of the workforce when diversity and inclusion are maintained.

An aim of the second year of the EST pilot was to gather data on the protected characteristics of the EST workforce in the pilot sites and to reflect this back to the network. Anecdotally, the EST workforce has been predominantly female and from a nursing background. The HEE information governance team were consulted and they advised on the appropriate method by which to capture this data. This included the completion of an HEE Data Protection Impact Assessment screening form and a full HEE Data Protection Impact Assessment. Following the completion of the information governance process, the project team were approved to proceed with the data collection.

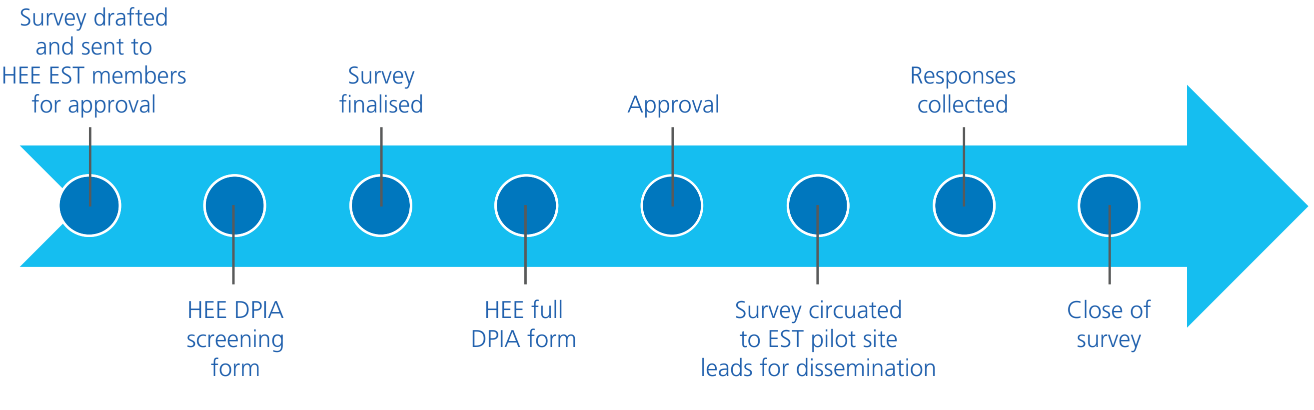


Diagram A: Timeline of the development of the EDI survey

Members of the EST in the pilot sites were asked to complete an online form (appendix 4) on a voluntary basis and all data was collected anonymously. The survey was developed based on HEE's Diversity, Inclusion and Participation Team best practice guidance for monitoring questions used to collect demographic information in surveys. The data captured included information about protected characteristics and also about whether the team member had carer responsibilities either for children or other dependents. Information was also obtained about flexibility of working patterns and whether the individual felt working patterns supported or disadvantaged them. To ensure awareness, the survey was sent to the chair of the HEE Deans' EDI Committee for information.

The Royal College of Surgeons of England, in its latest publication Parents in Surgery[8], acknowledges that workplace modification should be made in order to facilitate access to training for parents in surgery – the same observations apply to the EST workforce.

8 https://www.rcseng.ac.uk/about-the-rcs/about-our-mission/diversity/parents-in-surgery/

Retention in extended teams

Poor retention in teams is multifactorial. There may be professional issues including a lack of development opportunities, a perceived lack of career progression and a very limited scope of practice. There may be personal issues reflecting the tension between family life, caring responsibilities and unsocial working shift patterns. The EST workforce faces similar challenges to those seen in the wider medical workforce.

From the demographic data returned from pilot sites, it can be seen that the EST members are 62 per cent female. The survey also showed that 70 per cent of respondents are aged between 25 and 44 (32 per cent aged between 25-34 and 38 per cent aged between 35-44), and we can see that 44 per cent of the respondents have children aged between 0-17 living at home with them and 18 per cent give help or support to family members, friends, neighbours or others because of either long-term physical or mental ill-health, disability, or problems related to age. When asked about ethnic origin, the responses showed that nearly 59 per cent are White British/English, with 12 per cent of respondents answering Asian or Asian British – Indian, and another 12 per cent answering Asian or Asian British – Pakistani. It is well established that flexible working conditions are required to retain any worker faced with the challenges of family responsibilities. In our pilot sites, 15 per cent had ‘flexible shifts’ and another six per cent had a hybrid approach as part of their flexible working. 79 per cent of respondents had no flexible working arrangement.

There is a well-recognised attrition rate to staff returning from parental leave and it may be that there is a need for a system analogous to the HEE SuppoRTT system for trainees in a craft speciality. University Hospitals Derby and Burton, as an experienced site supporting EST development, has successfully implemented a lead ACP for practitioner support and wellbeing, having recognised the challenges of returning from parental leave. Additional SiM has been provided to enable the practitioners to regain confidence and be supported on returning to work after a period of time away.

Professional issues assessed and trialled in an attempt to improve retention in this pilot included the opportunity for multi-professional supervision of junior doctors, expansion of radiology requesting permissions, delivery of an out-of-hours on-call emergency rota and the opportunity for shared online learning with core surgery trainees.

Expanding professional capability

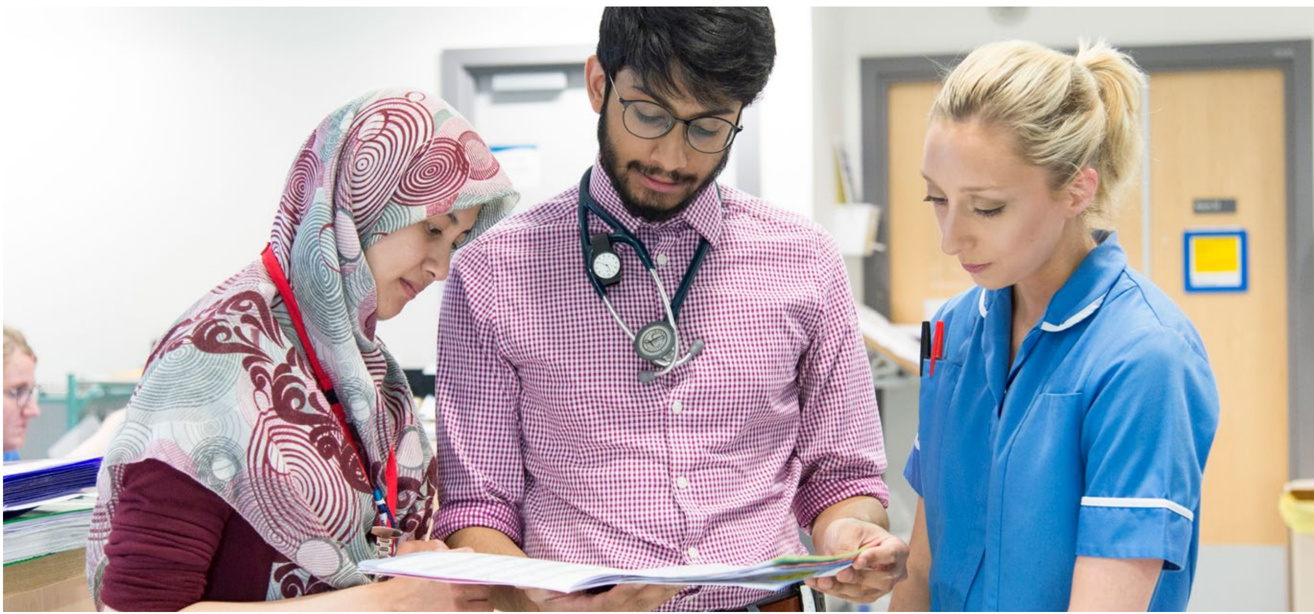
Multi-professional supervision pilot

Appropriate access to, and capacity of, supervision is a challenge across the multi-professional workforce. The NHS Long Term Plan[9] expansion commitments include the creation of an additional 26,000 staff in Primary Care, growing medical school places from 6,000 to 7,500 per year and 21,000 new mental health posts. This, coupled with the implementation of pharmacist education reforms affecting c.12,000 undergraduate students and c.3,000 Foundation trainees annually, will result in significantly increased learner numbers requiring access to supervision across clinical sectors.

The NHS workforce is the most valuable resource; supervision plays a key role in supporting the workforce to deliver high-quality care and improved patient outcomes. The imperative need to address supervisor access and demand across all systems and professions is pressing and cannot be overestimated. If this is not addressed, the quality of education and training will be significantly impacted, resulting in varied quality of care provided to patients and posing a significant patient safety risk.

HEE is establishing a new national programme of work looking at developing a supervisor workforce capable of managing trainee and clinician needs now and in the future. This programme will focus on establishing strategies to access appropriate multi-professional supervision (MPS) across healthcare systems. MPS provides an innovative alternative to traditional profession-specific supervision models and inter-professional education activities, providing flexibility in a pressured environment with finite supervisor resource. Further information on this can be found at supervisionreform@hee.nhs.uk.

A recent study established consensus across a range of healthcare professions regarding a shared set of values and activities, which can be applied to healthcare educators.



9 https://www.longtermplan.nhs.uk/publication/nhs-long-term-plan/

The EST pilot provides an opportunity to explore and test how MPS might improve access to – and quality of – supervision. The infrastructure within HEE and pilot site teams is already in place to support the development and delivery of this test-of-concept pilot. The aim of this work would be to explore the role of advanced clinical practitioners (ACPs) or other senior EST members as named clinical supervisors (NCS) to Foundation trainees. The MPS pilot to date includes 11 trainees across five pilot sites. It is proposed that the named clinical supervisor role for new Foundation trainees would pilot from December 2022 for the first four-month rotation, and that the EST named clinical supervisor would be in addition to the allocated named clinical and educational supervisors to mitigate any risk. Starting the pilot in the second rotation for Foundation doctors (rather than the first rotation in August) was felt to be a benefit, allowing for a comparison with previous experience of supervision when evaluating.

Pilot evaluation will include the educational supervisors, named clinical supervisors and the Foundation doctors. They will be able to feedback anonymously through an electronic survey and also via online structured interviews. The results of this pilot will inform part of a national campaign assessing the creation of educational capacity.

The above proposal was presented to HEE Foundation School directors in a consultation exercise. Feedback from this meeting was incorporated into the pilot, which commenced on 7th December 2022.

Communications regarding the pilot, which included information sheets (appendices 5a-f), were sent to EST pilot site leads, directors of medical education, Foundation School directors, heads of schools of surgery, and postgraduate deans to inform them of the aims of the pilot.

The approval process included:

- Pilot discussed with the lead HEE Foundation School Director, and lead for educational capacity workstream (regional postgraduate dean) – 19th April 2022.
- Presentation to Distribution Advisory Group – 5th May 2022.
- Presentation at Foundation School Directors' meeting on 15th June 2022, the pilot was supported to proceed.
- Consultation with GMC to ensure GMC support – initial letter with the aims of the pilot sent to the GMC on 4th July 2022 – confirmation received on 9th August 2022 that the GMC were happy for the pilot to proceed.

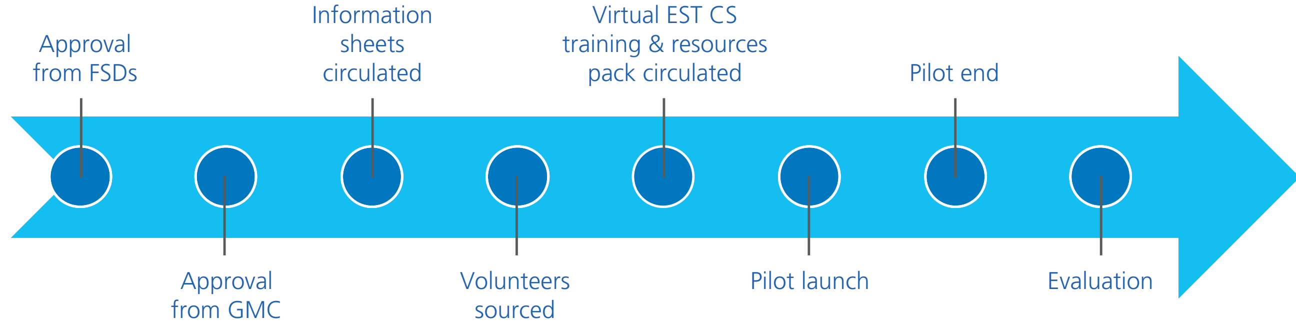


Diagram B: Timeline of MPS pilot project activity

The trusts that agreed to take part in the pilot are listed below:

Trust	Number of EST Named Clinical Supervisors
Leeds Teaching Hospitals NHS Trust	3
Manchester University NHS Foundation Trust	2
Hull University Teaching Hospitals NHS Trust	2
Bolton NHS Foundation Trust	1
University Hospitals of Derby and Burton NHS Foundation Trust	3

Once the Trusts were identified, a training resources pack (appendix 6) was developed for the EST named clinical supervisors, including links to UKFPO resources, guidance documents, e-learning and webinars.

An interactive training course over 1.5 days was delivered by Julia Taylor (GP Training Programme director and Primary Care Programme lead Advancing Practice Faculty), and covered topics relating to principles of the role of the named clinical supervisor, specifics of Foundation, Horus and supervised learning events.

Pilot sites that did not take part in the multi-professional supervision pilot were asked to give their reasoning. The reasons given centred around not wanting to overwhelm EST team members, a lack of a sufficiently matured professional body of EST members in a site, and it was felt that the senior EST members faced demands providing clinical supervision for other EST members. Some sites faced concerns from senior postgraduate trainers about the concept of junior doctors being supervised by professionals who were not themselves doctors.

Radiology requesting

Permission to request radiological investigations is a challenge frequently reported by members of the EST, depending on local trust policies. A recent report by a team of leadership fellows, supported by the Midlands Clinical Senate and a HEE advanced practitioner, explored this issue. The report will be available early in 2023, with clear recommendations to support addressing this challenge. The pilot sites were asked to provide details of the permissions and protocols for radiology requests in their trusts. The project team felt this information was important as many of the emergency settings and pathways in acute NHS care rely on timely radiological imaging of patients for successful patient flow, ambulatory care and timely discharge.

There was a general acknowledgement from sites that when members of the EST were permitted to request radiological investigations the patient pathway was more efficient. It was also recognised that this expansion of role gave greater professional satisfaction to the EST member and allowed for greater flexibility within teams. Centres in which the EST was allowed to request radiological investigations ensured that IRMER and MRI safety formed part of their ACP training, and that robust policies were in place to support this. Many centres had regular audits of requests. Sites described an initial reluctance to allow the EST member requesting rights. It was felt that, once communication, explanation of the role of the EST and proof of concept was seen in trusts, reluctance disappeared.

	Plain X Rays	CT Scan	USS	MRCP
East Suffolk and North Essex NHS Foundation Trust	✓	✓ (after discussion with registrar)	✓ (after discussion with registrar)	N/A
Manchester University NHS Foundation Trust	✓	✓	✓	✓
Hull University Teaching Hospitals NHS Trust	✓	✓	✓	✓
Countess of Chester NHS Trust	ACP/ANP ✓ PA ✘ IRMER regulations require the person ordering a test involving ionising radiation to be a registered practitioner. PAs (unless nursing background and retain their NMC registration) aren't registered currently.	ACP/ANP ✓ PA ✘ IRMER regulations require the person ordering a test involving ionising radiation to be a registered practitioner. PAs (unless nursing background and retain their NMC registration) aren't registered currently.	ACP/ANP/PA ✓ This test doesn't involve ionising radiation so all team members able to order.	ACP/ANP/PA ✓ This test doesn't involve ionising radiation so all team members able to order.
Barking, Havering and Redbridge University Hos-pitals NHS Trust	✘	✘	✓	✓
Bolton NHS Foundation Trust	✓	✓	✓	✘
Leeds Teaching Hospitals NHS Trust	✓ Must state 'non-medical referrer' on requests but able to book and discuss vetting for all. Need to have completed radiology ACP module.	✓ Must state 'non-medical referrer' on requests but able to book and discuss vetting for all. Need to have completed radiology ACP module.	✓ Must state 'non-medical referrer' on requests but able to book and discuss vetting for all. Need to have completed radiology ACP module.	MRCP ✓
University Hospitals of Birmingham	PA ✘ sACP ✓	PA ✘ sACP ✓	PA & sACP ✓	PA & sACP ✓

Table B: EST pilot sites and radiology requesting permissions.

Out-of-hours emergency rotas and how to safely utilise the EST within the parameters of agenda for change

Developing the EST

The utilisation of the EST to be included in traditional medical rotas can be seen as a significant challenge. The knowledge of each member's capabilities is essential and can be supported through utilisation of an agreed curriculum framework with valid and reliable assessment methods. The HEE curriculum for advanced practice in surgery[10] was published in November 2020 to support the gap in resource available to develop this workforce. A structured clinical development programme, including rotations out of the specialist environment, supports learning and enables the breadth of knowledge required to form part of an on-call rota. It is important to also acknowledge the medical and surgical presentations the practitioner may encounter, and again including rotations out of the surgical environment during training will add to knowledge and skill while increasing confidence.

Confidence

Experience has shown that lack of confidence, as opposed to a lack of capability, is more likely to occur, and to overcome this barrier it may be necessary to provide additional cover initially until confidence is gained. Assessment of the EST capability prior to being placed on a rota could include the implementation of a SiM, thus adding to employer confidence and strengthening governance.

10 https://www.iscp.ac.uk/media/1141/sacp_curriculum_dec20_accessible-1.pdf

Agenda for Change
Challenges with adding the EST member onto on-call rotas also include the restrictions with their terms and conditions. Agenda for Change (AfC) are the terms and conditions of employment and include a working week of 37.5 hours for full time against a doctor in training of an average of 40 hours/week. It is feasible though to annualise hours of the EST and thus enable effective rota planning.

Job planning
EST can be a hugely valuable part of the surgical team. However, as discussed, these members are usually very experienced healthcare practitioners and near to the top of their clinical career. It is vital that retention is considered from commencing them in post and it is therefore recommended that job plans are implemented upon employment.

EST members that require training are likely to access a master's programme, which is an apprenticeship programme. With this come some quite complex rigid apprenticeship rules that have to be adhered to, including 20 per cent "off the job" (otj) practice. When studying at university this is usually the day they attend, but the 20 per cent "otj" also applies when it is not that day. It is recommended this time is used to develop a clinical portfolio and therefore meet the capabilities within the curriculum being followed.

Upon completion of training, job planning is essential to ensure effective utilisation of this workforce and their knowledge, skills and experience. Successful provider sites with established EST and ACP teams include a minimum of 16 per cent SPA time where the three non-clinical pillars of advanced practice can be developed to underpin clinical practice. This time is therefore productive and effective in supporting retention and should be considered as it would be for a surgical consultant.

Multi-professional learning and use of digital technology

The Surgical Technology Enhanced Learning Academy (STELA) group from HEE created an online learning resource, aimed mainly at core trainees in surgery, to cover topics in the core surgery curriculum and be delivered by surgeons recognised as national experts in their fields. Access was granted to those EST members in the pilot sites (and other sites on request). This shared learning resource acknowledges the shared professional roles in surgery. The programme commenced in August 2022. Feedback in network meetings has been positive, and topics covered during August, September and October are included in appendix 7.

SAS doctors and their role in the extended surgical team

SAS doctors include specialty doctors and specialists, along with other closed grades such as staff grade doctors and associate specialists. The GMC register, as of 12th November 2022, showed that SAS and locally employed doctors (LED) make up almost 30 per cent of all registered doctors. The number of SAS doctors and LED on the GMC register has increased by 40 per cent in the last five years, in comparison to postgraduate doctors in training (17 per cent) and specialist register (11 per cent), driven by doctors coming from overseas. If the trend continues, by 2030 SAS and LED in secondary care will form the largest group in the medical workforce. The GMC register is unfortunately unable to differentiate between SAS and LED groups and is also unable to show the number of SAS doctors on specialist register. It is important to understand that SAS doctors and locally employed doctors are hugely different in terms of their stage of career, level of competence, experience, and career aspirations.

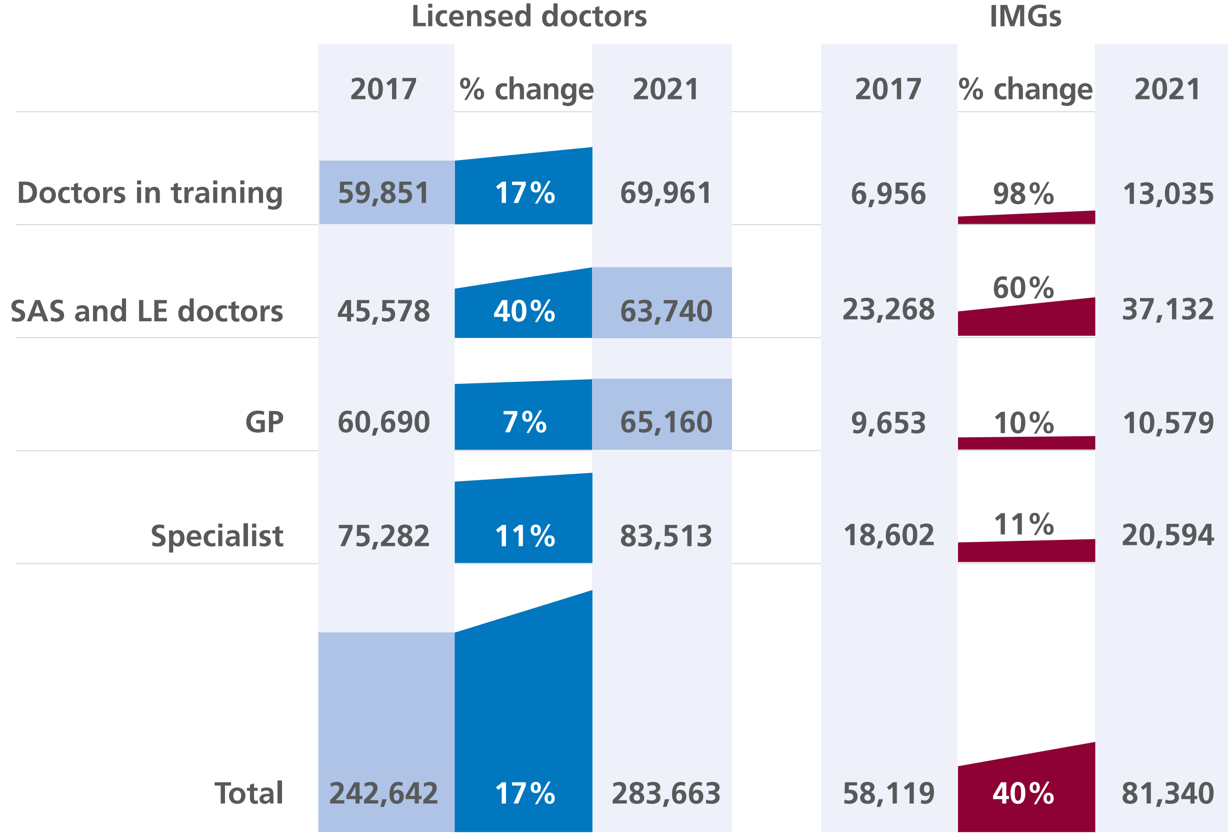


Diagram C: Reference from The state of medical education and practice in the UK, The workforce report, 2022, GMC (Figure 3, p9)[11].

11 https://www.gmc-uk.org/-/media/documents/workforce-report-2022---full-report_pdf-94540077.pdf?la=en&hash=9267A7B904842B44133BC982EEB3F5E8ED1A85F4

SAS doctors are the most diverse branch of the senior medical workforce, with 69 per cent from a Black, Asian or minority ethnic (BAME) background and a substantial proportion having trained overseas.

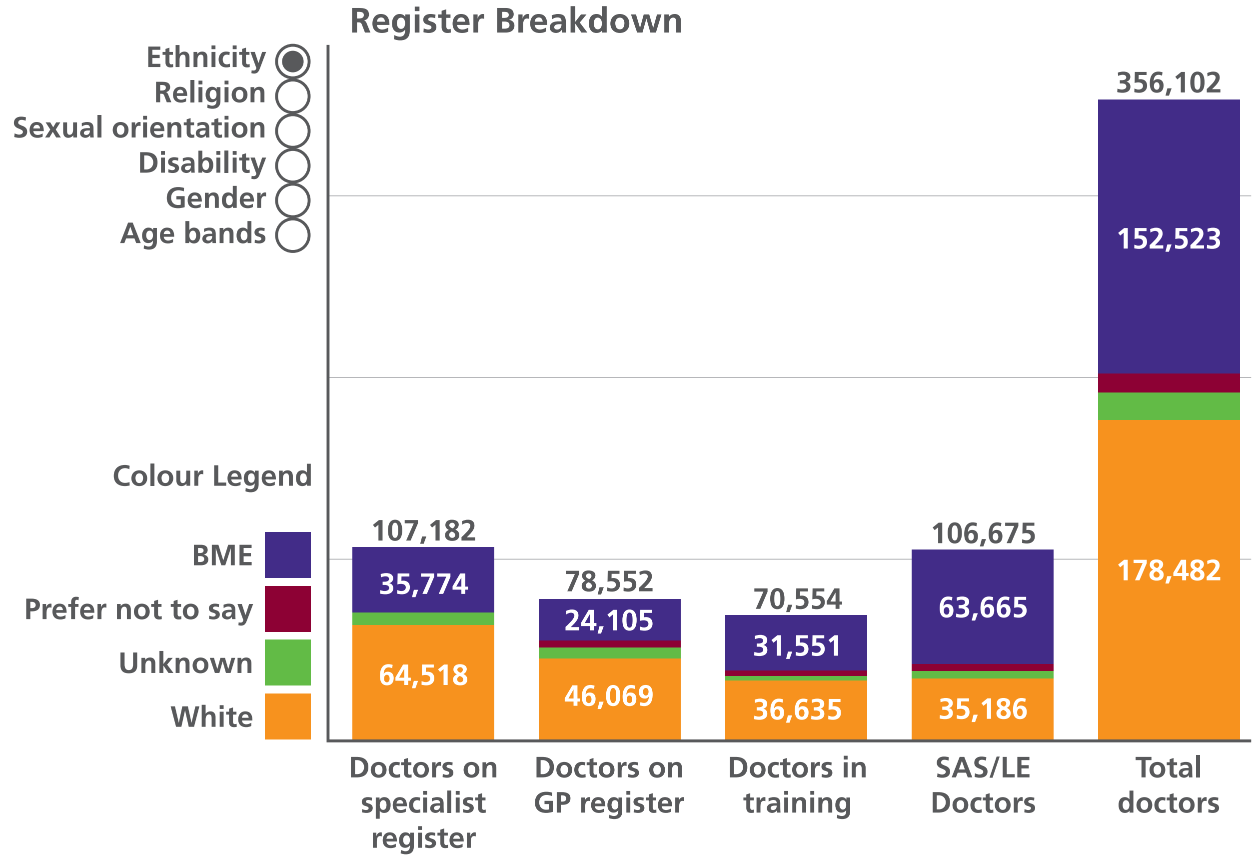


Diagram D: Diagram generated from the GMC Data Explorer[12] on 12th November 2022.

SAS doctors are an asset for NHS. They have a wealth of knowledge and expertise. Traditionally, the system has not always made the most of their talents. SAS doctors feel that they want better working environments, more support with career development and progression, but instead too many of them meet barriers that hinder their development.

Recognising issues around low morale, job satisfaction and career progression, the SAS Charter[13] was published in 2014, written by the Academy of Medical Royal Colleges, NHS Employers, the British Medical Association and Health Education England. Since then, several national documents have been written to support development of SAS doctors and promote SAS as an alternative viable career choice with no stigma or connotation of failure attached.

SAS contract reform in 2021 has resulted in the re-opening of the senior SAS grade called "specialist". This is an autonomous grade, and these doctors work independently as experts in a defined area of their practice. The eligibility criteria include 12 years of medical work since primary medical qualification and six years in relevant specialty SAS grades (or equivalent), along with proving competency across six domains of the Generic Capabilities Framework (GCF) derived from GMC's Generic Professional Capabilities (GPC).

12 https://www.gmc-uk.org/about/what-we-do-and-why/data-and-research/gmc-data-explorer
13 https://www.aomrc.org.uk/wp-content/uploads/2016/03/SAS_Charter_1214.pdf

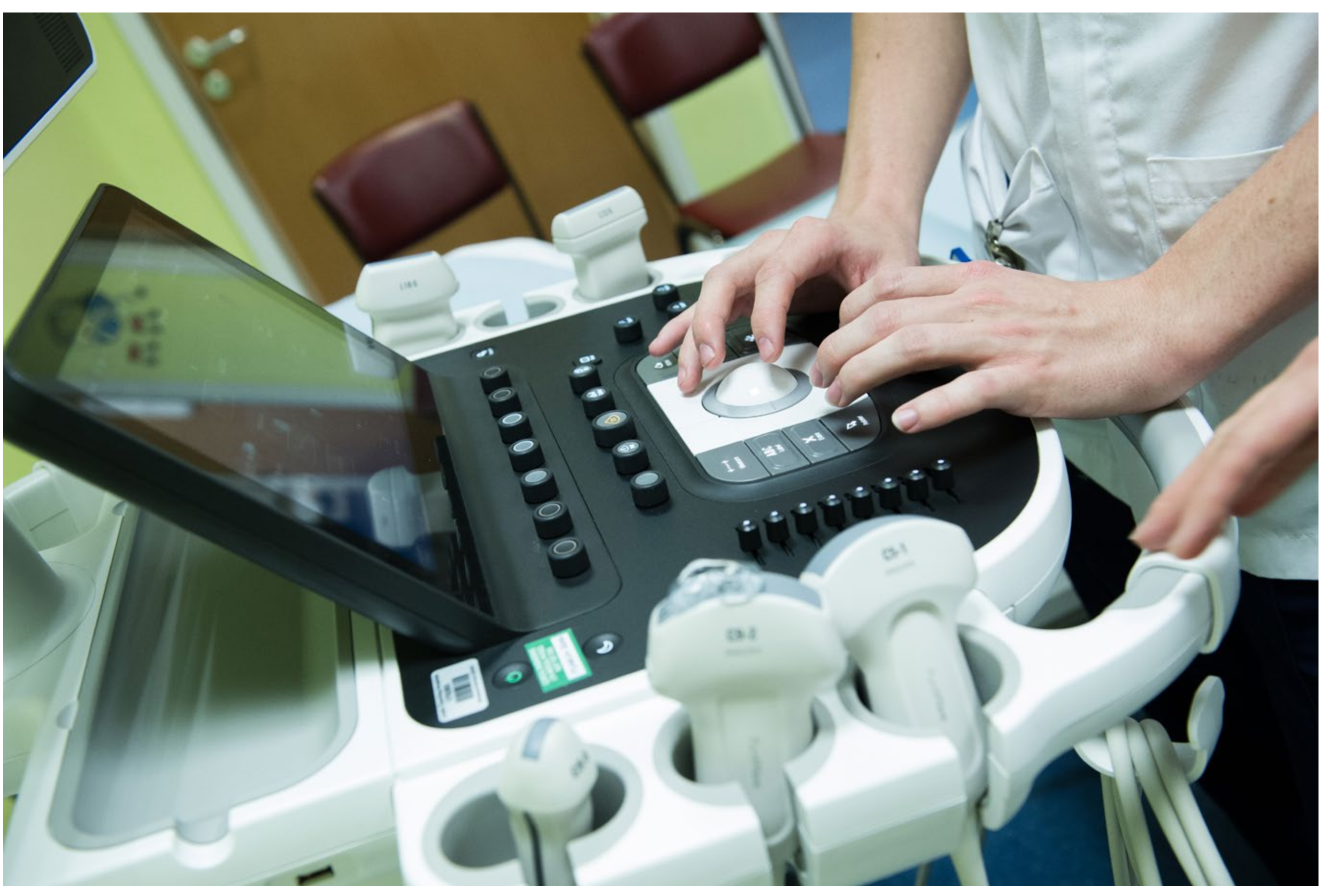
SAS surgeons form a key part of the extended surgical team (EST). Specialty doctors often contribute to the on-call rota at registrar level (ST3 and above equivalent) and as a result help in reducing the frequency of on-calls for everyone on the rota (postgraduate doctors in training, locally employed doctors, and non-medical practitioners). This helps to address issues around balancing service and training need.

Senior specialty doctors, associate specialists and specialist grade surgeons deliver a more independent and autonomous role, sharing emergency and elective responsibilities with consultants. Their job plans are mostly focused on delivering direct clinical care; however, they often are instrumental in providing training in different ward-based, clinic and theatre settings, benefitting all grades of doctors, students and non-medical practitioners. Postgraduate doctors in training often ask them to do workplace-based assessments (WPBA) and give feedback. Increasing numbers of SAS surgeons are taking up formal educational and leadership roles, contributing to the concept of multi-professional supervision. Royal College of Surgeons of England and Foundation Schools recognise SAS surgeons as clinical and educational supervisors. There are limited numbers of SAS surgeons who are in these formal educational roles; however, Health Education England is fully committed to the development of SAS doctors as educators and is expanding the opportunities for the relevant training and accreditation. Similarly, Royal College of Surgeons of England has developed a supportive and inclusive strategy for SAS surgeons' development, redefining the eligibility criteria for different educational and leadership roles, ensuring that recruitment to the roles is based on skills, knowledge, and experience, rather than title. There are finite numbers of trainers and therefore utilising SAS surgeons and the multi-professional workforce as trainers and educators is beneficial for all stakeholders.

It is important to acknowledge that SAS surgeons and every other member of the extended surgical team needs to be valued for the skills that they bring to improve patient care and training; they should not be used to simply for service delivery. There are overlapping needs for professional development among different members of the EST, which could lead to occasional conflict, and therefore an emotionally intelligent leadership is needed to create an environment of mutual respect and positivity.

The new People Plan 20/21[14] highlights the importance of diverse, inclusive, and compassionate medical leadership. An increasing number of medical leadership positions are now open to SAS doctors and, because of this evolving cultural change, more SAS doctors are getting appointed to leadership positions as clinical directors, appraisers, associate medical directors and medical directors. These opportunities are not yet fully embedded in the culture of the NHS; however, with an increasing number of leadership development opportunities provided by Health Education England through the SAS development fund, we envisage a growing number of SAS leaders in the NHS.

In conclusion, SAS surgeons are an important part of the EST; they deliver high-quality patient care and have an ever-increasing role as educators and trainers for medical and non-medical practitioners in the EST. SAS surgeons are a great support system for all rotating members of the team; they provide continuity and institutional memory, and bring about stability in the team, which eventually contributes to good patient care and professional development of all members of the EST.



14 People Plan 2020/21: action for us all https://www.england.nhs.uk/ournhspeople/

EST – year 3

To further advance the extended surgical teams programme, funding within the Medical Education Reform Team has been earmarked for up to four further trailblazer sites to pilot different approaches to the extended surgical team within 2023.

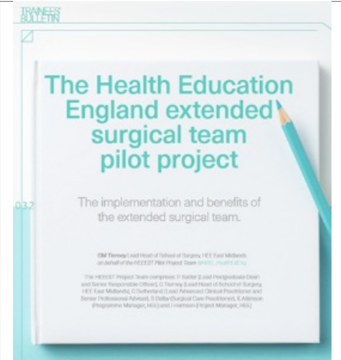
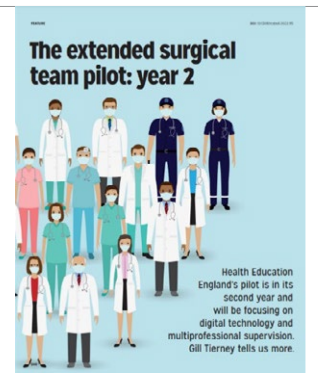
We were mindful of the COVID effect on training nationally, and therefore the focus of year 3 is targeted to a small number of trusts who, after reviewing objective data from the 2022 GMC Trainee survey[15], we felt could benefit by receiving funding and being part of not only a pilot, but an EST community in the longer term. The aim of this approach will explore how the EST pilot can support the delivery of improved workforce and surgical training provision in adverse situations.

Ten trusts were identified via the survey data and were contacted by email via their chief executive and medical director, where a letter outlining the pilot along with an application pack detailing the timeline and criteria to apply was attached. Applications are to be returned by Friday 16th December 2022, whereafter a panel will review and score the applications and award up to four trusts £80,000 each. The money will be transferred and work will commence in January 2023.

15 https://www.gmc-uk.org/education/how-we-quality-assure-medical-education-and-training/evidence-data-and-intelligence/national-training-surveys

Communication and outputs

The HEE EST pilot project is committed to sharing its findings widely in the surgical community, to share good practice. There have been a number of outputs as published articles and presentations. The team were invited to present in November 2022 at the Future Surgery event, in partnership with the Royal College of Surgeons of England and ASiT. Gill Tierney, Jacque Mallender and Sara Dalby delivered a presentation on the background to the HEE EST pilot, key findings and a health economic analysis of the model with evidence of return on investment. Publications resulting from the pilot are listed below.

The Bulletin of the Royal College of Surgeons of England 2021 103:S1, 032-035 The Health Education England extended surgical team pilot project September 2021 **Organisation** The Royal College of Surgeons of England **Author** GM Tierney, Head of School of Surgery, East Midlands, HEE https://publishing.rcseng.ac.uk/doi/epdf/10.1308/rcsbull.TB2021.11	
The Bulletin of the Royal College of Surgeons of England 2022 104:5, 252-257 The extended surgical team pilot: year 2 July 2022 **Organisation** The Royal College of Surgeons of England **Author** GM Tierney, Head of School of Surgery, East Midlands, HEE https://publishing.rcseng.ac.uk/doi/epdf/10.1308/rcsbull.2022.95	

Speakers at the Future Surgery Event 2022

Conclusion and recommendations

This second year of the EST pilot continues to show the benefit of extended teams to both trainees and patients. The flexibility of such a team enables all members to access appropriate training and educational needs while maintaining and improving service.

This second year has addressed reasons for poor retention of the EST. Demographic analysis of those working in the pilot has shown that the workforce is predominantly female and predominantly parents. A greater recognition of the need within the wider NHS to facilitate family-friendly working conditions in order to retain highly skilled staff is apparent. A further often cited reason for poor staff retention in this group is the lack of professional development opportunities for this group. The MPS pilot within this year was open to all sites. Those who were able to participate will inform the year 3 report. We hope this pilot will demonstrate whether the concept of MPS in an appropriately trained workforce is acceptable to both the EST and junior doctors.

Service improvements in all sites have demonstrated that the EST is key to the post-pandemic front door in emergency general surgery. Many strategies and pathways centred around ambulatory care and protocol-based safe assessments for emergency patients. We hope the information in this and the year 1 report will enable other NHS trusts to adopt the model.

The future

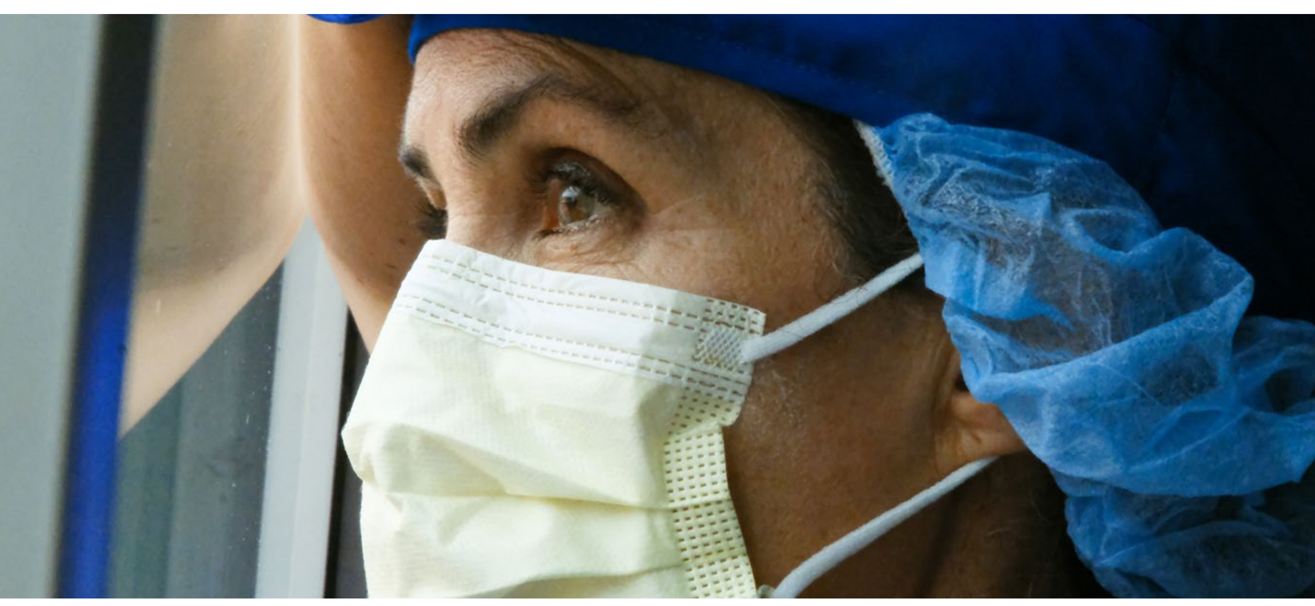
We look forward to the evaluation of the multi-professional supervision pilot, which is due to complete in March 2023. The results of this will form part of next year's report. We plan targeted recruitment of new sites for 2023, based on feedback in national training surveys. The EST pilot to-date has demonstrated that the model is safe and reproduceable in the pilot sites. It is essential to demonstrate that the model will continue to work in less favourable training settings, possibly reflective of the wider NHS.

A key feature of the model has been the impact of the extended surgical team on the post-pandemic acute trust front door. With the formation of new integrated care boards, we see an opportunity to demonstrate how this model might work in the new setting to improve population health and establish shared priorities at local levels in the acute care setting in surgery.
The evidence from this pilot suggests that the extended surgical team, when appropriately trained, supported, and offered opportunities for professional development, could form a key part of the success of both service and training recovery in the NHS.

Annex of documents

Documents referred to during the pilot. Please note the documents listed below are separate to the references contained within the report.

Title	Author	Date it was produced (if known)	Link to the document (if published)
IR(ME)R: Implications for clinical practice in diagnostic imaging, interventional radiology and diagnostic nuclear medicine | The Royal College of Radiologists. This guidance seeks to explain how the requirements of the regulations should be interpreted and used in practice	**The Royal College of Radiologists**	June 2020	https://www.rcr.ac.uk/publication/irmer-implications-diagnostic-imaging-interventional-radiology-diagnostic-nuclear-medicine
Position Statement – Training and governance requirements for Non-Medical Referrers to Radiology (NMR)	**The British Institute of Radiology**	January 2019	https://www.bir.org.uk/media-centre/position-statements-and-responses/guidance-for-non-medical-referrers-to-radiology.aspx
The Royal College – Our Professional Home. An independent review on diversity and inclusion for the Royal College of Surgeons of England	**Royal College of Surgeons of England**	March 2021	https://www.rcseng.ac.uk/about-the-rcs/about-our-mission/diversity-review-2021/



Appendices

Appendix 1 – Glossary of abbreviations and initialisations

ACP	Advanced clinical practitioner (to be changed to AP within the EST Year 3 report to signify a more inclusive terminology representing the varied range of advanced practice roles people work in)
ADEPT	Achieve Develop Explore Programme for Trainees
AfC	Agenda for Change
ALS	Adult life support
ANP	Advanced nurse practitioner
AoMRC	Academy of Medical Royal Colleges
ARCP	Annual Review of Competence Progression
ASA1/2	American Society Anaesthesiologists
ASC	Ambulatory surgical clinic
ASiT	The Association of Surgeons in Training
ATLS	Advanced trauma life support
BAME	Black, Asian or minority ethnic
BMA	British Medical Association
CEPOD	Confidential enquiry into peri-operative deaths
CiPs	Capabilities in practice
CNS	Clinical nurse specialist
CoPSS	The Confederation of Postgraduate Schools of Surgery
CPD	Continuing professional development
CS	Clinical supervisor
CST	Core surgical training
CSTHubUK	Core Surgical Training Hub UK
CT	Computerised tomography scan
CT3	Core trainee year 3
DPIA	Data protection impact assessment
ED	Emergency department
EDI	Equality, Diversity and Inclusion
EGS	Emergency general surgery
e-LfH	eLearning for Healthcare
ENT	Ear, nose and throat surgery
EST	Extended surgical team
FY1	Foundation year 1 doctor
FY2	Foundation year 2 doctor
FY3	Foundation year 3
GCF	Generic Capabilities Framework
GMC	General Medical Council

GP	General practitioner
GPC	Generic professional capabilities
HCP	Healthcare professionals
HEE	Health Education England
HEE SE	Health Education England South East
Hive	Manchester University NHS Foundation Trust has gone live with a Trust-wide Electronic Patient Record (EPR) solution called Hive
HUTH	Hull University Teaching Hospitals NHS Trust
HST	Higher surgical training
ICS	Integrated care system
IRMER	Ionising Radiation Medical Exposure Regulations
ISCP	Intercollegiate Surgical Curriculum Programme
JCST	The Joint Committee on Surgical Training
LCH	Leeds Community Healthcare NHS Trust
LED	Locally employed doctors
LST	Lower surgical training
LTFT	Less than full time
MCR	Multiple consultant report
NIMDTA	Northern Ireland Medical and Dental Training Agency
MPS	Multi-professional supervision
MRCP	Magnetic retrograde cholangio pancreatogram
MRI	Magnetic resonance imaging
NCS	Named clinical supervisor
NHS	National Health Service
NMC	Nursing and Midwifery Council
NMR	Non-medical referrer
otj	Off the job
PA	Physician associate
PGDs	Patient group directions
PGVLE	Postgraduate virtual learning environment
PICC	Peripherally inserted central catheter
sACP	Surgical advanced clinical practitioner
SACRU	Surgical ambulatory care unit
SAS	Staff grade, associate specialist and specialty doctors
SAU	Surgical assessment unit
SCP	Surgical care practitioner
SDEC	Same day emergency centre
SHO	Senior house officer
SiM	Simulation
SLE	Supervised learning events
SOP	Standard operating procedure

ST3	Specialty trainee year 3
STELA	Surgical Technology Enhanced Learning Academy
SuppoRTT	Supported Return to Training
T&O	Trauma and orthopaedic surgery
UKFPO	UK Foundation Programme Office
Upper GI / UGI	Upper gastrointestinal surgery
USS	Ultrasound scan
WBA / WPBA	Workplace-based assessments

Appendix 2 – Acknowledgements

EST project team
Fuad Abid, Health Education England
Kate Atkinson, Health Education England
Sara Dalby, Cheshire and Merseyside Integrated Care System
Jenna Harrison, Health Education England
Martin King, Association of Surgeons in Training
Sophie Lewis, Association of Surgeons in Training
Paul Sadler, Health Education England
Becky Shaw, Health Education England
Clare Sutherland, University Hospitals of Derby and Burton NHS Foundation Trust and Health Education England
Gillian Tierney, University Hospitals of Derby and Burton NHS Foundation Trust and Health Education England

In partnership with
The Association of Surgeons in Training (ASiT)
The Confederation of Postgraduate Schools of Surgery (CoPSS)
The Joint Committee on Surgical Training (JCST)

Pilot site leads
Richard Boulton, Barking, Havering and Redbridge University Hospitals NHS Trust
Tim Brammar, East Suffolk and North Essex NHS Foundation Trust
Sarah Duff, Manchester University NHS Foundation Trust
Nicola Eardley, Countess of Chester NHS Trust
Mark Gannon, University Hospitals of Birmingham
Karen Jarvis, Hull University Teaching Hospitals NHS Trust
Sunanda Roy Mahapatra, Countess of Chester NHS Trust
Adam Peckham-Cooper, Leeds Teaching Hospitals NHS Trust
James Pollard, Bolton NHS Foundation Trust
Jessica Wickins, University Hospitals of Birmingham

Extended Surgical Team Pilot sites
Barking, Havering and Redbridge University Hospitals NHS Trust
Bolton NHS Foundation Trust
Countess of Chester NHS Trust
East Suffolk and North Essex NHS Foundation Trust
Hull University Teaching Hospitals NHS Trust
Leeds Teaching Hospitals NHS Trust
Manchester University NHS Foundation Trust
University Hospitals of Birmingham

Multi-professional supervision pilot sites
Bolton NHS Foundation Trust
Hull University Teaching Hospitals NHS Trust
Leeds Teaching Hospitals NHS Trust
Manchester University NHS Foundation Trust
University Hospitals of Derby and Burton NHS Foundation Trust

Contributors
Shabina Azmi, Health Education England
Jacque Mallender, Economics By Design
Julia Taylor, Health Education England

Appendix 3
Barking, Havering and Redbridge: site achievement abstract

Appendix 4
Extended Surgical Teams Pilot: equality, diversity and inclusion survey

Appendix 5
Appendix 5a-MPS Information Sheet HoS.pdf
Appendix 5b-MPS Information Sheet FSD.pdf
Appendix 5c-MPS Information Sheet EST.pdf
Appendix 5d-EST Information Sheet DME.pdf
Appendix 5e-MPS Information Sheet Trainee.pdf
Appendix 5f-MPS Information Sheet PGD.pdf

Appendix 6
EST clinical supervisor training resources

Appendix 7 – PGVLE Core Surgery training sessions

CSTHubUK Session 1, Core Surgery On Call 101! 25th August 2022, 2pm-5pm

2.00pm	Trauma and Orthopaedics and Q&A, Mr Ross Sian
2.25pm	Urology and Q&A, Mr Ricky Ellis
2.50pm	General Surgery and Q&A, Miss Gillian Tierney and Mr Brij Madhok
3.15pm	Plastics and Q&A, Miss Lindsay Shanks
3.40pm	Vascular Surgery and Q&A, Miss Claire Dawkins
4.05pm	Paediatric Surgery and Q&A, Miss Clare Rees
4.30pm	ENT Surgery and Q&A, Mr Quentin Bonduelle
4.55pm	Close

CSTHubUK Session 2, ATLS Bottoms and ISCP! 22nd September 2022, 2pm-5pm

2.00pm	ATLS, Vignettes with Q&A, Mr Mark Bagnall
2.55pm	Tea break (you tell us, we listen!)
3.00pm	Bums, bottoms and perianal problems with Q&A, Mr Jon Lund
3.55pm	Tea break
4.00pm	ISCP, Curriculum, Cips, MCRs and all questions answered, Mr Keith Jones, ISCP lead
5.00pm	Close

CSTHubUK Session 3, The 'How to' of Core Surgery Academia! 27th October 2022, 2pm-5pm

2.00pm	Introduction
2.05pm	How to pick the right project
2.20pm	How to get, sort and store the data
2.35pm	How to pick the right stats
3.00pm	Tea break and abstract task
3.15pm	How to right an abstract
3.40pm	How to pick the right conference and present poster / oral talk
4.00pm	How to appraise a paper
4.20pm	Collaborative studies and opportunities for you in CST
4.30pm	Panel discussion and questions

Health Education England

www.hee.nhs.uk

LinkedIn
@NHS_HealthEdEng
www.facebook.com/nhshee