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## CURE Newsletter 2022

Welcome back to the CURE newsletter. We've had a long break after our wonderful editor Matthew Botting left to pursue a career outside academia. Luckily the equally wonderful Jedidah Mould has stepped into the breach, with the support of PhD students Akshay Kumar and Charlotte Cotterill. Here are some highlights from the past year - starting with some thanks and nice news. Fiona Sampson, CURE Director.

**Thanks to everyone we have worked with over the past year including PPI and our colleagues in ambulance services, Emergency Departments and other health and social care who have participated in and collaborated in our research in difficult circumstances.**

**Congratulations to Suzanne Ablard on the arrival of Emily Louise Burrill. Emily has settled into family life well and Isabelle is loving being a helpful big sister!!**



**Congratulations to Joanne Coster and Maxine Kuczawski on achieving promotion to Senior Research Fellow and Research Fellow in the latest round of academic promotions. We celebrated their successes at the SchARR Christmas party.**

With a large group and more remote working it is difficult to keep up with the research that is happening within our own group. At our latest CURE meeting people summarised their work in 'Gone in 60 seconds' presentations followed by a feast of food. Too busy eating to take a group photo before people left but here is evidence of empty plates.





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## IMPACT Ref 2022

As Health Service Researchers we all aim to make a difference to patient care so we were delighted that ScHARR's eight impact case studies were rated as 'world leading' or internationally excellent in the Research Excellence Framework assessment. Below are the four impact case study summaries that were led or written by CURE staff.

### **Reducing hospital admissions for suspected heart attack. Steve Goodacre and Praveen Thokala**

Acute myocardial infarction (heart attack) is diagnosed using a troponin blood test. Our research showed that using a high-sensitivity troponin assay for heart attack diagnosis is more cost-effective than using a conventional assay. It was pivotal in changing National Institute for Health and Care Excellence (NICE) guidelines from recommending conventional troponin testing at 10-12 hours after symptom onset to recommending high-sensitivity testing within 3 hours. This guidance has been implemented across the NHS through the Accelerated Access Collaborative and adopted by 92 of 125 English acute hospital trusts. It has reduced unnecessary hospital bed days and reduced health service costs.

### **Using mortality review methods to improve hospital care. Jo Coster, Allen Hutchinson, Katy Cooper, Richard Jacques, Jon Nicholl**

University of Sheffield research developed Structured Judgement Review (SJR) to identify problems in care related to hospital deaths, reduce deaths due to problems in care and ultimately improve care. The Royal College of Physicians (RCP) implemented a three-year programme of SJR through the National Mortality Case Record Review Programme (NMCRR). One hundred and seven hospital trusts in England have now implemented SJR which has resulted in improved patient outcomes and mortality rates e.g. a 26% reduction in death associated with septicaemia in Mid Yorkshire Hospitals NHS Trust, and a 19% reduction in cardiac arrest events in Sheffield Teaching Hospitals Foundation Trust.



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## IMPACT Ref 2022

**Safely reducing hospital transfers for older patients using advanced paramedic practitioners in urgent and emergency care. Suzanne Mason, Jon Nicholl, Emma Knowles, Colin O'Keeffe, Jo Coster, Rachel O'Hara et al.**

In the UK and internationally, demand for ambulance services, subsequent emergency department attendances, and hospital admissions is unsustainable for health economies. Between 2003 and 2013, Sheffield researchers evaluated the ability of new professional roles, Advanced Paramedic Practitioners (APPs) or Emergency Care Practitioners (ECPs), to reduce pressure on this system without compromising patient outcomes. The research is the only evidence underpinning National Institute for Health and Care Excellence (NICE) guidelines recommending the use of APPs and ECPs in urgent and emergency care settings and has been widely cited in key policy documents. The numbers of advanced paramedics employed by English ambulance services in 2014-2020 has increased from 600 to over 2,500. In that period, conveyance to the emergency department has reduced by over half a million patients, resulting in a conservative cost saving in NHS hospital care alone of over £50 million.

**Major policy change to improve ambulance response and efficiency in the NHS. Janette Turner, Jon Nicholl, Richard Jacques, Jo Coster**

In 2015 ambulance services in England responded to 6.5 million 999 calls compared to 3.5 million in 1995. With no equivalent increase in resources, they were unable to meet response times expected for the most critically ill. The Sheffield programme of work evaluated changes to processes of assessing, categorising and dispatching ambulances to 999 calls and helped set new performance standards. The evidence-based changes have been adopted in the NHS resulting in more consistent fast response to the most urgent calls and ensuring as far as possible people who call get the right response first time. Now all regional ambulance services meet the response time standard for the most serious calls compared to only 1/10 before.



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## Conference news

### CURE SHINES AT EMS 999 RESEARCH FORUM

On the 29th March many CURE members attended and presented their research at the virtual 999EMS Research Forum.

Carl Marincowitz presented on Pandemic Respiratory Infection Emergency System Triage (PRIEST) study

Naif Hathi presented a poster on Research priorities for Prehospital Care of Older Patients with Injuries: Scoping Review

Fiona Sampson presented the following posters:

NHS 111 staff and user views of online NHS 111: a useful adjunct to the NHS 111 telephone service

Exploring the use of pre-hospital pre-alerts and their impact on patients, ambulance service and Emergency Department staff: protocol for a mixed methods study.

Stakeholder perspectives of piloting pre-hospital Covid-19 lateral flow test and direct admissions pathway: exploring why well received ideas have low uptake.

Emergency Service provider perspectives of feasibility and acceptability of Emergency Services distribution of Take Home Naloxone, .

### Congratulations

to Joanne Coster who won the 'Best Rapid Elevator Pitch' prize!

Service provider views of the safety, appropriateness and perceived acceptability of telephone advice for calls to the ambulance service triaged as low urgency



999EMSRese... @999... · Mar 29 ...

Wonderful pitch by [@joannecoster](#) on the service provider views of the safety, appropriateness and perceived acceptability of telephone advice for calls to the ambulance service triaged as low urgency. [#999EMSRF2022](#)  
[@PRIMECentre](#) [@YorksAmbulance](#)  
[@yas\\_charity](#)





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# HSR UK COMES TO SHEFFIELD!

HSR

UK

**The University of Sheffield hosted the 15th annual HSR conference on 5-7th July. A brilliant turn out from ScHARR staff, including many CURE staff presenting or ran workshops.**

## **Presentations and rapid fire poster presentations from CURE staff.**

'What influences decisions to transfer older care home residents to the emergency department? A synthesis of qualitative reviews and systematic reviews' (Carl Marincowitz )

'NHS 111 staff and user views of online 111: Not as trusted but a useful adjunct to the NHS 111 telephone service' (Fiona Sampson)

What impact did the introduction of NHS 111 online have on the NHS 111 telephone and wider NHS system?' (Richard Jacques)

'Use of urgent, emergency and acute care by mental health service users: A record level cohort study' (Jen Lewis)

Perspectives of people who use opiates and emergency service providers on the feasibility and acceptability of take home Naloxone distributed by emergency services. (Fiona Sampson)

Exploring advanced clinical practitioner's role identify and experiences of developing clinical competence' (Joanna Sutton Klein)

'Identifying the most effective ways to engage members of public in clinical research' (Suzanne Ablard)

'Delivery of public health interventions by the ambulance sector' (Suzanne Ablard)

Impact of working through Covid-19 on ambulance staff resilience and intention to leave the NHS: a mixed methods study (Joanne Coster)



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# CONFERENCE WORKSHOPS

## HSR UK 2022

'Knowing what we now, would you build NHS 111 online? An interactive workshop exploring findings from two NIHR studies that examined what people think about NHS 111 online and its impact on the wider health system', chaired by Fiona Sampson, Cathy Pope, Richard Jacques and Joanne Turnball.

'English Health System emergency preparedness and response (EDPR) during COVID-19, a multilevel perspective workshop on learning and adaptations' chaired by Steve Goodacre, John Richmond and Andrew Lee.

## ARC AT THE 999 EMS FORUM

Colin O'Keeffe, Theme Manager for ARC YH Urgent and Emergency Care and Jamie Miles, Clinical Research Fellow in CURE led a workshop at the 999 EMS Forum in Sheffield in June of this year, showcasing the work of the ARC YH UEC Theme. This workshop was part of a session entitled: 'collaborative approaches in pre-hospital research.'

The workshop proved successful, with great engagement and enthusiasm for the collaborative approaches presented by the researchers, managers and clinicians participating. Colin described the different types of mechanisms for collaboration (e.g. partnerships and academic secondments); while Jamie gave an example of how ARC collaboration had helped him develop an academic career.



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## Some CURE highlights from 2022

### House of Lords Special Adviser

Sue Mason has been acting as a Special Advisor to the Public Services Committee of the House of Lords. The committee has been reviewing urgent and emergency care and are preparing a report for publication that addresses the problems and solutions to the current crisis. This has involved meeting regularly with the Public Services Committee chaired by Baroness Hilary Armstrong of Hilltop, and working with the committee clerks to advise on witnesses to call to give evidence to the committee which was heard over a number of weeks, advising on documents to review and then assisting in drafting the report.



The aim for the report is that it will be presented to Government and the committee then try to influence policy through lobbying the Government using the evidence provided in the report. Its been a very interesting experience learning a bit more about how the House of Lords functions and the different protocols they follow.

### **RADOSS - calculating risk of adverse effects after seizure**

Jon Dickson's RADOSS (Risk of Adverse Outcomes after a Suspected Seizure) grant application was funded by RfPB. This will be led in Sheffield by Jon and Sue Mason with a statistician and data manager based in CURE. The project aims to calculate the risk of adverse events after a seizure. The grant argues that much unnecessary transport to hospital after a suspected seizure is driven by an overestimate of the risk of adverse outcomes. We aim to demonstrate that overall the risk is low, and to identify factors which can be used as markers of high risk requiring transport to hospital.



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## **Improving pain management in Adult Emergency Departments**

Dr Fiona Sampson's work has been referenced in UK Royal College of Emergency Medicine and European Society for Emergency Medicine Guidelines for the management of pain in Emergency Departments. The research was funded by an NIHR Doctoral Research Fellowship, supervised by SCHARR's Professor Steve Goodacre and Professor Alicia O'Cathain.

The project addressed the worldwide problem of inadequate pain management in Emergency Departments (EDs) and incorporated systematic reviews of existing literature as well as fieldwork within 3 EDs in England to help understand what the barriers to pain management were, and how EDs could work to improve pain management in future. Findings challenged the use of a pain score as an auditable tool for assessing pain management and highlighted the need for EDs to integrate pain management into the structures and processes of the department in order to improve how pain management is delivered.

## **Impact of Covid-19 on ambulance staff resilience and intention to leave the NHS**

Dr Rachel O'Hara and Dr Jo Coster have been working with Bath University on this important study.

Covid 19 resulted in consistently high levels of ambulance service operational pressure alongside high levels of staff sickness and covid related isolation. We used a mixed-methods study (survey n = 500 and interviews n = 20) to explore the impact of covid on ambulance service staff, and to explore whether they intended to remain working within the NHS and the drivers around decisions to stay or leave between April 2021 and March 2022.

The survey showed that staffing levels, morale, stress & workload rated as much worse than pre March 2020. Nearly one fifth of survey participants had applied for a non-NHS job within the last six months, with most survey respondents taking active steps towards non-NHS employment. The interviews explored the reasons for this in more depth and identified the relentless impact of covid on work pressures and staff physical and mental well-being, but also that many staff valued working for the ambulance service.

*"I feel it's aged me! I really, I feel like the last 18 months has really aged me, physically and mentally. I'd probably, if I was able to retire, I'd probably retire"*

The impact of covid had had and continues to have a negative effect on ambulance workload, morale and both mental and physical health, with implications for staff retention and NHS care delivery. Findings from this study are intended to inform approaches to NHS staff retention. A further wave of the survey will be undertaken in early 2023 to further understand the continuing impacts.





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## PhD Students News!

Meet our new PhD students. Yazeed started in 2022. Charlotte and Mel started in late 2021 and have recently passed their upgrades.

My name is Yazeed Sonbol. I'm a teacher assistant at Emergency Medical Services (EMS) College in King Saud University. For my background, I earned BSc in EMS from King Saud University, Saudi Arabia and MSc in Critical Care from Queen Mary University of London, UK.

My PhD will be looking into the potential of Lactate measurement for improving Prehospital Sepsis Warning Scores to identify sepsis patients.

[ysonbal1@sheffield.ac.uk](mailto:ysonbal1@sheffield.ac.uk)

Supervisors: Steve Goodacre & Laura Sutton



My name is Charlotte. I began my PhD in October 2021, looking at primary care management of people with epilepsy. People with epilepsy are frequent attenders at urgent and emergency care centres, my PhD looks at how primary care and the skillsets of GPs can help improve quality of care for people with epilepsy.

[clcotterill1@sheffield.ac.uk](mailto:clcotterill1@sheffield.ac.uk)

Supervisors: Danny Hind, Jon Dixon, Ben Thomas



My name is Mel and I am in the first year of my PhD in SchARR. I am interested in how the ambulance service cares for patients with palliative needs in the last year of life and how this could be improved.

I have a clinical background, with my MBChB, BMedSci and MPH all undertaken here in Sheffield. Following my foundation training, I specialised in Anaesthetics and also spend some time working in healthcare education.

[mda04mvw@sheffield.ac.uk](mailto:mda04mvw@sheffield.ac.uk)

Supervisors: Suzanne Mason, Elizabeth Teale, Fiona Sampson





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## RESEARCH PRIORITIES FOR PREHOSPITAL CARE FOR OLDER PATIENTS WITH INJURIES

**Congratulations to Cure PhD student Naif Harthi who has published his scoping review and presented his paper at prehospital conferences.**

*Naif Harthi, Steve Goodacre, Fiona Sampson, Rayan Alharbi, Research priorities for prehospital care of older patients with injuries: scoping review, Age and Ageing, Volume 51, Issue 5, May 2022*

Naif has presented this research at the Royal College of Emergency Medicine, British Geriatric Society, a virtual paramedic conference and the 999 EMS Research Forum

This is the first study to review the published evidence on prehospital trauma care for older patients and identify research gaps in the literature. It has identified 'field-triage', 'ageing changes', 'decision-making', 'paramedic's awareness' and 'paramedics' behaviours' as key priorities. Ageing-related physiologic changes, comorbidities, and polypharmacy were the most widely researched. Undertriage and overtriage were commonly cited as poorly investigated field-triage subthemes. Inaccurate decision-making and poor early identification of major injuries were identified as potentially influencing patient outcomes.



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## PUBLICATIONS

**Congratulations to everyone in CURE who has published their work in the past year! Some of the papers that have been published since our last newsletter are listed below.**

Simpson RM, O'Keeffe C, Jacques RM, et al Non-urgent emergency department attendances in children: a retrospective observational analysis *Emergency Medicine Journal* 2022;39:17-22.

Taylor P, Stone T, Simpson R, et al Emergency department presentations in palliative care patients: a retrospective cohort study *BMJ Supportive & Palliative Care* Published Online First: 29 March 2022.

J. Magallanes, T. Stone, P. D. Morris, S. Mason, S. Wood and M. -C. Villa-Uriol, "Sequen-C: A Multilevel Overview of Temporal Event Sequences," in *IEEE Transactions on Visualization and Computer Graphics*, vol. 28, no. 1, pp. 901-911, Jan. 2022, doi: 10.1109/TVCG.2021.3114868.

Mason, S., Stone, T., Jacques, R., Lewis, J., Simpson, R., Kuczawski, M., & Franklin, M. (2022). Creating a real-world linked research platform for analyzing the urgent and emergency care system. *Medical Decision Making*. doi:10.1177/0272989X221098699

Phelps, K., Regen, E., van Oppen, J. D., Riley, P., Lalseta, J., Martin, G., . . . Conroy, S. (2022). What are the goals of care for older people living with frailty when they access urgent care? Are those goals attained? A qualitative view of patient and carer perspectives. *International Emergency Nursing*, 63, 101189. doi: 10.1016/j.ienj.2022.101189

Marincowitz, C., Preston, L., Cantrell, A., Tonkins, M., Sabir, L., & Mason, S. (2022). Factors associated with increased Emergency Department transfer in older long-term care residents: a systematic review. *The Lancet Healthy Longevity*, 3(6), e437-e447. doi:10.1016/s2666-7568(22)00113-1

Goodacre S & Fuller GW (2022) New guidance on initial antimicrobial treatment of sepsis. *British Medical Journal*, 377.

Wang K-L, Roobottom C, Smith JE, Goodacre S, Oatey K, O'Brien R, Storey RF, Curzen N, Keating L, Kardos A, Felmeden D et al (2022) Presentation cardiac troponin and early computed tomography coronary angiography in patients with suspected acute coronary syndrome: a pre-specified secondary analysis of the RAPID-CTCA trial. *European Heart Journal: Acute Cardiovascular Care*.

Marincowitz C, Stone T, Hasan M, Campbell R, Bath PA, Turner J, Pilbery R, Thomas BD, Sutton L, Bell F, Biggs K et al (2022) Accuracy of emergency medical service telephone triage of need for an ambulance response in suspected COVID-19: an observational cohort study. *BMJ Open*, 12(5), e058628.

Dash K, Goodacre S & Sutton L (2022) Composite outcomes in clinical prediction modeling: are we trying to predict apples and oranges?. *Annals of Emergency Medicine*. View this article in WRRO

Sharp AL, Kawatkar AA, Baecker AS, Redberg RF, Lee M-S, Ferencik M, Wu Y-L, Shen E, Zheng C, Park S, Goodacre S et al (2022) Does hospital admission/observation for chest pain improve patient outcomes after emergency department evaluation for suspected acute coronary syndrome?. *Journal of General Internal Medicine*, 37(4), 745-752.



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Richards A, Muddassir M, Sampson F, MacLachlan L, Miller E, Fitchett J, Bell F, Ivan M, Lillie P, Samson & Easom N (2022) Evaluation of pre-hospital COVID-19 rapid antigen tests by paramedics and their use in a direct admission pathway. *Journal of Infection*.

Harthi N, Goodacre S, Sampson F & Alharbi R (2022) Research priorities for prehospital care of older patients with injuries: scoping review. *Age and Ageing*, 51(5).

Jansen JO, Cochran C, Boyers D, Gillies K, Lendrum R, Sadek S, Lecky F, MacLennan G, Campbell MK, Jansen JO, Campbell MK et al (2022) The effectiveness and cost-effectiveness of resuscitative endovascular balloon occlusion of the aorta (REBOA) for trauma patients with uncontrolled torso haemorrhage : study protocol for a randomised clinical trial (the UK-REBOA trial). *Trials*, 23(1).

Dixon J, Bouamra O, Lecky F, Hing CB, Baxter M & Eardley W (2022) Regional Variation in the Provision of Major Trauma Services for the Older Injured Patient. *Injury*.

Battle C, Charnock A, Davies S, Davies S, Dawson T, Driscoll T, Evans PA, Fitzsimmons D, Harris S, Jones K, Lecky FE et al (2022) Early exercise in blunt chest wall trauma: protocol for a mixed-methods, multicentre, parallel randomised controlled trial (ELECT2 trial). *BMJ Open*, 12(4).

Tonkins M, Bradbury D, Bramley P, Sabir L, Wilkinson A & Lecky F (2022) 750 Is higher-level trauma centre care associated with better outcomes in patients injured by low-energy trauma? A systematic review. *Emergency Medicine Journal*, 39(3), 267.3-26268.

Alqurashi N, Alotaibi A, Bell S, Lecky F & Body R (2022) The diagnostic accuracy of prehospital triage tools in identifying patients with traumatic brain injury: a systematic review. *Injury*.

Marincowitz C, Sutton L, Stone T, Pilbery R, Campbell R, Thomas B, Turner J, Bath PA, Bell F, Biggs K, Hasan M, Hopfgartner F, Mazumdar S, Petrie J, Goodacre S. Prognostic accuracy of triage tools for adults with suspected COVID-19 in a pre-hospital setting: an observational cohort study. *Emerg Med J* 2022.

Chatters R, Cooper CL, O'Cathain A, Murphy C, Lane A, Sutherland K, Burton C, Cape A & Tunnicliffe L (2022) Learning from COVID-19 related trial adaptations to inform efficient trial design—a sequential mixed methods study. *BMC Medical Research Methodology*, 22(1).

Sampson FC, Bell F, Coster JE, Miller E & Easom N (2022) Stakeholder perspectives of piloting pre-hospital COVID-19 lateral flow testing and direct admissions pathway: exploring why well-received ideas have low uptake. *British Paramedic Journal*, 7(3), 15-25

Espahbodi S, Fernandes G, Hogervorst E, Thanoon A, Batt M, Fuller CW, Fuller G, Ferguson E, Bast T, Doherty M & Zhang W (2022) Foot and ankle Osteoarthritis and Cognitive impairment in retired UK Soccer players (FOCUS): protocol for a cross-sectional comparative study with general population controls. *BMJ Open*, 12(4).

Pandor A, Fuller G, Essat M, Sabir L, Holt C, Buckley Woods H & Chatha H (2022) Individual risk factors predictive of major trauma in pre-hospital injured older patients: a systematic review. *British Paramedic Journal*, 6(4), 26-40.

Pollard D, Fuller G, Goodacre S, van Rein EAJ, Waalwijk JF & van Heijl M (2022) An economic evaluation of triage tools for patients with suspected severe injuries in England. *BMC Emergency Medicine*, 22.





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Sabir L, Wharton L, Goodacre S. Retrospective single-centre descriptive study of the characteristics, management and outcomes of adult patients with suspected sepsis in the Emergency Department. *Emerg Med J* 2022; 39:272–278

Sabir L, Ramlakhan S, Goodacre S. Comparison of qSOFA, and Hospital Early Warning Scores for prognosis in suspected sepsis in Emergency Department patients: a systematic review. *Emerg Med J* 2022; 39:284–294

O'Hara R, Coster J & Goodacre S (2021) Qualitative exploration of the Medical Examiner role in identifying problems with the quality of patient care. *BMJ Open*, 11(2).

Street A, Maynou L, Gilbert T, Stone T, Mason S, Conroy S. The use of linked routine data to optimise calculation of the Hospital Frailty Risk Score on the basis of previous hospital admissions: a retrospective observational cohort study. *Lancet Healthy Longev.* 2021;2(3):e154–e62

Turner J, Knowles E, Simpson R, Sampson F, Dixon S, Long J, Bell-Gorrod H, Jacques R, Coster J, Yang H, Nicholl J et al (2021) Impact of NHS 111 online on the NHS 111 telephone service and urgent care system: a mixed-methods study. *Health Services and Delivery Research*, 9(21)

Hotham R, O'Keeffe C, Stone T, et al Heterogeneity of reasons for attendance in frequent attenders of emergency departments and its relationship to future attendance. *Emergency Medicine Journal* Published Online First: 29 June 2021. doi: 10.1136/emmermed-2020-210412

Lewis J, Stone T, Simpson R, Jacques R, O'Keeffe C, Croft S, et al. (2021) Patient compliance with NHS 111 advice: Analysis of adult call and ED attendance data 2013–2017. *PLoS ONE* 16(5): e0251362. <https://doi.org/10.1371/journal.pone.0251362>

Burton C, Stone T, Oliver P, et al. Frequent attendance at the emergency department shows typical features of complex systems: analysis of multicentre linked data *Emergency Medicine Journal* Published Online First: 26 May 2021. doi: 10.1136/emmermed-2020-210772

Miles, J., Jacques, R., Turner, J., & Mason, S. (2021). The Safety INdEx of Prehospital On Scene Triage (SINEPOST) study : the development and validation of a risk prediction model to support ambulance clinical transport decisions on-scene—a protocol. *Diagnostic and Prognostic Research*, 5(1). doi:10.1186/s41512-021-00108-4

Tonkins M, Miles J, O'Keeffe C, Forero SJ & Goodacre S (2021) *Emergency Medicine Journal* COVID-19 monthly top five.. *Emerg Med J*.

Ackland GL, Van Duijvenboden S, Abbott TEF, Gutierrez del Arroyo A, Wilson MJ, David AL, Ali A, Wikner M, Noblett J, Usman N, Wray S et al (2021) Interleukin-1 receptor antagonist, mode of analgesia and risk of Caesarean delivery after onset of labour : a Mendelian randomisation analysis. *British Journal of Anaesthesia*.

Boxell EG, Malik Y, Wong J, Lee MH, Berntsson HM, Lee MJ, Bourne RS, McCullagh IJ, Hind D & Wilson MJ (2021) Are treatment effects consistent with hypothesized mechanisms of action proposed for postoperative delirium interventions? Reanalysis of systematic reviews. *Journal of Comparative Effectiveness Research*.

Lamidi S, Baker DM, Wilson MJ, Lee MJ (2021) Remote ischemic preconditioning in non-cardiac surgery : a systematic review and meta-analysis. *Journal of Surgical Research*, 261, 261–273



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