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23

EMERGE

ANNUAL REPORT

2022-2023

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Director's statement

Another year has flown by. Another year in which, despite the challenges of the clinical landscape in which we work, we have continued to offer more emergency department patients than ever the opportunity to participate in emergency medicine research. As mentioned in my director's statement last year, one of our key aims for 2021-22 was to develop EMERGE paediatrics under the leadership of Jen Browning. Ashleigh Hegan, Amarachi Ihenacho and now Sacha Hamilton, with support from Caroline Blackstock, over the last year, have recruited 781 paediatric participants into research at the RHCYP emergency department, thanks to their growing collaboration with PERUKI and their commercial partnership with Lumira, and have without doubt embedded research into the paediatric emergency department.

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- • EMERGE¹⁴ in December gave us the opportunity to pause and reflect on our experiences, to celebrate them and to look forwards to 2023/24.
- • Highlights of this year have been the success of home-grown cardiovascular studies ASPIRED and TARGET-CTCA and home-grown sepsis studies ABC Sepsis, MIS ABC and EVIS, in collaboration with NHS Greater Glasgow and Clyde. Our toxicology portfolio is rapidly expanding with a suite of exciting paracetamol studies coming soon, along with a challenging but hugely important Medical Research Council multicentre study of flumazenil in overdose, which will be led by Edinburgh. We have also welcomed emergency medicine trainee, Christopher Humphries from Plymouth, who will be working on a PhD with James Dear, whilst supporting this huge toxicology portfolio.
- •

As well as increasing home-grown work in our key areas, we have completed and continue to work on a large amount of NIHR portfolio work with many more studies planned for the next 12 months. Special mention to Anna Miell for delivering CoSTED, a smoking cessation study, which built on our portfolio of public health interventions in the ED started with previous minimal unit alcohol pricing work.

Director's statement



- Our CVRG team, under the stewardship of Allan MacRaid continues to deliver nationally and internationally important stroke, neuroradiology, and neurosurgical research, as do
- our renal team, who have just had a paper accepted for Nature Medicine. EMERGE St Johns has some exciting studies coming online in the next few months including BeSure, which is
- looking at how we manage trauma in ethnic minorities patients.
- EMERGE continues to support medical and nursing research opportunities. Ben Clarke, this year's EMERGE TERN fellow successfully delivered the DASHED and SEED studies in NHS Lothian, with Rory Anderson, a previous EMERGE TERN fellow being the UK Chief Investigator for the latter. In addition, both have taken on Associate PI roles as well as Jon Carter. Our 2023 EMERGE TERN fellowship has just been advertised and we continue to build on our ACCS ED secondments (which are now in their 5th year), this year expanding this opportunity to ST4 EM trainees who are new to the region.

The results of DASHED, an observational study of people attending the ED with Acute Aortic syndrome symptoms, led by another previous EMERGE TERN fellow Rachel McLatchie across 27 UK NHS hospitals and run by Nicky Freeman and Alicia Cowan, are eagerly awaited, with the findings set to impact on future research in this area over the next few years. Given the current difficulties in conducting research in our emergency departments, 2022-23 was really not too bad a year!



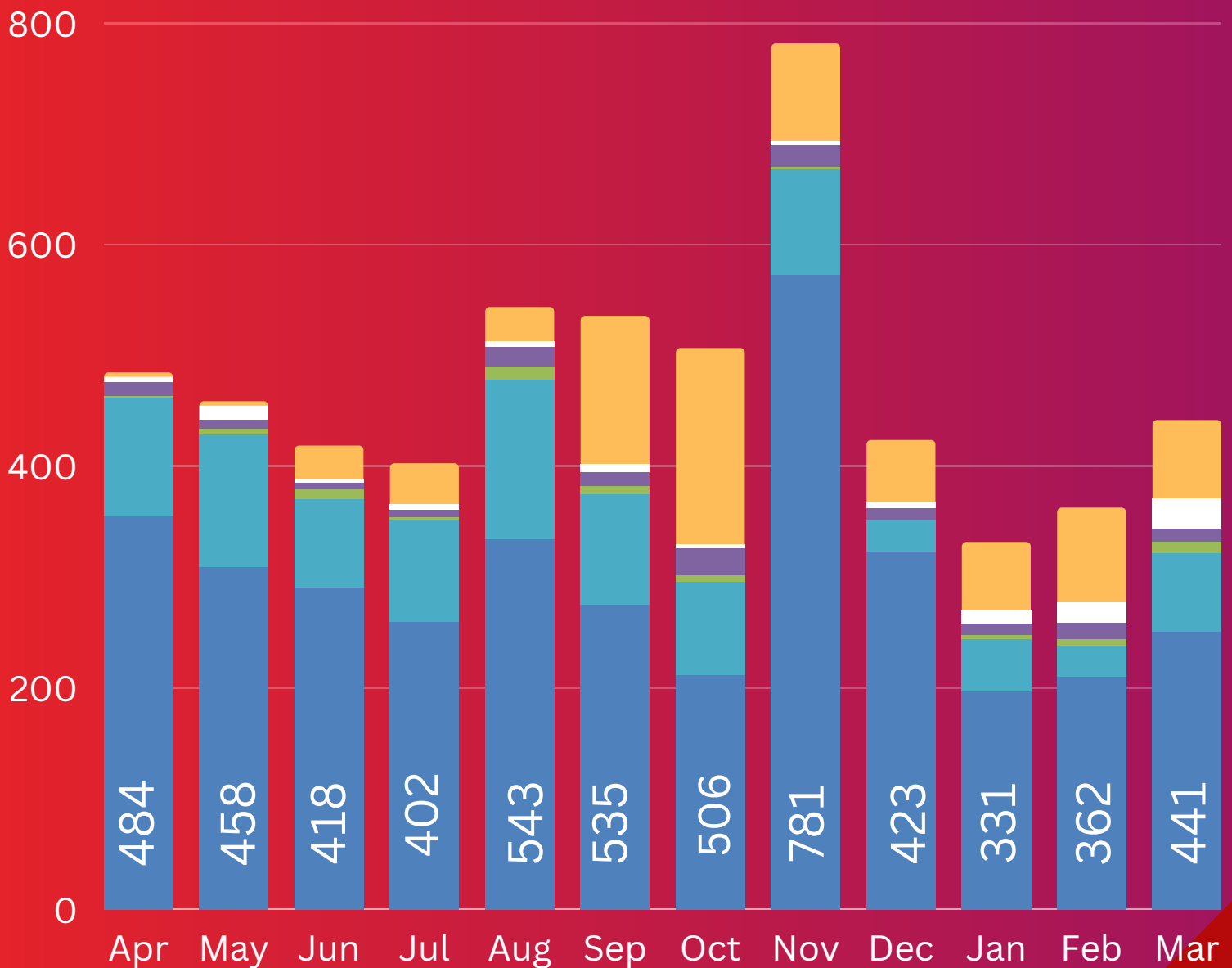
*Matt Reed, EMERGE Director
13 th March 2023*

RECRUITMENT

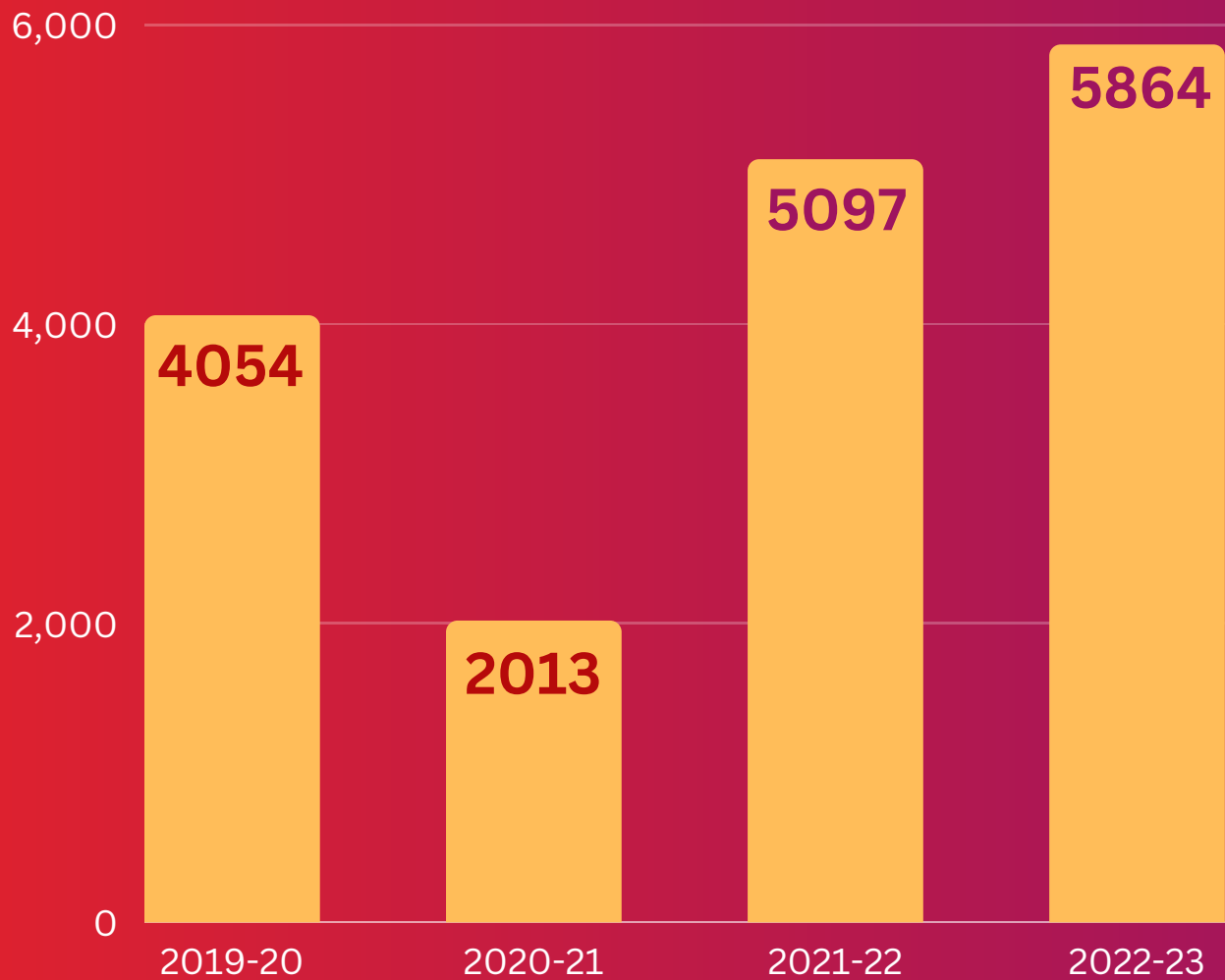
FIGURES 2022-2023

The figures speak for themselves – it has been a fantastic year:

EMERGE EMERGE SJH Stroke Renal
INR & Neuro Paeds



RECRUITMENT FIGURES 2022-2023



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**5864 PARTICIPANTS
RECRUITED BETWEEN
2022-23**

Staffing and Team Development

The team has continued to evolve over the last year, we welcomed four new band 6 research nurses, Victoria Minnis and Shona McDonald to the ED adult team, Okwuchi Azubuike to the SJH team and Beth Morrison to the Renal team. We also welcomed Ellise Clarke, band 5 project manager, Malgorzata Litwin band 4 administrator, with the core team, Sasha Hamilton band 3 clinical trial assistant (CTA) with EMERGE Paeds and Nikki McLaughlin band 3 CTA at SJH. All proving to be excellent additions to the group.

Nick Fethers, Alison Williams, Amarachi Ohenacho, Jennifer Carruthers, Rebecca Lidstone-Scott, Michelle Coakley and Fiona Murphy left EMERGE to embark on the next chapter of their career. Whilst it is always disappointing to say goodbye to members of our team, we recognise that with the drive and ambition of EMERGE, some of our team will always move on to new challenges.

We also had our first official nursing student from the Edinburgh University degree programme. This was a valuable and refreshing experience for the team to practice mentorship skills, advance CPD and help shape the future of nursing. We eagerly await our next student in September.

*Julia Grahamslaw
Lead Research Nurse*



EMERGE SJH



The EMERGE St John's Research Team has continued to change and develop over the last year.

INFERENCE

Our recruitment figures improved in comparison to previous years despite periods of reduced staffing and the team is now back at its full complement of staff.

NOVEL₁, INFERENCE, BRAINED TBI, ABC Sepsis and EMBOL 1 all closed with a combined recruitment of 663 participants in total and 995 participants recruited in this financial year.

Current Studies comprise of NOVEL 2, ASPIRED and POC-ET. The hope is to add a number of other studies to our portfolio including BE SURE, a study about inequalities faced by ethnic minorities in comparison to white British patients when presenting to the ED with minor injuries, and we hope to add HiSNAP, a study looking at giving higher dose NAC to patients presenting with paracetamol toxicity.

We aim to continue our hard work to achieve even better recruitment within St John's Hospital giving our patients in West Lothian the opportunity to take part in meaningful research. The team are growing from strength to strength and look forward to new opportunities arising and growing as a team.

Claire Cheyne
Senior Research Nurse



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Cerebrovascular Research Group (CVRG)

The EMERGE/CVRG collaboration strengthens year on year through a hugely varied portfolio of studies and trials within the disciplines of Stroke / Neurosurgery and Interventional Neuroradiology. Potential participants are presented with research opportunities which extend further than their initial presentation to longer-term follow-up. This affords the team a unique perspective on the patient journey.

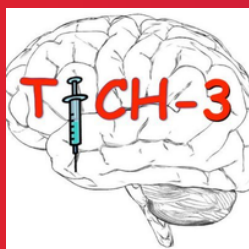
Stroke

Notable highlights include completion of recruitment to local feasibility studies, long-running national trials and enhanced support for locally-led observational studies.



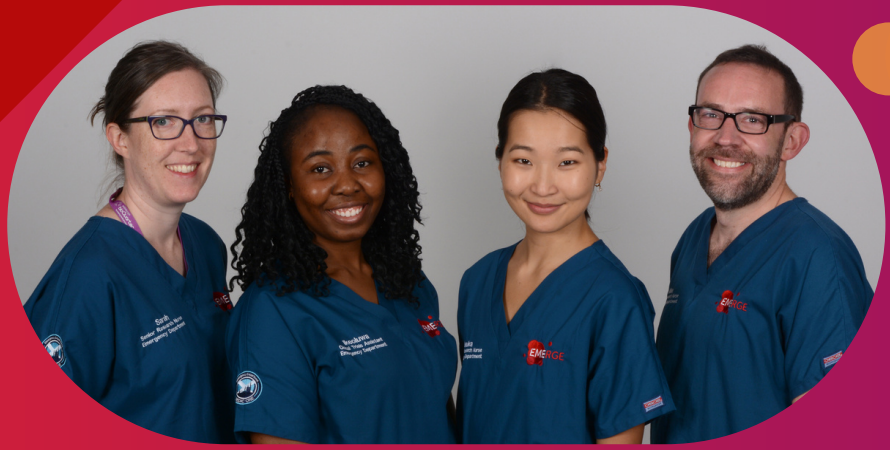
ATTEST 2 - Alteplase – Tenecteplase Trial Evaluation for Stroke Thrombolysis - presenting results at World Stroke Congress in October 2023. The findings could potentially have a significant effect on current practice. Due to present at the UK Stroke Forum (UKSF) in November 2023

Share Stroke Decisions - Development and implementation of Realistic Medicine for severe stroke through Shared Decision Making. Results due for presentation at UKSF.



TICH-3 - Tranexamic acid for hyperacute spontaneous IntraCerebral Haemorrhage. Crucial in the search to provide acute treatments for ICH patients.

The examples above range from RESUS level acute stroke care to longer-term decision making for our severe stroke patients. These capture both the Emergency Medicine response to Stroke and also a patient-centred approach to ongoing care. The team also continue to conduct long-term follow ups to both CTIMPs and Observational studies involving imaging, blood sampling and cognitive assessment.



Neurosurgery

This clinical speciality has seen growth in its research portfolio. Again, a variety of NHS Lothian Bioresource studies and both locally nationally run trials keep the team busy.



CARE Trial Cavernomas A Randomised Effectiveness (CARE) pilot trial. Recruitment has concluded with analysis underway and main stage trial submission in progress.

Tessa Jowel Brain Matrix – observational trial involving tissue sampling from Glioblastomas and patient-focussed quality of life questionnaires. We have surpassed the local target but continue to recruit and collaborate with the South East Scotland Cancer Research Network for follow-up.



NHS Lothian Bioresource – a variety of studies consenting participants to blood sampling and brain tissue donation from surgical patients.

Innovative research is currently being conducted with brain tissue samples by a team at the University of Edinburgh funded by the Jackie Stewart/ James Dyson Race Against Dementia project.

Interventional Neuroradiology

The team supports an ever-increasing number of clinical evaluation studies. A welcome recent addition has been the addition of PreSize investigating AI software to support flow diverter brain-stenting procedures.

We are privileged to gain a meaningful understanding of the impact and value of research within the patient pathway.

Allan MacRaid
Lead Research Nurse



EMERGE Renal Studies

Over the last year, a number of exciting developments have been made within the EMERGE branch of Acute Renal Research. The team expanded which has not only facilitated an increase in recruitment figures, but has allowed for the portfolio of studies to expand, making Acute Renal Research an ever more robust speciality.

- The team are delighted to announce that the OCTANE study has been recently accepted for publication in Nature Medicine. Some exciting findings from this study highlight the potential for retinal OCT imaging to act as a non-invasive monitoring and prognostic biomarker of kidney Injury. The team are eager to develop this study even further and have recently made an ethical amendment to continue this study with wider populations whom were previously excluded from the study, such as those with diabetes and a history of eye disease.
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A more recent addition to the portfolio of studies is the AFIRM trial, in this study, MRI imaging is used to look closely at the kidneys in participants who have chronic kidney disease with the aim of this non-invasive imaging technique potentially being a tool for diagnosis and acting as a treatment guide in the future. Since recruitment opened in November 2021 the team are pleased to say that they have surpassed the recruitment target ahead of schedule.



After winning a 'Dragons Den' style competition last year, Emily and OCT imaging specialist Charlene attended an intensive 'academy programme' in Leeds alongside other healthcare professionals, the programme, funded by Kidney Research UK, aimed to help people develop strategies to improve the development and availability of technologies to improve the lives of patients living with Kidney Disease. This was an exciting and thought provoking opportunity of how we can translate the work we do in research into clinical practice to ultimately improve patient outcomes.



It has been exciting to see the growth of the Acute Renal Research team since it was embedded into the EMERGE team in 2019. Since the branch was established, over 500 participants have been recruited into the various studies. The team feel fortunate to work in such an interesting speciality and are exciting to see it develop even further.

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Emily Godden
Senior Research Nurse



EMERGE Paediatrics

EMERGE Paediatrics has now been established for 1 year, working alongside Dr Jen Browning in introducing clinical research into the Emergency Department within the Royal Hospital for Children and Young People. Ashleigh Hegan was appointed to the position and has been responsible for co-ordinating this branch of research within the Paediatric Emergency Department.

The team commenced recruitment to our first commercial study, working with LumiraDX on the INFORM study. We collected samples from patients who may have RSV, flu or COVID-19 to develop rapid Point of Care testing. We reached our recruitment target within 5 months and recruited 247 participants to the study.



EMERGE Paediatrics have collaborated with Paediatric Neurologist Dr Jay Shetty in supporting with a clinical trial looking at the pharmacological management of seizures post traumatic brain injury (MAST).

In July the EMERGE Paediatrics team attended the Paediatric Emergency Research in the United Kingdom & Ireland (PERUKI) conference in Liverpool. The team got to network with other Paediatric Researchers across the UK and Ireland and gain a better insight into Paediatric Emergency research.



Throughout the year EMERGE Paediatrics have been actively recruiting patients to several PERUKI studies, such as BronchStart and most recently FIDO. The team look forward to continuing to support research within the Paediatric Emergency Department, creating links with the clinical team to improve the care for our paediatric patients.

*Ashleigh Hegan,
Senior Research Nurse*



TERN

TRAINEE EMERGENCY
RESEARCH NETWORK



Another productive year for the EMERGE/TERN fellow. Ben Clarke held the role this year and has delivered a number of studies across both RIE and SJH EDs alongside leading the EMJ Journal Update for Feb/Mar and being an NIHR Associate PI for the 'Early Vasopressors in Sepsis' (EVIS) study.

The first was the EUSEM 'Syncope in European Emergency Departments' (SEED) study looking at the management of patients with suspected syncope across Europe. The study was headed by EMERGE Director Matt Reed with previous EMERGE/TERN Fellow Rory Anderson as UK Chief Investigator. The RIE ED had the highest number of patients recruited of any single site, with the UK recruiting the most as a country.

Following on from this was the 'Diagnosis of Acute Aortic Syndromes in Emergency Departments' (DASHED) study. Aortic dissection is a notorious diagnostic challenge for emergency clinicians and this study was designed and led by previous EMERGE/TERN fellow Rachel MacLatchie, who deservedly won the Rod Little prize for it at last year's RCEM Annual Scientific Conference. A team of 21 ED care providers and medical students worked together to put RIE into the top 5 recruiting sites (out of 32 sites across the UK). Results are expected at this year's RCEM ASC.



Currently ongoing is the latest TERN study, 'Acute Coronary Syndrome in the Emergency Department' (ACS:ED). Management approval has been granted for both RIE and SJH EDs with patient recruitment scheduled for mid-April.

The EMERGE team continues to welcome the new EM trainees and offer a taster week with the team with all four ST1s and a number of the new ST4s taking advantage of this opportunity.

*Ben Clarke,
EMERGE TERN Fellow*



AIMS OF EMERGE

To support the individual researcher and project, in order to improve the quality of the research, audit or service improvement.

To raise the local and national profile of Emergency Medicine research

To co-ordinate the departmental research activity, in order to facilitate and optimise research and minimise disruption to normal clinical practice



EMERGE AT A GLANCE

25 nursing,
administrative
and support
staff



40
publications



55
studies actively
recruiting and in
setup



Study launched
across the UK

2 PhDs
awarded



5683
participants
recruited overall



ACKNOWLEDGMENTS

Annual report time arrives once again, and it has been another incredible year which, despite being post pandemic and the challenges associated with that, the EMERGE team have continued to increase the number of patients who were offered the opportunity to participate in research in the dynamic environment of the acute care setting. The team continue to grow commercial research and partnerships, as well as delivering academic work in collaboration with many emergency medicine teams across the UK.

It has been a pleasure to watch the growth and development of trainee led research which has been remarkable and fills us with much hope for the future in emergency medicine research. The trainees successfully set up, delivered and led two multi-centre studies whilst supporting recruitment to another.

We also are extremely proud that our nursing colleagues, Polly Black and Lisa MacInnes, have both been successful in being appointed into fully funded PhDs starting in August 2023 and wish them all the success in their journeys ahead.

The team have flourished in 2022/23 and it is always a joy to watch professional development and watching all members gain new skills and independence within the team. It is an absolute pleasure to work with so many talented individuals with such a unique skill set who continue to deliver such high quality, outcome changing work.

I would also like to take this opportunity to thank the trial management team from the Edinburgh Clinical Trials Unit with whom we work incredibly closely to deliver our home grown studies, namely Denise Cranley, Kat Oatey, Sian Irvine, Anna Heye, Julia Boyd, Lynn Dinsmore and Karen Ponder. Their professionalism and knowledge is second to none.

We look forward to an exciting 2023/34 continuing to provide the highest quality evidence-based care to all patients in the acute care setting.

*Rachel O'Brien,
Research Nurse Manager*



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