



SNAP40 IS HERE!



In recent years, there has been an increasing focus on the earlier detection of deterioration in patients in order to prevent adverse outcomes and maintain patient safety.

This is especially important in the Emergency Department, a dynamic environment with large volumes of undifferentiated patients, which carries inherent patient risk. Techniques to improve the detection of deterioration have included early warning scores such as National Early Warning Score (NEWS) which requires staff to monitor and record patients' vital signs. These recordings are used to help staff recognise any changes in a patient's clinical condition. However, this relies on staff taking and documenting these vital signs at set intervals, something which can be problematic in a busy Emergency Department. To try to help this issue, EMERGE are really excited to be investigating the use of an innovative

medical device called SNAP40.

SNAP40 is a device that monitors vital signs. It is small, portable and has no leads or wires, allowing for patients vital signs to be continuously monitored anywhere in the department. The device is smaller than most mobile phones, and is held within a blue casing attached to an armband. When fitted to a patient's arm, the device will continuously monitor the patient's heart rate, respiratory rate, temperature, change in systolic blood pressure and oxygen saturations whilst they are in the Emergency Department.



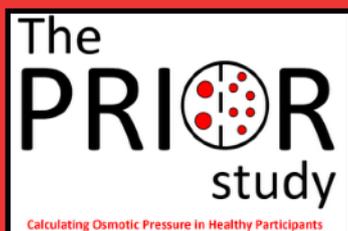
SNAP40 device

We are really excited to be investigating if this device can detect any changes to patients' vital signs earlier than the ways we currently measure them in the Emergency Department. This may improve the ability to recognise any patients at risk of becoming unwell, potentially resulting in earlier medical attention for patients in the department.

We aim to recruit 250 patients from the ED, and hope to get the study started in the next month. Look out for more updates coming soon as the study begins!

Megan McGrath

STUDY UPDATES



The genesis of this small observational study was in Dr Frank Prior's PhD some 40 years ago but the ambition was profound – to update the seminal Starling hypothesis of fluid balance and exchange. The final key to this clinical question required the blood samples of 20 healthy volunteers and EMERGE has sourced those samples by the kind consent of staff working at RIE. Thank you and we'll keep you posted...

Allan MacRaid

The POP study has successfully completed the 8 participants in the first cohort of the study with 5 of those nearing their final follow-up visit. A review by the Safety Data Monitoring Committee (SDMC) determined that we could move on to the next cohort of a higher dose.

So it's time again to let the research nurses know if anyone attends with a paracetamol overdose. Early notification, at triage preferably, is best to enable us to get everything in place prior to the first bag of NAC finishing. You could even get yourself one of these lovely pens!



Bernadette Gallagher

TWITTER UPDATES

Tweeting is one of the EMERGE team's favourite pastimes. So, what have the team been up to this quarter?



Matt (@mattreed73), Lucia and Roberto caught the last of the Scottish summer sunshine when they walked across the Forth Road Bridge.



Polly (@pollylouiseblac) took our EMERGE tote bag to the beautiful Ithaca in Greece.



The now very well-travelled EMERGE tote bag got to experience some delicious wine and cheese in France with Dr. James Dear (@EdinClinTox)

TWITTER: @emerge_research

“WHAT’S A RESEARCH PARAMEDIC?”



Paramedicine regularly lags behind nursing by around a decade and the scarcity of paramedics in research reflects this. Working as autonomous and isolated practitioners, we’re vulnerable to our own hearsay and bias; when I told ambulance colleagues we were going to interview bystanders about their experiences of out of hospital cardiac arrest, the response was clear - “Why? We know what they think...we see it every day.”

Clinical staff often complain that research “gets in the way” of the day job; since joining EMERGE my understanding of the input research makes into clinical practice has increased enormously and I’ve been excited to share with my colleagues my appreciation of how small actions on scene can translate into a “big picture” with real impact on patient care.

Conducting research in the prehospital field is not easy, the environment is challenging, the patients are acute and the clock is always ticking. Paramedics are ideally placed to facilitate these projects; they are comfortable with unpredictable environments, accustomed to changeable situations and have enormous cognitive bandwidth to bring to the task.

Analysis of our interviews is still ongoing and results of the First First Responder project will not be written for several months, but I am just as excited for the future of EMERGE and paramedicine. We have a real opportunity to drive, direct and change the face of prehospital care and with the increased emphasis on paramedics that is evidence based and research aware, I think it won’t be long until “I’m a research paramedic” isn’t responded to with, “So, you study...ambulances?”

Joel Symonds

STUDY UPDATE RAPID CTCA

The RAPID-CTCA trial has been up and running across over 30 UK sites for the past two and a half years. Led by Professor Alasdair Gray, it evaluates the use of CT Coronary Angiogram in patients with moderate ACS. See below for an update on recruitment numbers.



SITE	Number of Patients Recruited
EDINBURGH	99
OTHER UK SITE	1082
ALL SITES	1181

ACCS PLACEMENTS WITH EMERGE

I recently had the privilege of being the first ACCS EM (Emergency Medicine trainee) to spend a week with the wonderful EMERGE team. It started with an exciting morning with Allan dashing around the hospital recruiting one (nearly two!) RAPID CTCA patients. All far more exciting and dramatic than I had realised. I started to understand not only the extent of research being done in the department, but also how interesting and immediately relevant many of the studies are to our day to day practice. I completed the GCP course (big tick for me) and hooked up with Liz to plan some 'Save A Life For Scotland' CPR teaching days. Another highlight was the RRG meeting where the team were kind enough to explain their various research interests – everything from pores to linguistics to defibrillating drones. Wonderful.

Claire Crichton



PitSTOP STUDY

The latest study to open to recruitment this month is Prevalence and Risk factors of Pituitary Dysfunction after Traumatic Brain Injury – PitSTOP. This will be lead by Mr John Emelifeonwu, who is a Neurosurgeon at the WGH. We aim to enrol 100 participants until February 2019. We will be screening all patients who attend the ED with a head injury, who require a CT scan. Only patients that have a positive CT scan, but who not require immediate transfer to neurosurgery, will be considered for eligibility.

Julia Grahamslaw

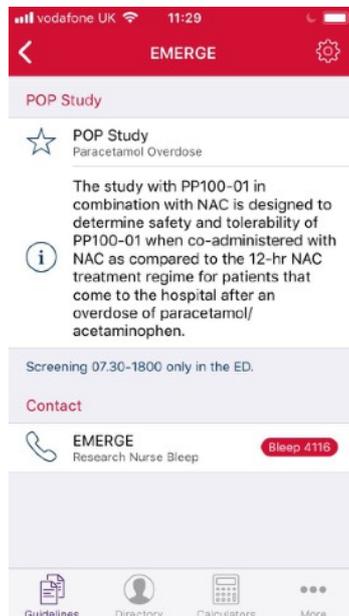
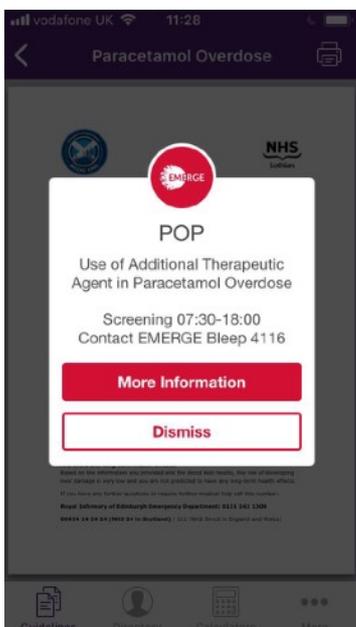
EDINBURGH EMERGENCY MEDICINE APP

Dave McKean has developed the app "Edinburgh EM" which is used frequently by the ED staff. The most exciting part of the app for the EMERGE Team is that it will hopefully raise awareness of our research trials and encourage patient referrals from the clinical team.

The aim is that when a clinician clicks on a specific speciality for protocol information or guidelines, the app will prompt a pop-up on the screen that links to one of our relevant studies. From here, a 'More Information' link can be pressed. This is where the templates will sit and will provide the clinician with the key information about the study as well as contact details for the EMERGE research nurses.

We look forward to collaborating with Dave McKean further on this innovative project.

Mary Morrissey



A FOND FAREWELL TO MEGAN AND EMMA

Two more members of the EMERGE team have sadly departed in the past couple of months, Research Nurse Megan McGrath, and Research Administrator Emma Ward.

Both Megan and Emma have left their EMERGE roles to embark on exciting new experiences. Megan has accepted a well-deserved place at university to study a Masters in Occupational Therapy, and Emma has secured a new post at the Edinburgh Clinical Research Facility as Senior Projects Assistant.

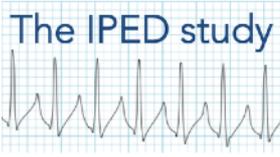
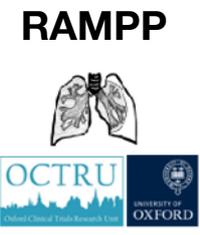
Thank you both for all your hard work, and good luck in your future endeavours!



Quote of the quarter:

“Don't underestimate the power of data nor the power of stories...”
Dr Anthony Costello, Director of Department for Maternal Newborn Child & Adolescent Health, WHO

STUDY INFORMATION - HOW CAN YOU HELP?

Study	Clinical condition	Patient group	How can you help?
	Suspected or confirmed ACS	<ul style="list-style-type: none"> • ECG changes not in keeping with high risk • History of Ischaemic heart disease • Raised troponin 	Highlighting patients, confirming eligibility, prescribing beta blockade if necessary
	Paracetamol overdose	<ul style="list-style-type: none"> • Patients aged 16 years or over who present with paracetamol overdose 	Highlighting patients, Start patients who present with paracetamol overdose on the multi disciplinary care plan for paracetamol overdose at triage and choose the 5% dextrose as a diluent for NAC.
	Epistaxis (nosebleed)	<ul style="list-style-type: none"> • Patients aged 18 years or over • Atraumatic, unresolved epistaxis 	Highlighting eligible patients, familiarising with new epistaxis SOP (ENT box in Exam)
	Traumatic Brain Injury (TBI)	<ul style="list-style-type: none"> • Patients aged 17 years or over • Primary traumatic brain injury including multi-trauma 	Highlighting patients who are being referred to CT for TBI
	Palpitations or pre-syncope	<ul style="list-style-type: none"> • Episodes of palpitation or pre-syncope • Underlying ECG remains undiagnosed after assessment • Patients with compatible smartphone 	Highlighting patients, confirming eligibility
	Chest pain	<ul style="list-style-type: none"> • Anyone having a troponin sent 	Look out for study cards in patient notes when reviewing patients
	Significant ankle ligament injuries (OAR positive - No bony injuries (except avulsion/flake fractures))	<ul style="list-style-type: none"> • Patients aged 18 or above presenting to the ED with isolated ankle injuries 	Highlighting patients with significant ankle ligament injuries. Handing out introductory letters to patients who meet eligibility criteria out of hours
	Primary Spontaneous Pneumothorax (PSP/ collapsed)	<ul style="list-style-type: none"> • Patients aged between 16 and 55 years old • PSP confirmed by CXR or CT • 3 trial arms; interventional (rocket device), standard care (aspiration +/- chest drain, observational) 	Highlighting eligible patients, Dr Marie-Clare Harris is providing device training for doctors - please be up to date with GCP training

A WEE BLETHER WITH...

ANN STEWART B.E.M - VOLUNTEER & PATIENT AND PUBLIC REPRESENTATIVE

The EMERGE team work closely with a variety of people with different areas of expertise and we thought we'd introduce you to some in each newsletter edition. Ann Stewart was awarded the British Empire Medal by the Queen in June this year for voluntary service to the Arts, Healthcare and Steam Railway preservation. Currently, Ann acts as a patient and public representative for the Emergency Department.

Can you tell us about your role and your main responsibilities?

I see my small role in the accident and emergency PPI as helping where I can. I am given leaflets that will be given to patients to check and comment on. One such said that a broken bone had been straitened when it had, in fact, been straightened. I always put myself on the receiving end of these leaflets.

What is interesting about you that we might not know?

I suffered from depression from the age of 16 years old until 65 year old, when I was tested on a prototype machine for measuring the mercury vapour given off by metal fillings in teeth. I was off the scale so I had all fillings removed and replaced, at my own expense. The depression lifted and has never returned. So much for some medical advice that said "Pull yourself together!"

Who do you think would make a great world leader?

A great world leader would be Rory Stewart MP, no relation. He has a motto "get on with it", listens carefully to questions and takes time to answer.

What biscuit would you be, and why?

I would be a Belgian chocolate biscuit to bring comfort to the weary and the sick and give strength for the next task.

Emma Ward & Ann Stewart

AN ITALIAN INFLUENCE IN THE EMERGE OFFICE

Spending a month with EMERGE was a great experience!

We are Lucia Trombetta and Roberto Sacco, we just graduated in medicine in Italy. We came to Edinburgh for a research collaboration and we had the chance to meet this nice group. A friendly and easygoing group, made of smart and enthusiastic people.

We took part in their meetings and shadowed them during patient recruitment in the Emergency Department.

After this month we can say that organisation and passion are the main ingredients of EMERGE. In the critical and busy area of the ED, recruitment is not easy. However, all research nurses manage to do a perfect job with a special attention to patient needs and opinions.

We will definitely treasure this opportunity. Thank you for everything!

Ciao ciao,
Lucia and Roberto



WELCOME BACK, POLLY BLACK!



For the past year I have been working for NHS Research Scotland (NRS) as the support manager for musculoskeletal research, reporting on and promoting rheumatology and orthopaedic research across Scotland. I am delighted to be back working with EMERGE and in the Emergency Department and there are so many new and exciting projects going on! To begin I will be focusing on SNAP40-ED, a study comparing the detection of physiological deterioration by the wireless SNAP40 device to the standard Mindray device currently used in the ED. Looking forward to working with you all again!

Polly Black

RESUSCITATION RESEARCH GROUP

All the latest updates from the RRG...

RRG TEAM NEWS

Dr. Steve Brooks

**- A new RRG
member**

Dr. Steven Brooks has joined the Resuscitation Research Group as a University of Edinburgh Visiting Professor from August 2017 to July 2018. He is an Emergency Medicine physician from Queen's University in Canada. Dr Brooks is the Principal Investigator on several



active projects including a randomised controlled trial evaluating the PulsePoint mobile phone application to crowd-sourced basic life support for victims of cardiac arrest (www.pulsepoint.org) and an observational study investigating carotid artery point-of-care ultrasound to risk stratify patients presenting to the emergency department with chest pain. He sits on the Basic Life Support Committee of the International Liaison Committee on Resuscitation and has authored several international guidelines on cardiac arrest and ACS. Dr. Brooks will be working with Dr. Clegg and the RRG to support the Scottish national strategy for cardiac arrest. Specifically, the collaborative effort will involve using location data from historical cardiac arrests and current public access defibrillator locations to guide optimal future deployment of public access defibrillators. The optimisation models will access current AED coverage in Scotland, guide future deployment to maximise benefit, and assess the cost-benefit of various future AED strategies. The optimisation models will also support an assessment of how drone aircraft might be used to deliver defibrillators to cardiac arrest victims in the future.

When Dr. Brooks is not in the RRG office, he will be running about Scotland with his three sons and wife trying to see it all before returning home in July. Please introduce yourself if you see him around!

Sandrine Flower



Publication of the Out of Hospital Cardiac Arrest Data Linkage Project

This innovative work has linked complex datasets for the first time in order to report on OHCA in Scotland. As such, the results should be treated as provisional while the data and methodology are still in development. Initial results are, however, very promising and highlight essential data to tackle the wider OHCA issues. The process of assembling this baseline dataset has laid the foundations for an OHCA epistry (epidemiological registry) in Scotland. This will allow us to track the impact of Scotland's OHCA strategy to 2020 and beyond. See the below link for more information;

<http://www.gov.scot/Resource/0052/00523287.pdf>

**SAVE A LIFE
FOR SCOTLAND**

Amazing Results with Young Scot and Future Works

Back in June this year, Save a Life for Scotland and Young Scot launched

a marketing campaign looking to raise awareness of CPR amongst young people in Scotland. Results have been very positive. A Facebook Live, organised to show how to do CPR, has been viewed more than 43,000 times! We are looking forward to continuing our partnership and engaging further with young people, especially as we come into 2018 - the Year of Young People in Scotland. For more information about this initiative, please visit www.young.scot/cpr



Sandrine Flower

**For more information on EMERGE, RRG and our team please
visit www.emergeresearch.org
Newsletter edited by Emma Ward**