

		Agenda No	33-24
Name of meeting	Quality & Patient Safety Committee		
Date	20/06/24		
Name of paper	Research and Development Department Annual Report		
Responsible Executive	Richard Quirk		
Author	Craig Mortimer		
Synopsis	Overview of the work and development undertaken by the department over the 2023/23 year.		
Recommendations, decisions or actions sought	Approval of report		
Does this paper, or the subject of this paper, require an equality impact analysis ('EIA')? (EIAs are required for all strategies, policies, procedures, guidelines, plans and business cases).		No	



Research and Development Department Annual Report 2023/24



Best placed to care, the best place to work

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Introduction

The past twelve months have seen a number of changes within South East Coast Ambulance Service NHS Foundation Trust (SECAmb). With a new CEO and interim Medical Director, strategic changes for the organisation have been discussed, and in some circumstances commenced. Working within this changing environment, the Trust's Research and Development Department continues to position itself at the forefront of research driven processes.

As part of the extensive healthcare research network, SECAmb's Research and Development Department works collaboratively with other Trust departments and external organisations/institutions and the professionals within, including the Clinical Research Network Kent, Surrey and Sussex (CRN KSS), Higher Education Institutions (HEIs), commercial/non-commercial organisations and other NHS Trusts from across England, Wales, Scotland and Northern Ireland.

Through this collaborative approach, the Research and Development Department continuously designs, develops, and delivers a variety of research studies, within an evolving healthcare system. We aim to augment the contribution of ambulance service research influencing overall evidence-based practice within our Trust and the broader NHS community. Given the sometimes unscheduled nature of research, a definitive plan as to the themes being investigated at a given time, or their associated finances is not possible. This results in a broad and diverse portfolio of studies being undertaken each year that encapsulates both the Trust's and wider healthcare network's vision and strategy.

This report provides an overview of the department and its key activities undertaken between April 2023 and the end of March 2024.

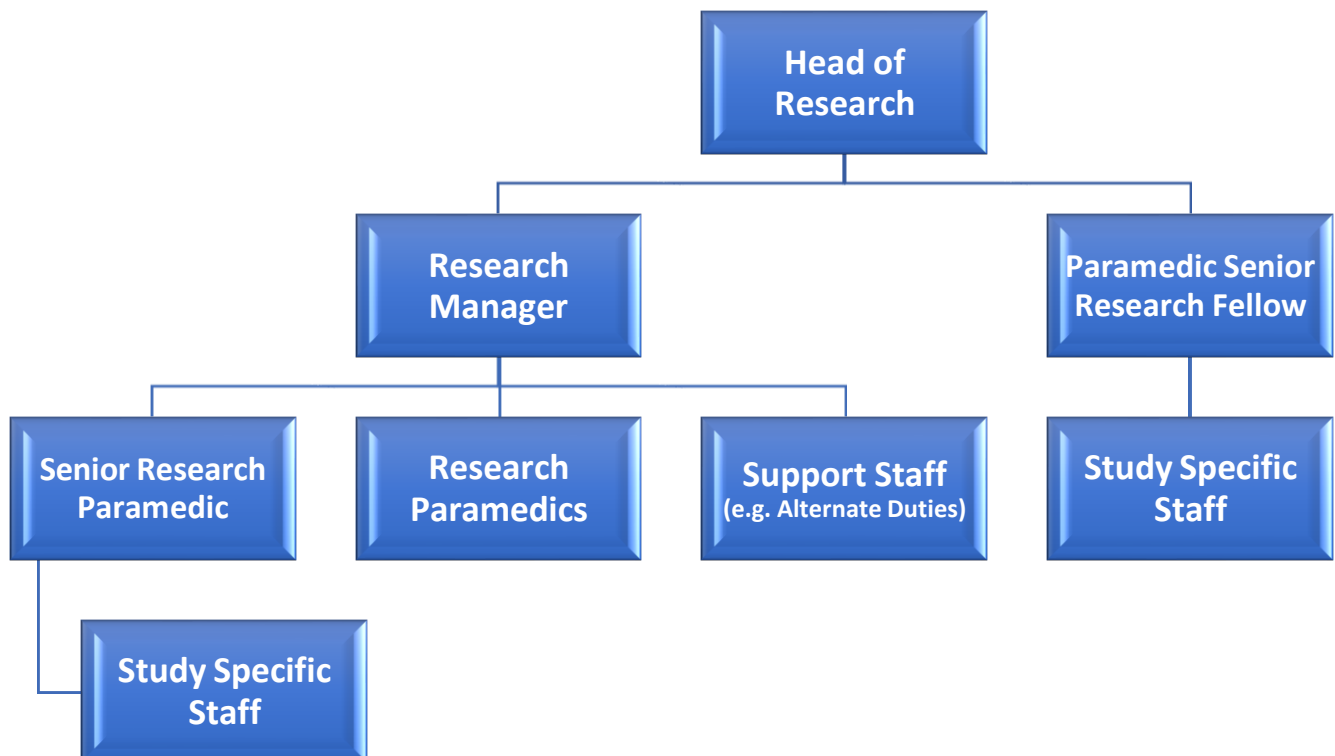
Staffing Overview

Following a departmental review and restructure during 2023 the core team currently consists of four substantive staff members covering 2.9 Whole Time Equivalents (WTE). These are Professor Julia Williams (Head of Research) - 0.4WTE; Craig Mortimer (Research Manager) - 1WTE; Dr Jack Barrett (Paramedic Senior Research Fellow) – 0.5WTE and Peter Eaton-Williams (Senior Research Paramedic) - 1WTE. A further substantive 0.2 (WTE) Research Paramedic vacancy is present within the department which is currently vacant.

The department is financed through two main funding streams. The Head of Research role is fully funded by SECAmb, whereas the Research Manager,

Paramedic Senior Research Fellow and Senior Research Paramedic roles have dual funding from both the Trust and CRN KSS. Funding from the CRN commenced in 2016 with recurrent funding negotiated to support development of the Trust's research vision.

Department Structure



Study Specific Staff

Provided through fully costed studies, the department over the past year has been supported by seconded Research Paramedics who have and continue to work on designated studies. These additional staff not only increase the department's size at varying timepoints, but also help develop its footprint within the Trust and across the research network.

Since March 2022, a Research Paramedic has been recruited into the department to work as the coordinating Research Paramedic for the Paramedic-3 Trial on a 0.5WTE basis. Since December 2023, another Research Paramedic funded (0.4WTE) by the CRN KSS has worked on the Paramedic-3 study to help with its expansion into additional operating units within the Trust. This position will close

on 01st May 2024. A summary of the Paramedic-3 study is provided in the ‘*Open Portfolio Studies*’ section of this report.

As further funded research studies come into the department, or are developed by the department, more roles will be made available to allow us to continue to offer staff development opportunities and build department staffing levels.

Finances

All monies within the department’s working budget have been brought in either through the support of external organisations such as the CRN KSS, or as part of research work streams, consultancy and successful grant applications.

Maintained in accordance with SECamb’s current policies and procedures, funds held by the Research and Development Department are used to both develop and promote the department, its respective workstreams, as well as support SECamb where possible in undertaking varied research activities.

The following table identifies funding that has been received by the department during the 2023/24 financial year and its designation.

Funding Provider	Amount	Designation
Clinical Research Network Kent Surrey and Sussex.	£63,700	Facilitation of a Band 8a Research Manager (1 WTE)
Clinical Research Network Kent Surrey and Sussex.	£31, 850	Facilitation of a Band 8a Paramedic Senior Research Fellow (0.5 WTE)
Clinical Research Network Kent Surrey and Sussex.	£63,122	Facilitation of a Band 7 Senior Research Paramedic (1 WTE)
NHSE/University of Surrey	£14,803	Post-Doc Bridging Award (J. Barrett)
University of Warwick (Grant)	£121,973.96 over 48 months	Paramedic-3 Research Study
Swansea University (Grant)	£30,183 over 60 months	BESURE Research Study
University of Southampton (Grant)	£200	ParAid Study

University of Hertfordshire	£6,098	Grant Writing Secondments (J. Barrett; P. Eaton-Williams)
NIHR/Department of Health	£25,000	NIHR Research Capability Funding
Clinical Research Network Kent Surrey and Sussex.	£6,208.38	Facilitation of an additional Band 6 Research Paramedic to support Paramedic-3

Some amounts have been rounded off for ease of collation.

Research Studies

The Research and Development Department continues to support and collaborate on a wide range of research studies as part of its ongoing commitment to fostering new research and developing the ability of staff to participate in and undertake quality research. Covering a variety of themes and topics these research studies are either Trust initiated (undertaken by SECamb staff members), either as part of departmental workstreams or staff members' academic programmes (e.g. MSc, PhD); or led by external organisations (e.g. HEIs, other trusts) where SECamb is either a Participant Identification Centre (PIC) or a research site.

Internal Studies

Due to changes within the national governance and ethics approval process, more non-research studies are being completed by students studying master's levels qualifications. Research studies undertaken have been:

- ***A Retrospective Review of Pacing Performed by Critical Care Paramedics within a UK Ambulance Service.*** Led by a SECamb CCP. A study looking at successful prehospital transcutaneous pacing performed by SECamb CCP's, as demonstrated by electrical capture on the ECG. *Write up in progress.*
- ***Increased blood glucose levels and their correlation with changing cardiorespiratory observations amongst asthma patients receiving nebulised salbutamol: a pragmatic quantitative study.*** Led by SECamb and funded by Kingston University (£1,000). This study is looking at the correlation between blood glucose levels and nebulised Salbutamol amongst asthma patients experiencing an acute exacerbation. *Write up in progress.*

- **Paramedics' perceptions and experiences of the administration of adrenaline to patients in traumatic cardiac arrest: an exploratory qualitative study.** Led by a SECAMB CCP. This study is looking to determine paramedics' current perception and experiences of the administration of adrenaline to patients in traumatic cardiac arrest. *Write up in progress.*
- **Leadership in UK ambulance services: A critical investigation into how emergency service leaders can effectively alternate their leadership style between emergency to non-emergency situations.** Led by a SECAMB staff member. This study intends to look at how UK ambulance services leaders adapt leadership styles between major/critical incident management and team/departmental day to day management? *Completed.*
- **A national perspective of ambulance clinicians' perceptions, experiences and decision-making processes when assessing older adults with a head injury: a mixed-methods study.** Led by SECAMB's Research and Development Department and funded by the College of Paramedics (£1,250). This study explored ambulance clinicians' clinical decision-making when presented with older adults with a head injury. *Completed.*
- **Retrospective Cohort Study on the Prehospital Use of Tenecteplase: Safety, Efficacy, and Outcomes in Out of Hospital Cardiac Arrest.** Led by a SECAMB CCP. The study aims to investigate the safety, efficacy, and outcomes associated with the prehospital use of Tenecteplase in OHCA. As CCPs (Critical Care Paramedics) use a single drug, under a strict dosing regimen. *Write up in progress.*
- **Advanced Paramedic Practitioner Led Integrated Care Model within an NHS Ambulance Trust (APPLIED): A case study of interprofessional collaborative decision making dynamics.** Led by SECAMB's Research and Development Department. This study will look at the dynamics in place within the current care hub set up within Ashford OU. *Write up in progress.*
- **A phenomenological study of Critical Care Paramedics' perceptions and lived experiences of breaking bad news in the out-of-hospital cardiac arrest setting.** Led by a SECAMB CCP. The study aims to explore Critical Care Paramedics' (CCPs) perceptions and lived experiences of breaking bad news (BBN) in the out of hospital cardiac arrest (OHCA) setting. *Data collection in process.*
- **A Work-based Project Examining Patient Safety Incident Reporting Habits of Ambulance Crew: A Questionnaire Study.** Led by a SECAMB PP (Paramedic Practitioner). This study aims to explore ambulance crews' confidence in reporting Patient Safety Incidents (PSIs) and to identify any perceived barriers to this. *Data collection in process.*

External Studies

The following are open/closed studies led by external teams where SECamb has been a nominated site/PIC over the past year. The biggest reduction in activity seen has been amongst external students approaching the Trust to undertake their study.

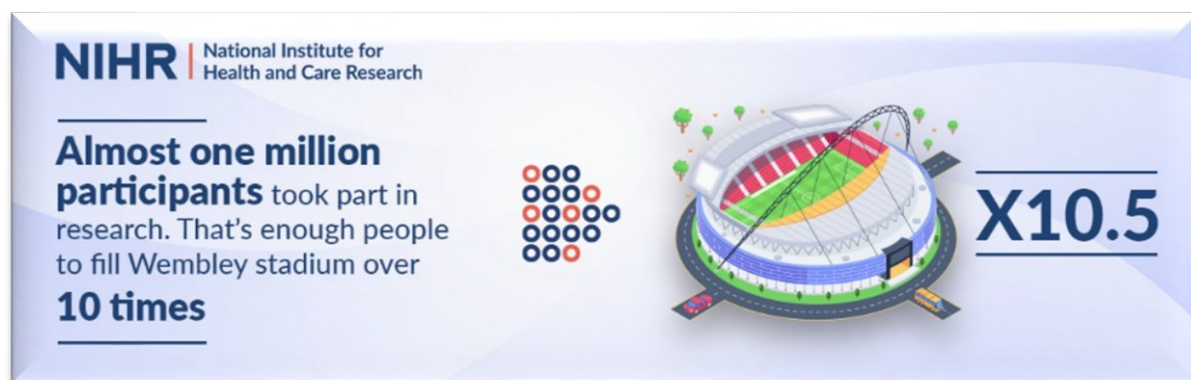
- ***‘What is the decision-making relationship between the paramedic and family during an emergency ambulance response to an acutely unwell child?’*** Led by a University of Hertfordshire PhD student. This study explores the phenomenon and relevant factors of the paramedic and family relationship in acute care decisions for a child during an emergency ambulance response. *Following a protocol amendment, the study continues to recruit across SECamb.*
- **Knowledge exchange workshops to support the Risk of ADverse Outcomes after a Suspected Seizure (RADOSS) project.** Led by Yorkshire Ambulance Service and funded by the National Institute for Health Research – Research for Patient Benefit (RfPB) Programme (£247,541.00). The study aimed to generate a risk prediction tool that allowed ambulance crews to generate a personalised estimate of that individual’s risk of death/recontact with the urgent and emergency care system within 3 days of attendance. Opened within SECamb 15/05/23. *Closed and published.*

Portfolio Studies

The National Institute for Health and Care Research Clinical Research Network (NIHR CRN) Portfolio of Studies consists of high-quality clinical research studies that are eligible for support from the NIHR CRN in England. As part of the CRN process, each trust, in consultation with their relevant network, sets an annual accrual target based on the number and type of portfolio studies due to recruit that year.



For the 2023/24 financial year **SECamb pledged to achieve 360 accruals** in total from its portfolio studies. This was based on the number of studies the Trust had open at the time and those likely to start within the required timeframe. Within the 12 month time frame we had recruited to **7 studies** and achieved an **accrual figure of 419 in total** across all portfolio studies which is **a 116% increase on the ‘To Pledge Total.’**



The NIHR Clinical Research Network (CRN) showed that during 2022/23 over 100 people in England were recruited every hour to take part in health and care research. That's enough people to fill Wembley Stadium over 10 and a half times. An additional 220,000 people took part in research compared to pre-pandemic levels.

For the forthcoming year (2024/25), an accrual pledge of 38 has been set. This is a significantly lower figure than other years but reflects minimal studies currently recruiting, slow recruitment rates, and few potential studies planned to commence within the timeframe.

Completed Portfolio Studies

- ***Reducing time to appropriate emergency response in trauma incidents using smartphone video streaming from 999 callers: A feasibility Randomised Controlled Trial (SEE-IT).*** Led by Surrey University with SECamb being the lead NHS Trust and funded via an NIHR grant (£467,981) this study aims to assess by way of a pilot study whether the use of GoodSAM (a live streaming app) is beneficial in the remote triaging of trauma calls and facilitates a better level of clinical response. Published. (243 [SECamb portfolio accruals](#))
- ***The PALLUP Study: Equipping community services to meet the palliative care needs of older people with frailty approaching the end of life; a mixed methods study.*** Led by the University of Surrey this study aims to improve the understanding of palliative care needs of severely frail elders and better support families to work with palliative care services and reduce unnecessary interventions, and further equip community services to provide palliative care for frail elders. Published. (1 [SECamb portfolio accrual](#)).

- **PreHOspital Triage for potential stroke patients: lessONs from systems Implemented in response to COVID19 (PHOTONIC).** Led by University College London and funded through the NIHR Health Services and Delivery Research programme (£592,411.19). This study builds on the recent rapid service evaluation of prehospital video triage in London and East Kent to address implementation and impact of prehospital tele-triage. (4 SECAmb portfolio accruals).
- **Paramedic delivery of end-of-life care: a mixed methods evaluation of service provision and professional practice (ParAid): Phase 1.** Led by the University of Southampton and funded by Marie Curie Research Grants Scheme (£149,475.00). This study is looking at how different models of service provision shape paramedic practice and influence outcomes for individuals at end-of-life. (117 SECAmb portfolio accruals).
- **PErceived bEnefits and limitations of Remote decision-making Support for ambulance clinicians. (PEERS).** This study is led by SECAmb Research and Development Department and funded by the College of Paramedics (£1,250). Most UK ambulance trusts offer clinicians that are attending patients with remote decision-making support provided by telephone calls to specialist paramedics and other health professionals. This study is qualitatively exploring SECAmb clinician perspectives of using the Emergency Crew Advice Line (ECAL) with the aim of revealing practical considerations to inform further development. (27 SECAmb portfolio accruals).
- **Exploring the use of pre-hospital pre-alerts and their impact on patients, ambulance service and Emergency Department staff (PreAlert).** Led by the University of Sheffield and funded by NIHR Health and Social Care Delivery Research Programme (£555,740.24). This study aims to understand how pre-alert decisions are made and implemented by pre-hospital staff, and the impact of these on receiving EDs and patients, in order to identify principles of good practice, areas of uncertainty and areas for improvement. (96 SECAmb Portfolio Accruals)

Open Portfolio studies

- ***Pre-hospital Randomised trial of MEDication route in out-of-hospital cardiac arrest (PARAMEDIC 3).*** Led by Warwick University and funded by the NIHR (£2,689,632). This is a national randomised controlled trial with patients randomised to adrenaline given intra-osseous as first route versus intravenous during resuscitation. Opened to SECamb recruitment on 08/09/22. Recruiting within the Brighton, Gatwick, Banstead & Chertsey OUs. *(162 SECamb portfolio accruals to date).*
- ***Black, Ethnic and Asian populations' Service Use Relating to Emergency services for accidents and injuries (BE SURE): A mixed-methods study of presentation, care delivered, outcomes and stakeholder perspectives.*** Led by Swansea University with SECamb as a co-applicant, it has been funded through an NIHR grant (£173,723). The study will investigate disparities in how ethnic minorities present to emergency ambulance services and Emergency Departments (ED) with injuries, the care they receive and what happens to them, compared to the White British population, to inform policy to address differences in care, morbidity and mortality. Opened to SECamb recruitment on 10/01/23. *Work Package (WP) 3 recruitment completed. (61 SECamb portfolio accruals). Secondary data collation phase (WP2) in process.*
- ***Fighting fatigue in the NHS ambulance workforce: development, acceptability and feasibility testing of a comprehensive fatigue risk management system to improve staff and patient safety (CATNAPS).*** Led by the University of East Anglia and funded through the NIHR Health Services and Delivery Research programme (£641,528.58). The study aims to develop a comprehensive fatigue risk management system for the UK ambulance sector that is underpinned by a theory of change and is acceptable, feasible, and likely to improve patient and staff outcomes. Opened within SECamb 23/09/22. *WP1/WP2 recruitment completed (15 SECamb portfolio accruals to date). WP3 started January 24 with ethnographic component due to start in East EOC and North Kent during April/May 24.*
- ***Paramedic delivery of end-of-life care: a mixed methods evaluation of service provision and professional practice (ParAid): Phase 2.*** Led by the University of Southampton and funded by Marie Curie Research Grants Scheme (£149,475.00). This study is looking at how different models of service provision shape paramedic practice and influence outcomes for individuals at end-of-life. *Currently in Set-Up.*

- **Optimising Implementation of Ischaemic Stroke Thrombectomy (OPTIMIST): exploring NHS Professional Views about the Emergency Stroke Pathway.** Led by the University of Newcastle and funded by the National Institute for Health Research - Programme Grants for Applied Research (PGfAR). The study aims to develop and evaluate (by a trial) a new specialist pre-hospital direction thrombectomy pathway and to subsequently model how thrombectomy pathways should be configured across England to achieve optimal clinical and cost effectiveness. Opened within SECamb 22/02/24. *Currently recruiting across SECamb.*

Upcoming Portfolio studies

- **Randomised trial of clinical and cost effectiveness of Administration of Prehospital fascia Iliaca compartment block for emergency Pre-Hospital hip fracture care Delivery (RAPID 2).** Led by Swansea University this collaborative grant (4 NHS Ambulance Trusts and receiving hospitals) application successfully obtained NIHR funding in April 2020 (£1,784,766). Postponed due to the pandemic, start-up has now re-commenced. *Discussion ongoing with Maidstone and Tunbridge Wells NHS Trust and Paddock Wood OU to commence study.*

Grant Applications

The department continues to design and develop research studies in response to Trust priorities and those of the wider NHS, pursuing key themes of development within current healthcare. Working collaboratively with other NHS and non-NHS organisations the department strives to produce research that is recognised nationally and internationally for its relevance, accuracy and quality. The following are successful grant applications that have been submitted within the last 12 months, or those that are still awaiting a decision.

Internal Applications

- **NHSE Post-Doc Bridging Award:** Personal award to Jack Barrett (SECamb), via the University of Surrey, to develop an NIHR Advanced Clinical and Practitioner Academic Fellowship (ACAF) application. The award is being used to support a systematic literature review, patient and public involvement workshops, costs for conference attendance and time to develop the ACAF application (one day a week). *SECamb awarded £14,803.*

- **NIHR Undergraduate Internship Programme (UIP) – Round 1:** Funded by the Department of Health and Social Care, this programme offers fully funded placements for up to three research interns. These interns, ideally undergraduate student paramedics, have the opportunity to shadow the research department and actively contribute to research design and delivery. A successful application led by Jack Barrett and supported by Julia Williams was submitted to support three intern placements during the summer of 2024. The six-week internship allows each participant to engage in meaningful work focusing on projects which include ongoing research in older adults and head injury, collaboration on road traffic collision studies with Imperial College London, and exploring how research can identify patients at risk of deterioration while awaiting ambulance responses. *SECAmb awarded £16,705.00.*

External Applications

- **Enhancing Road Safety: Automatic Vehicle Triage in the NHS Ambulance Service for Improved Post-Crash Care and Injury Prediction.** Led by Imperial College, London and funded by the Road Safety Trust. Jack Barrett is a co-applicant on the grant and PI for SECAmb. This is a preliminary piece of work to evaluate existing road traffic collision response and car eCall data usage within SECAmb. The study aims to enhance road safety and post-crash care through three key objectives: developing injury risk models based on real-world data for policy influence and future implementation, analysing dispatch practices for NHS improvement, and conducting focus groups to understand dispatcher challenges and technology acceptance. These efforts are set to inform a follow-up intervention study, aiming to optimise triage systems within the NHS and adapt to evolving regulations and vehicle technology, potentially reducing road injuries and fatalities. A successful grant of £49,000 was awarded to the study team. *SECAmb awarded £16,608.*

Processes

The Research and Development Department ensures that all activities are undertaken in accordance with relevant national and local policies, procedures and guidance. Incorporating advice from the Trust, NHS, NIHR, CRN, Health Research Authority (HRA), Care Quality Commission (CQC) and other relevant governing bodies, the department continues to monitor and review its working practices to provide robust and quality research and associated activities across all departments and sites.

Research Governance

SECamb's internal research governance process adheres to the HRA's UK Policy Framework for Health and Social Care Research and maintains standards to protect and promote the interests of staff members, patients, service users and the public. Through a fully collaborative approach, the department ensures all governance and ethical requirements are met for each research study undertaken within the Trust.



Research and Development Sub-Group

The Research and Development Sub-Group (RDG) was developed to support all research activity within SECamb. With substantive representation from other Trust departments as well as external consultants (e.g. lay representation), the group seeks to maintain patient safety, clinical and cost-effectiveness, high quality and positive patient experiences through regular meetings, continuous reviews and ongoing communications.

The RDG endeavours to assist in the promotion of the Trust as a leading research active organisation by maintaining its reputation, (e.g. through high quality publications, research income and collaborations) and by ensuring that new processes (e.g. treatments, health technologies) are introduced based on high-quality evidence.

- The Sub-Group meets bi-monthly (every two months) and extraordinary meetings are called by the Chair between these meetings to discuss and resolve any critical issues arising.

Research Governance Portal

A central point of access for all internal staff wishing to obtain governance approvals to undertake research within SECamb has been active on the MARVAL* platform since 2021. Allowing for a more structured approach, the portal facilitates a fully auditable process ensuring that both applicant and department meet required timeframes and manage expectations.



The past couple of years have seen the development of similar portals from other departments. The expectation is that as these develop and expand, a more collaborative and dynamic process will be available to staff members seeking to develop practice.

Care Quality Commission (CQC)

As stated by the NIHR *'Clinical research is no longer just a 'nice to do' exercise in the NHS - it is now a key part of improving patient care. Research is written into the NHS Constitution and this is now backed up through the CQC inspection process'*. Since the CQC strategy was published in 2021, research indicators have been embedded within the *'Well-led Framework'* supporting the requirement for all associated processes to be appropriate, transparent and effective.



The Research and Development Department maintains these principles for the Trust by ensuring the department aligns to the NIHR CRN objectives and maintains a central research repository including the EDGE research management system and Central Portfolio Management System (CPMS).

Presence

Given the importance of research in healthcare and the general desire and need for clinical and non-clinical staff to actively participate in research, the Research and Development Department continually promotes awareness of SECAMB's research activities within and external to the organisation. As a department, we have found that a multi-pronged approach is most effective, including direct outreach to individuals, social media posts, emails, and webinars.

Whilst national portfolio studies continue to be prevalent across the UK, over the past year there has been a gradual decrease in the number of research studies carried out from students at HEIs. This is in response to new HRA advice regarding the types of projects students should undertake to complete a master's programme, a move that has echoed the reduction seen during the pandemic.

Despite this, the department continues to support those staff members that undertake research studies for the purpose of academic programmes or workstreams through existing mechanisms.

Department Recognition

The Research Support Awards, run by the National Institute for Health and Care Research Clinical Research Network Kent, Surrey and Sussex, recognise people and teams who provide essential support to research activities within the NHS and wider health and care sectors, despite not working directly in research roles.



During 2023 the Research and Development Department submitted a nomination for the Trust's PARAMEDIC3 trial-trained Paramedics that randomise eligible cardiac arrest patients into this national trial of drug administration route. Following more than 80 individual and team nominations from across a range of NHS trusts, dental practices, homecare providers and primary care, the Trust won in the Acute Trust/Ambulance Trust category.

This award is in recognition of SECamb staff embracing research, taking time to learn about studies, making patients and service users aware about studies and supporting the research department in its further advancement of research practices.

Clinical Research Events

As part of its commitment to raise awareness of research activities within the Trust, over the past year the department has implemented an ongoing series of clinical research summits. Open to all clinical grades and students, these events are intended to bridge the gap between research and clinical practice through provision of an oversight of past, present and future research being carried out within the Trust and elsewhere. Each event is themed to provide a collaborative showcase of a specific area of healthcare and demonstrate how we as a Trust are involved and benefiting from the work being undertaken. The department aims to host three clinical research summits a year, spread evenly across the Trust's

region. So far, we have run two events with two more planned for the forthcoming year. Those already undertaken are:

Traumatic Brain Injury (TBI) in the Prehospital Setting: 04th July 2023

Held at the South of England events centre West Sussex, 90 members of staff attended to discuss current TBI research and its implications for clinical practice. Simon Weldon, our CEO opened the event and highlighted the importance of research in enhancing ambulance services and their patient care. Chaired by Prof. Tom Quinn (SECamb Non-Executive Director), the presentations included Dr Harriet Tucker's (Air Ambulance Charity Kent, Surrey, Sussex) discussion on severe TBI management and the benefits of Tranexamic Acid (TXA), and Dr Claire Baker's (Imperial College) innovative work on using in-vehicle sensors to predict TBI in road accidents. Finally, Dr Jack Barrett (SECamb) presented research from his National Institute of Health and Care Research Fellowship on identifying at-risk older adults for TBI.

Advancements in Prehospital Stroke Care: 28th February 2024

Held at the Nutfield Centre, Redhill Surrey, 50 members of staff attended the event to discover how the provision of Prehospital Stroke Care is developing amongst prehospital services. The summit was opened by our Acting Deputy Chief Medical Officer Magnus Nelson, who shared his personal insights into the importance of early recognition of stroke and the impact ambulance services can have in this patient group. Presentations included Kaili Stanley (King's College Hospital) who shared how national data is being used to improve patient outcomes and the contributions that ambulance services can make. Dr Angus Ramsey (University College London) discussed the current work relating to tele-triage being undertaken in Kent and how that could change clinical practice in the future. Finally, Dr Graham McClelland (Northumbria University), nationally recognised as a paramedic leading in prehospital stroke research, shared where prehospital research has come from and what we can expect to see in the future.

Applied Research Collaboration (ARC)

Since 2019 the NIHR Applied Research Collaboration (ARC) partnerships have been set up between various NHS providers, Higher Education Institutions, charity organisations, local authorities, and Academic Health Science Networks.



Covering the 15 regions of England these partnerships, developed by the NIHR, support applied health and care research that responds to, and meets, the needs of local populations and local health and care systems.

The ARCs achieve this by focusing on seven priority areas:

- Adult social care and social work
- Healthy ageing, including dementia and frailty.
- Child health and maternity
- Health and care inequalities
- Mental health, including children and young people's mental health.
- Multiple long-term conditions
- Prevention, including behavioural risk factors.

By maximising the ability to mobilise research findings into practice, they aim to improve outcomes for patients and the public; improve the quality, delivery and efficiency of health and care services; and increase the sustainability of the health and care system both locally and nationally.

Investment into the ARCs extends to 31st March 2026 and SECamb has been contracted as part of this collaboration through the NIHR ARC KSS partnership. SECamb's Research and Development Department continues to support this initiative through development of strong links and work arrangements to support the aims of the ARC, whilst ensuring that ambulance services and their related healthcare activities are represented in any future ARC priority setting activities.

Internal Website

The Research and Development Department maintains an internal website hosted on 'The Zone.' Acting as the



department's hub it sits as a repository to provide staff members with a range of useful information and documents on how to both get involved with research and navigate the varying requirements of developing a study. Reflecting changing national/local guidance, research opportunities and Trust projects, the site is divided into four subpages:

- Research Activities – Internal & External.
- Research Participation – Studies currently recruiting within SECamb.
- Research Governance – Gaining research approvals.
- How to undertake a research project – Guidance on developing research.

The site is a resource accessed by a variety of Trust staff members for a number of reasons, whether requiring initial support/information on what they should/could do when looking at pursuing research activities, through to forming part of post appraisal work suggested by line managers.

External Webpage

The Research and Development Department's external webpage is designed to promote and inform on the activities of the department. The current structure has a landing page that provides a statement of how SECamb seeks to develop through the integration of research and an invitation for anyone wishing to be notified of any Patient and Public Involvement (PPI) activities in the future. There are then three subpages that provide access to key information around aspects of research within the Trust. These are:

- **NIHR Clinical Trial Performance Platform** – Known as the Performance in Initiating and Delivering Clinical Research (PID) exercise, this presents data on how the Trust has initiated and delivered clinical research during the preceding years. Whilst this was paused during 2023, it is expected to restart late 2024.
- **Research & Development Privacy Notice** – A document explaining the purposes for which personal data are collected and used, how the data are used and disclosed, how long it is kept, and the controller's legal basis for

processing. It identifies the data controller and provides contact details for the Data Protection Officer.

- **Current Studies** – Details of national portfolio studies, along with other studies that may require access to patients and/or their information have been included here. New studies are added as they commence within the Trust, providing access to documentation and/or contact details required under UK legislation.

Additional subpages will be developed and added through 2024 to include links to Trust publications and external sites SECAMB are currently collaborating with.

National Ambulance Research Steering Group (NARSG)

The National Ambulance Research Steering Group (NARSG) has been the official group representing ambulance research in the UK since 2006. Comprised of Department Heads, Research Managers and representatives from every UK ambulance service, they are dedicated to facilitating pre-hospital research by helping researchers develop new research, develop new research avenues, identify areas of need and further the evidence for pre-hospital clinical practice.



Regular meetings facilitate open discussion around the expansion of pre-hospital research and through representation and attendance, SECAMB's Research and Development Department has built an active network alongside the other ambulance Trusts allowing collaborations, joint-working and decision-making to strengthen the processes and approach we take to pre-hospital research.

Social Media

Effective communication is essential to maximising awareness of research and the use of social media platforms facilitates this across local/national/international audiences. The Research and Development Department has dedicated accounts for this purpose and uses these applications to help inform staff members and external



stakeholders/interested parties of a range of research activities including, current studies, participation opportunities, and conferences. SECamb Research and Development Department uses both X (Twitter) and Yammer, with links to other platforms/applications where required to help maximise its ability to connect with this wide audience.

Publications/Presentations

SECamb's consistent presence within academic journal publications and at varying national/international conferences is key in demonstrating the Trust's ongoing engagement, visibility and reputation amongst healthcare research networks. Dissemination of findings is at the heart of research and each study affords the opportunity to add to the growing evidence base supporting the operation of ambulance services and the wider health and social care system.

The following papers/abstracts/presentations published this year were either undertaken by members of SECamb staff or involved SECamb as a participating site/PIC. As there is not a definitive list of outputs linked to any given site it is understood that the following list is the minimum number of research publications/presentations that we are aware of at the time of writing this report.

Published Papers (*Trust authors*)

- **Barrett, J.W.**, Bennett Eastley, K., Herbland, A., **Owen, P.**, Naeem, S., **Mortimer, C.**, King, J., Foster, T., Rees, N., Rosser, A., Black, S., Bell, F., Fothergill, R., Mellett-Smith, A., Jackson, M., McClelland, G., Gowens, P., Spaight, R., Igbodo, S., Brown, M., **Williams, J.** (2024) The COVID-19 ambulance response assessment (CARA) study: a national survey of ambulance service healthcare professionals' preparedness and response to the COVID-19 pandemic. *British Paramedic Journal*, 8(4), 10-20.
- **Barrett, J.W.**, **Williams, J.**, Skene, S.S., Griggs, J. E., Bootland, D., Leung, J., Da Costa, A., Ballantyne, K., **Davies R.** and Lyon R.M. (2023) Head injury in older adults presenting to the ambulance service: who do we convey to the emergency department, and what clinical variables are associated with an intracranial bleed? A retrospective case–control study. *Scand J Trauma Resusc Emerg Med* 31, 65. <https://doi.org/10.1186/s13049-023-01138-1>

- Couper, K., Ji, C., Lall, R., Deakin, C.D., Fothergill, R., Long, J., Mason, J., Michelet, F., Nolan, J.P., Nwankwo, H., **Quinn, T.**, Slowther, A-M., Smyth, M.A., Walker, A., Chowdhury, L., Norman, C., Sprauve, L., Starr, K., Wood, S., Bell, S., **Bradley, G.**, Brown, M., Brown, S., Charlton, K., Coppola, A., Evans, C., Evans, C., Foster, T., Jackson, M., Kearney, J., Lang, N., Mellett-Smith, A., Osborne, R., Pocock, H., Rees, N., Spaight, R., Tibbetts, B., Whitley, G.A., Wiles, J., **Williams, J.**, Wright, A., & Perkins, G. D. (2024). Route of drug administration in out-of-hospital cardiac arrest: A protocol for a randomised controlled trial (PARAMEDIC-3). *Resuscitation Plus*, 17, 100544.
- **Eaton-Williams P, & Williams J.** (2024) 'Family members screaming for help makes it very difficult to don PPE'. A qualitative study on UK ambulance staff experiences of infection prevention and control practices during the COVID-19 pandemic. *Journal of Infection Prevention*, 25(1-2): pp.17-23.
<https://doi.org/10.1177/17571774231209494>
- McManamny, T., Ortega, M., **Munro, S.**, Jennings, P., & Whitley, G. A. (2023). A pre-hospital mixed methods systematic review protocol. *British Paramedic Journal*, 8(2), 38-43.
- **Munro, S.**, Cooke, D., **Holah, J.**, & **Quinn, T.** (2023). The views, opinions and decision-making of UK-based paramedics on the use of pre-hospital 12-lead electrocardiograms in acute stroke patients: a qualitative interview study. *British Paramedic Journal*, 8(3), 1-10.
- Ollis, L., Skene, S. S., **Williams, J.**, Lyon, R., & Taylor, C. (2023) The SEE-IT Trial: emergency medical services Streaming Enabled Evaluation In Trauma: study protocol for an interventional feasibility randomised controlled trial. *BMJ Open* 2023;13:e072877. doi: 10.1136/bmjopen-2023-072877
- Taylor, C., Ollis, L., Lyon, R. M., **Williams, J.**, Skene, S. S., Bennett, K., Glover, M., **Munro, S. & Mortimer, C.** (2024). The SEE-IT Trial: emergency medical services Streaming Enabled Evaluation In Trauma: a feasibility randomised controlled trial. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*, 32(1), 1-15.
- Vadeyar, S., Buckle, A., Hooper, A., Booth, S., Deakin, C. D., Fothergill, R., Ji, C., Nolan, J.P., Brown, M., **Cowley, A.**, Harris, E., Ince, M., Marriott, R., Pike, J., Spaight, R., Perkins, G.D. & Couper, K. (2023). Trends in use of intraosseous and intravenous access in out-of-hospital cardiac arrest across English Ambulance Services: A registry-based, cohort study. *Resuscitation*, 109951.

Published Papers (*SECamb participating site/PIC*)

- Baghdadi F, Evans BA, Goodacre S, et al. (2023) Building an understanding of Ethnic minority people's Service Use Relating to Emergency care for injuries: the BE SURE study protocol. *BMJ Open* 2023;13:e069596. doi: 10.1136/bmjopen-2022-069596
- Brown, S., Noakes, T., Foster, T., & Prothero, L. (2023). An in-depth qualitative interview study of female ambulance staff experiences of the menopause transition (CESSATION phase 3). *British Paramedic Journal*, 8(3), 20-26.
- Charlton, K., & Bate, A. (2024). Factors that influence paramedic decision-making about resuscitation for treatment of out of hospital cardiac arrest: Results of a discrete choice experiment in National Health Service ambulance trusts in England and Wales. *Resuscitation Plus*, 17, 100580.
- Noble, A. J., Morris, B., Bonnett, L. J., Reuber, M., Mason, S., Wright, J., Pilbery, R., Bell, F., Shillito, T., Marson, A.G. & Dickson, J. M. (2024). 'Knowledge exchange' workshops to optimise development of a risk prediction tool to assist conveyance decisions for suspected seizures—Part of the Risk of ADverse Outcomes after a Suspected Seizure (RADOSS) project. *Epilepsy & Behavior*, 151, 109611.
- Boyd, A., Sampson, F. C., Bell, F., Spaight, R., Rosser, A., Coster, J., ... & Pilbery, R. (2024). How consistent are pre-alert guidelines? A review of UK ambulance service guidelines. *British Paramedic Journal*, 8(4), 30-37.
- Wilson, C., Budworth, L., Janes, G. et al. Prevalence, Predictors and Outcomes of Feedback for Ems Professionals: a Mixed-methods Diary Study, 13 March 2024, PREPRINT (Version 1) available at Research Square [<https://doi.org/10.21203/rs.3.rs-4014306/v1>]
- Yang, L., Hollis, C., Stewart, E., MacGregor, K., Bass, S., Savage, E., & Minton, O. (2023). Evaluation of Palliative Care Related Hospital Admissions in a Regional Centre. *American Journal of Hospice and Palliative Medicine®*, 10499091231211470.

Published Abstracts/Poster Presentations (*Trust authors*)

- Patel G, Botan V, Phung V, Trueman I, Pattinson J, Hosseini SMP, Ørner R, Asghar Z, Smith MD, Rowan E, Spaight R, Evans J, Brewster A, Mountain P, **Mortimer C**, Miller J, Brown M, Siriwardena AN. (2023) PP44 Consensus on innovations and future change agenda in community first responder schemes in England: a national Nominal Group Technique study. *Emergency Medicine Journal* 2023;40:A18.
- Walton, H., Aghoram, P., Bray, G., Dearling, J., Fulop, N. J., **Hall, C.**, ... & Ramsey, A. I. (2023). Stroke prehospital video triage for suspected stroke patients: Qualitative analysis of implementation and stakeholder experience in four areas of the English NHS. 999 EMS Research Forum, Manchester. <http://hdl.handle.net/20.500.12417/1601>.

Conference Presentations

- College of Paramedics Webinar Series. April 6-19, 2023. Head injuries in older adults. Part one: Non-conveyed patients, a hidden population. Part two: Which patients are at risk of a bleed? Part three: In guidelines, we trust – Why are we conveying head-injured older adults to the emergency department? **Jack Barrett**.
- College of Paramedics National Conference. Nottingham. May 23-24, 2023. British Paramedic Journal Golden Nugget [Oral] Presentations: Critical Care Paramedics' Experiences of Performing an Emergency Scalpel Cricothyroidotomy: A Qualitative Study. **Mark Durham**.
- Primary Care Respiratory Society (PCRS) Respiratory Conference. Telford. September 21-23, 2023. Abstract oral presentations; Asthma: Paramedics' perceptions of asthma patients and the use of $\beta 2$ agonists within the acute setting. **Craig Mortimer**.

Membership of External National Advisory Groups

- NIHR Funding panels – Professor Williams sits on funding application grant panels for Research for Patient Benefit and Health Technology Assessment awards.
- JRCALC- Dr Jack Barrett for Head Injury; Professor Williams for Burns
- National Ambulance Research Steering Group – Craig Mortimer

- 999 Research Forum – Professor Julia Williams
- College of Paramedics Research and Development Advisory Committee – Professor Julia Williams

Educational Support

The department continues to receive requests from its HEI collaborators to support post graduate development both formally and informally. This engagement allows the department, on behalf of the Trust, to further assist with the development of internal/external students and all staff members, clinical or not. Access to the varied HEIs also allows us to ensure an awareness of processual requirements of research within the NHS is provided to faculty and students whilst also actively promoting the work being undertaken by the department.

We have continued to request research relevant content be included within the annual Key Skills program and Transition to Practice course, but this has not been realised during the past year. Local support for staff is consistently available with two main streams requesting support throughout the year:

Critical Care Paramedic Development

The Research and Development Department continues to support Critical Care Paramedics (CCP) with an open dialogue led by the Head of Research. CCPs are expected to be research active and we will continue to support building experience and embedding research culture in CCP practice through core activities including literature searches, research question and method development, and national/local approval navigation.



University Support

Outside of the standard support provided to students undertaking academic studies, the department has continued to advocate for a more collaborative approach to the development of research studies and general research principles. To support this, the Higher Education Institutions and SECamb Collaborative Research Group (HEATReg) was set up by SECamb's Research and Development Department pre-pandemic to better explore how we can collaborate with our partner universities to increase research opportunities and support both research capability and capacity amongst our staff.



Whilst we looked at reinstating this programme during 2023, a number of external issues meant we were unable to successfully reengage with our partner HEIs. Moving forward this is something the department is actively looking to resolve during 2024 as part of a larger HEI/student development opportunity.

Summary

Key points for 2023/2024

- Now clear of the restraints of the pandemic and post pandemic transition, the department is able to fully embrace its vision and progress with its objective of maximising quality research within a supportive Trust environment.
- The department brought in over £245,000 of external income during 2023/2024.
- Recruitment of 419 participants to seven different portfolio studies resulted in SECamb exceeding its initial CRN pledge of 360. This is 116% 'To Pledge Total'.
- A total of 20 research studies have been supported over the past 12 months, with a further 2 portfolio studies currently in development/set-up.
- Following review and restructure, the department underwent re-banding and the introduction of new roles. This new structure reflects the ongoing workstreams of the department and the future trajectory of research within the Trust.

SECamb's Research and Development Department has for many years been a discrete entity within the Trust, often limited by its size and subsequent capacity. Over the last year we have continued to expand our reach into the wider healthcare environment with an increasingly active presence both internal and external to the Trust. Through active promotion and engagement with the national health and social care research infrastructure, other NHS Trusts, HEIs and private organisations, the department continues to build its capacity and to conduct more varied and essential research to contribute to the development and sustainability of the provision of evidence-based health care within the ambulance service setting.