



RESEARCH & DEVELOPMENT ANNUAL REPORT

2021 to 2022

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Contents	Page	
1.0	Introduction	2
2.0	Research Policy, Strategy, PID & RDOCS	3
3.0	Research Networking Activity	4
4.0	Health Research Authority Approval	5
5.0	Research Project Activity	6
6.0	Recruitment of Research Subjects	8
7.0	Impact of Research on Practice	8
8.0	Financial Support	9
9.0	Research Capacity	9
10.0	Participant in Research Experience Survey	10
11.0	Research Involvement Group	10
12.0	The Library & Knowledge Service	11
13.0	Research Newsletter	11
14.0	Publications	11
15.0	Research Presentations	13
16.0	Research Misconduct, Fraud & Complaints	13
17.0	Future Direction	13
18.0	References	15

1.0 Introduction

The East of England Ambulance Service NHS Trust (EEAST) delivers a wide range of high-quality research to time and target, with engaged staff throughout the Trust. Research is considered core business for the NHS, bringing benefits to patients, clinicians, and the NHS Organisation (Box 1). The NHS Long Term Plan launched in January 2019² highlights the need for “Research and innovation to drive future outcomes improvement” and states that “Patients benefit enormously from research and innovation, with breakthroughs enabling prevention of ill-health, earlier diagnosis, more effective treatments, better outcomes and faster recovery.” Indeed, the Care Quality Commission incorporated clinical research enquiries into its Well-Led Framework³.

The EEAST Research Support Service (RSS) works with academic and other health and social care partners to develop, support, and promote research as a core part of service provision. This reporting period covered the ongoing COVID-19 pandemic as well as the restart of paused research activity. RSS worked consistently hard to ensure that patients and staff continued to have every opportunity to participate safely in relevant pre-hospital ambulance research.

Box 1 – Why we do research

Benefits of research

For our patients:

- Improved health outcomes for all patients not just those participating in research
- Most patients want to take part in clinical research for new knowledge
- Taking part in clinical trials results in improved clinical care

For the NHS:

- Research findings result in better treatment for patients
- Improves use of scarce NHS resources
- Enables fair use of resources and reduces inequalities

For healthcare clinicians:

- Involvement in research increases clinical skills
- Helps clinicians to understand evidence and use this in their clinical practice
- Improves job satisfaction
- Encourages team working

For healthcare organisations:

- Involvement in research helps attract more forward-looking staff
- Increases the number of clinicians with expertise in research
- Drives the development of research relevant to the population served

This report presents an overview of clinical research activity and achievements within EEAST during the timeframe April 2021 to March 2022. Such continued participation in high quality clinical research activity has demonstrated EEAST's on-going commitment to improving the care it offers, in addition to contributing to wider health improvement. Research findings are being used to inform clinical and other service developments, where such evidence is available.

2.0 Research Policy, Strategy, PID & RDOCS

A copy of the current approved Research and Development (R&D) Policy can be obtained from the Trust website within the Clinical Quality / RSS folder, [Research policy and capability](#). The aim of this Policy is to advise the conduct of research activity within EEAST to ensure compliance with good research practice as detailed in the UK Policy Framework for Health and Social Care Research⁴.

The Research and Innovation Enabling Strategy 2020-2024 was approved by the Trust in June 2020. Its principal aim is to provide a credible and ambitious direction to the EEAST research function. A copy is available within the Clinical Quality / RSS folder, [Research policy and capability](#).

In line with legislation, Trust Performance in Initiating and Delivering (PID) reports (about initiating Clinical Trials and delivering Commercial Contract Clinical Trials), are published internally and externally on the Trust website within the Clinical Quality / RSS folder, [Research policy and capability](#). Publication is monitored by the National Institute for Health Research (NIHR) Clinical Trials Performance Team on a quarterly basis and reported nationally⁵. It should be noted that such research activity currently forms a small proportion of the clinical research that EEAST undertakes, therefore nil returns are common.

Finally, EEAST R&D management arrangements, organisational study capabilities, and R&D interests are available via the R&D Operational Capability Statement (RDOCS; Trust website within the Clinical Quality / RSS folder, [Research policy and capability](#)). This document signposts interested parties to the best person to contact within EEAST for differing research enquiries, for example capacity and capability assessments, research passports, contracts, and so forth.

3.0 Research Networking Activity

Clinical Research Networks (CRNs) are responsible for allocating NIHR monies to support delivery of NIHR Portfolio-adopted research activity. EEAST has Partner Organisation status with CRN-East of England, and regularly attended associated meetings throughout the reporting period. In addition, CRN-North Thames continued their financial support which enabled the development of research opportunities in their area of the Trust region.



The National Ambulance Research Steering Group (NARSG) continued to meet bi-monthly during this reporting period, and EEAST maintained active involvement with this increasingly important group for pre-hospital ambulance research. The overall purpose of NARSG is to develop research capacity and capability amongst UK ambulance services. The group achieves this by working together and sharing good practice, as well as encouraging collaboration with external partners

including academia, commercial organisations and other health and social care providers. NARSG is accountable to, and a sub-group of, the Association of Ambulance Chief Executives

RSS team members also attended a variety of academic and research network groups, from which was sought guidance, support and linkages to researchers and other resources. Examples of such activity included CRN East of England Stroke Specialty group, regional Research Managers meetings, College of Paramedics events, Council for Allied Health Professions Research East Anglia group, and several University of East Anglia (UEA) Health and Social Care Partners Research and Management Groups.

4.0 Health Research Authority Approval

Health Research Authority (HRA) Approval provides a single governance approval for all NHS research, consisting of assessments by HRA staff alongside the independent Research Ethics Committee (REC) opinion where required. NHS Trusts assess their capacity and capability to deliver HRA Approved studies, before giving permission to start if feasible. Up to date HRA guidance is available via <https://www.hra.nhs.uk/>.

RSS team members have been trained to undertake the capacity and capability assessments, ensuring all arrangements are in place to successfully deliver a study via:

- Review of costings / research contracts / agreements (as necessary)
- Liaison with required support department(s)
- Advice regarding issuing of honorary research contracts or letters of access
- Provision of guidance on HRA requirements and applications
- Review of impact of amendments to existing studies

5.0 Research Project Activity

This reporting period has continued to be very busy. Six studies which commenced in previous reporting periods remained active during 2021/22.

In addition, RSS received a total of 11 new research study proposals, requiring capacity and capability assessments during 2021/22, all of which were given approval to proceed. Eight were NIHR Portfolio projects and 5 were student-level research studies, whereby RSS offers mentorship within the Trust as secondary support to university supervisors.

A summary of research projects with delivery activity in the reporting period is presented in Table 1 below. Further details can be obtained from the Trust website within the Clinical Quality / RSS folder, or from RSS directly.

Table 1. Research projects which had delivery activity in reporting period 2021 to 2022

Brief Project Title	Sponsor	Status & Notes
Frequent caller intervention study – STRETCHED (NIHR Portfolio)	Swansea University	On-going from previous reporting period. Recruitment on-going.
Triage of 999 calls for management of COVID-19 patients – TRIM (NIHR Portfolio)	Swansea University	On-going from previous reporting period. Recruitment on-going.
Impact of menopause on female ambulance staff – CESSATION (NIHR Portfolio)	East of England Ambulance Service	On-going from previous reporting period. Commenced recruitment December 2021.

Brief Project Title	Sponsor	Status & Notes
Ketone Meter use feasibility study – KARMA2 (NIHR Portfolio)	East of England Ambulance Service	On-going from previous reporting period. Commenced recruitment October 2021.
Impact of C-19 on EMS resuscitation – COMPARE (NIHR Portfolio)	South West Ambulance Service	On-going from previous reporting period.
Advanced mobile stroke unit	East of England Ambulance Service	On-going from previous reporting period.
Enhancing rates of telephone assisted CPR (NIHR Portfolio)	University of Stirling	Commenced August 2021.
An exploration of performance dyads	University of Portsmouth	Student activity. Commenced recruitment April 2021.
PARAMEDIC3 (NIHR Portfolio)	Warwick University	Commenced recruitment June 2021.
AHP perceptions of research in the NHS (NIHR Portfolio)	Leeds Community Healthcare NHS Trust	Cumulative accruals at CRN level.
Prehospital feedback initiatives (NIHR Portfolio)	University of Leeds	PIC activity for PhD research.
Delivering on the frontline prehospital maternity care	University of Bath	PhD research.
Perceptions of Advanced Paramedic Urgent Care role	University of Hertfordshire	Student research.
Research Paramedic role – RESPARE (NIHR Portfolio)	North East Ambulance Service	Commenced October 2021.
SEE-IT Good Sam app for clinical triage study (NIHR Portfolio)	South East Coast Ambulance Service	Feasible - approval to proceed pending.

Brief Project Title	Sponsor	Status & Notes
NHS staff retention in a post-covid-19 world (NIHR Portfolio)	University of Bath	Approval to proceed March 2022.
Triage of patients with traumatic brain injury (NIHR Portfolio)	University of Manchester	Feasible - approval to proceed pending.

6.0 Recruitment of Research Subjects

During 2021/22 EEAST recruited 341 participants (patients and Trust staff) as a site into high quality research studies approved by a Research Ethics Committee, a decrease on the previous year. Recruitment was hampered by HRA approval delays due to the on-going pandemic, which affected the start of several high-recruiting studies. However, all these subsequently opened to recruitment thereby future years will benefit.

It should be noted that where EEAST acts as a Participant Identification Centre or hosts smaller-scale student level projects being undertaken by Trust staff and external parties, the recruitment to such activity is not routinely captured.

7.0 Impact of Research on Practice

Findings from the ATLANTIC study which looked at administration of Ticagrelor instead of Clopidogrel have subsequently led to antiplatelet regime changes during this reporting period.

RSS surveys in the areas of hyperglycaemic patient care and the impact of the menopause transition on female ambulance staff resulted in successful research grant bids from Diabetes UK and the College of Paramedics, respectively. Both of these studies commenced recruitment in the current reporting period.

A further RSS survey exploring vitamin D and deficiency recently resulted in a successful bid to the EEAST Charity Funds to conduct vitamin D testing for 400 Trust staff.

RSS share the findings from high-quality research at Clinical Best Practice Group (CBPG) meetings, to inform recommendations for decisions about future direction of clinical practice.

8.0 Financial Support

Financial support for the RSS function was obtained from contracted income related to delivery of some of the research studies during the reporting period. Over and above such income, the Trust received funding from the CRNs amounting to approximately £130k, an increased level of support from previous years.

CRN funds were used to maintain the full-time Advanced Research Paramedic role, as well as 2 full-time Research Paramedics, and part of the Head of Research role within RSS, to facilitate delivery and development of NIHR Portfolio research activities. CRN East of England support was also utilised for Local Project Management System (EDGE) training, and capacity building activities within the Trust.

9.0 Research Capacity

During 2021/22 the substantive RSS function consisted of 3.0 Whole Time Equivalent (WTE) staff, supported during the year by seconded Research Paramedic roles on fixed-term contracts for delivery of the STRETCHED, TRIM and KARMA2 studies.

Research awareness and knowledge-raising activity throughout the Trust involved dissemination of research findings on the Trust website, discussion at CBPG, Medicine Management and Clinical Directorate meetings, as well as regular articles in Trust publications.

Wider dissemination of the findings from research activities has been achieved through oral and poster presentations at external peer-reviewed

meetings and conferences, as well as publications in peer-reviewed journals, copies of which can be obtained from RSS.

Trust staff undertaking graduate or post-graduate studies with a research element, whether financially supported by the Trust or not, continued to be encouraged to contact RSS for mentoring and support alongside their Higher Education Institution supervision.

It is anticipated that all student paramedics within the Trust have undertaken an introduction to research training module. Similarly, all clinicians involved in research studies are expected to successfully obtain an appropriate Good Clinical Practice certificate.

In collaboration with CRN East of England, a Fundamentals of Clinical Research Delivery in the Ambulance Setting online learning module has been developed to support staff involvement in research. It has been made available to all UK ambulance services via NIHR Learn ([Learning and support | NIHR](#)) and is awaiting NIHR accreditation.

10.0 Participant in Research Experience Survey

The national NIHR Participant in Research Experience Survey (PRES; [Participant in Research Experience Survey \(PRES\) | NIHR](#)) is promoted by the CRNs as a feedback mechanism to Trusts regarding their research delivery. The recently developed PRES for ambulance Trusts was utilised for patients, and the online PRES for adults was utilised for staff that participated in suitable studies during 2021/22.

It should be noted that very few studies were suitable for PRES activity. However, a total of just 6 responses were received in 2021/22, which was less than the previous year, and disappointing given the resource outlaid. Positive research experiences were reported generally, but the response rate this year has not given any additional learning to inform RSS practice.

11.0 Research Involvement Group

As set out in the Research and Innovation Enabling Strategy 2020-2024, the Research Involvement Group (RIG) has continued to meet during this

reporting period, albeit remotely rather than face-to-face due to the on-going pandemic. The RIG has proved a useful forum for EEAST to engage with patient and public members and to receive on-going objective feedback about research that it wishes to undertake and deliver.

12.0 The Library & Knowledge Service

EEAST continued to subscribe to the Library & Knowledge Service for NHS Ambulance Services in England (LKS ASE) during the reporting period. The subscription provides all employed EEAST staff with access to library services including document supply, literature searching, current awareness, and guides and help on various aspects of information skills. The LKS ASE can be contacted directly by staff via email Matt.Holland@nwas.nhs.uk or by using one of the online forms on the website <https://ambulance.libguides.com/home1/home>.

13.0 Research Newsletter

As set out in the Research and Innovation Enabling Strategy 2020-2024, to improve communication about research activity in the Trust the RSS Newsletter has continued to be produced twice a year. Current and future studies are showcased, and relevant findings shared. The RSS Newsletter is cascaded using Need to Know and the Clinical App, and copies can be obtained on the Trust website [Research Newsletters](#) or by contacting RSS.

14.0 Publications

Albargi, H., Mallett, S., Berhane, S., Booth, S., Hawkes, C., Perkins, G., Morton, M., Foster, T., Scholefield, B. (2021) Bystander cardiopulmonary resuscitation for paediatric out-of-hospital cardiac arrest in England: an observational registry cohort study. *Resuscitation*, 170: 17-25. DOI: [10.1016/j.resuscitation.2021.10.042](https://doi.org/10.1016/j.resuscitation.2021.10.042)

Aslam, R.W., Cole, R., Diethart, B., Edwards, A., Edwards, B.M., Evans, B.A., Foster, T., Fothergill, R., Gripper, P.C., Hughes, H., John, A., Khanom, A., Petterson, R., Philips, C.J., Porter, A., Rees, N., Rosser, A., Scott, J., Tee, A.,

Watkins, A., Snooks, H. (2021) Co-design of a logic model describing components, mechanisms of change and potential impacts of case management for people who frequently call ambulance services, *Emergency Medical Journal*, 38:e5 <http://dx.doi.org/10.1136/emered-2021-999.5>

Barella, D., Downie, F. (2021) Pressure redistribution in the ambulance: is this possible? *Wounds UK*, Vol 17, No.3.

Clark, L.V., Fida, R., Skinner, J., Murdoch, J., Rees, N., Williams, J., Foster, T. and Sanderson, K. (2021) Mental health, well-being and support interventions for UK ambulance services staff: an evidence map, 2000 to 2020. *British Paramedic Journal*, 5(4), 25–39

Jones, J., Allen, S., Davies, J., Driscoll, T., Ellis, G., Fegan, G., Foster, T., Francis, N., Islam, S., Morgan, M., Nanayakkara, P., Perkins, G., Porter, A., Rainer, T., Ricketts, S., Sewell, B., Shanahan, T., Smith, F., Smyth, M., Snooks, H., Moore, C. (2021) Randomised feasibility study of prehospital recognition and antibiotics for emergency patients with sepsis (PhRASe). *Scientific Reports*, Sep 20; 11(1): 18586 doi: [10.1038/s41598-021-97979-w](https://doi.org/10.1038/s41598-021-97979-w).

Mochrie, T., Prothero, L., Foster, T. and South, N. (2021) The experiences and attitudes of ambulance staff towards the counter-terrorism “PREVENT” training: a survey-based service evaluation. *Emergency Medical Journal*, 38(9), <http://dx.doi.org/10.1136/emered-2021-999.34>

Prothero, L.S. and Foster, T. (2021) A survey-based evaluation of ambulance staff awareness of vitamin D and risk of deficiency in a UK ambulance service. *British Paramedic Journal*, 6(2), 40 – 48

Prothero, L.S., Foster, T., Dhatariya, K., Lake, A., Boyle, A., Rayman, G., Williams, J. and Sampson, M. (2021) Use of capillary blood ketone meters to improve ambulance service care of hyperglycaemic patients: protocol for a stepped-wedge, controlled feasibility study (KARMA2) *Emergency Medical Journal*, 38(9), <http://dx.doi.org/10.1136/emered-2021-999.37>

Prothero, L.S. and Foster, T. and Winterson, D. (2021) Menopause affects us all...’ Menopause transition experiences of female ambulance staff from a

UK ambulance service: a survey-based service evaluation. *British Paramedic Journal*, 6(3), 41 – 48

Snooks, H., Watkins, A., Bell, F., Brady, M., Carson-Stevens, A., Duncan, E., Evans, B., England, L., Foster, T., Gallanders, J., Gunson, I., Harris-Mayes, R., Kingston, M., Lyons, R., Miller, E., Newton, A., Porter, A., Quinn, T., Rosser, A., Siriwardena, A., Spaight, R., Williams, V.(2021) Call volume, triage outcomes, and protocols during the first wave of COVID-19 pandemic in the United Kingdom: Results of a national survey. *Journal of the American College of Emergency Physicians*, Vol 2, Issue 4.
<https://doi.org/10.1002/emp2.12492>

15.0 Research Presentations

Use of capillary blood ketone meters to improve ambulance service care of hyperglycaemic patients: protocol for a stepped-wedge, controlled feasibility study (KARMA2) (2021) Poster: 999 EMS Research Forum; Council for Allied Health Professions Research East Anglia Annual Conference; East of England Diabetes Clinical Network; Group for Research and Clinical Experience in Diabetes

The experiences and attitudes of ambulance staff towards the counter-terrorism “PREVENT” training: a survey-based service evaluation (2021) Poster: 999 EMS Research Forum

16.0 Research Misconduct, Fraud and Complaints

Once again, no concerns or incidences have been raised in this reporting period.

17.0 Future Direction

In line with the recently published Best Research for Best Health Strategy (2022)¹ our primary focus will be on supporting and seeking funds to generate health-related research, which leads to improved outcomes for people. Additionally, the Trust will explore means to support more internal research projects for instance through collaborations with universities throughout the region.

The Research & Innovation Enabling Strategy 2020-24 and corresponding action plan provide a framework for the advancement of research within the Trust. Regular progress reports are produced for CBPG to monitor progress.

Increasing PRES activity has been set as a High Level Objective by CRN for 2021/22 onwards, therefore identification of appropriate studies from which to approach participants will be a priority in the new financial year.

At a local, regional, and national level, the Trust will continue to attract high quality studies and drive the development of research grant applications in under-developed areas of pre-hospital ambulance research need and areas of importance to Trust patients and staff.

RSS will continue to communicate opportunities for research skills development throughout the Trust, to increase research knowledge, particularly at the senior management level.

18.0 References

1. Department of Health and Social Care (2022) Best research for best health. A new national health research strategy. [Best research for best health: a new national health research strategy - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/103121/best-research-for-best-health-a-new-national-health-research-strategy.pdf)
2. Department of Health and Social Care (2019) The NHS Long-term Plan <https://www.longtermplan.nhs.uk/publication/nhs-long-term-plan/>
3. Care Quality Commission (2018) Key lines of enquiry, prompts and ratings characteristics for healthcare services <https://www.cqc.org.uk/guidance-providers/healthcare/key-lines-enquiry-healthcare-services>
4. Health Research Authority (Nov 2017) UK Policy Framework for Health and Social Care Research. <https://www.hra.nhs.uk/planning-and-improving-research/policies-standards-legislation/uk-policy-framework-health-social-care-research/>
5. National Institute for Health Research (2019) Performance in Initiating and Delivering Clinical Research (PID) Submission guidelines <https://www.nihr.ac.uk/documents/performance-in-initiating-and-delivering-guidelines/19932>