

Supplementary file 3: Questions scored in round 3 with their mean score

	Mean score
Medical cardiac arrest	
To which out of hospital cardiac arrest patients should critical care teams be dispatched?	7.3
Which out of hospital cardiac arrest patients do not benefit from transfer to a PCI centre?	4.4
How do we identify out of hospital cardiac arrest patients to whom critical care team should be dispatched from information received during the call?	6.8
In patients with medical out of hospital cardiac arrest attended by pre-hospital critical care teams, which interventions beyond ALS improve outcomes?	7.7
Trauma including TCA	
What is the role of thoracotomy in blunt trauma and in exsanguinating cardiac arrest?	5.9
What is the morbidity from pre-hospital thoracostomy in adult patients?	5.8
Which patients with penetrating trauma benefit from advanced on-scene care?	5.7
What clinical features and interventions are associated with survival to hospital discharge in patients with traumatic cardiac arrest?	6.3

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PHEA/airway/sedation/analgesia	
In patients with ROSC following OOHCA, does PHEA improve patient outcomes?	6.7
In trauma patients undergoing pre-hospital RSI, is there an impact on patient focussed outcome (e.g. mortality) correlated with 999 call time to time of RSI delivery?	6.2
Which is the best PHEA drug dosing regime to optimise first pass success and avoid drug-induced complications (e.g. hypotension) in post ROSC, head injury and polytrauma patients?	3.9
Neurological emergencies	
What is the benefit offered to head injured patients by critical care teams?	6.6
In patients with severe traumatic brain injury, does pre-hospital administration of osmotic agents result in improved survival or neurological outcome, and what is the optimal dose?	6.8
Does pre-hospital administration of FFP or whole blood improve short and longer-term outcomes?	5.5
Does pre-hospital reversal of anticoagulation improve outcomes in patients with traumatic brain injury?	6.4
Does invasive arterial blood pressure measurement improve patient care and outcomes without adversely affecting scene times?	4.9
Is PHEA superior to sedation in the management of agitated mild-moderate TBI?	4.2
Major haemorrhage/blood products	

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What is the optimal dose of calcium in major traumatic haemorrhage and does pre-hospital administration improve patient outcomes?	6.1
REBOA: does it improve survival in major trauma patients with major internal haemorrhage, and is it feasible in less heavily urbanised settings?	4.5
What method of volume resuscitation improves outcomes in injured patients with haemorrhagic shock?	7.5
What method of volume resuscitation improves outcomes in patients with traumatic brain injury?	7.3
Triage	
Which patients with frailty should be triaged to a major trauma centre?	6.1
Would the use of digital health technology improve dispatch of enhanced care teams to critically unwell patients?	7.3
Does transfer to a neurological centre for consideration of time critical thrombectomy improve outcome in patients suffering a suspected stroke in the pre-hospital setting?	6.5
Dispatch	
Is pre-hospital critical care clinician dispatch superior to standard ambulance service dispatch?	6.1
How can critical care dispatch be improved to quickly and accurately dispatch critical care teams to patients?	6.9
Impact/benefit of pre-hospital critical care teams	
What other benefits do pre-hospital critical care teams bring, other than medical outcomes?	5.5

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Is physician led pre-hospital care cost effective?	3.8
Well-being and mental health	
How can we identify risks to well-being and protect the mental health of pre-hospital critical care providers?	7.3
What is the effect of stress on performance of pre-hospital clinicians exposed to a recurring case load of critically injured patients?	4.7
Other	
What is the role of POCUS in pre-hospital critical care in improving patient outcomes?	6.1
Is there any benefit to patients by using pre-hospital point of care testing	6.5
In cases of pre-hospital death, what strategies can be employed by pre-hospital practitioners to improve the experience for friends and family who receive bad news in the acute setting?	6.0
What pre-hospital simulation strategy is optimal to improve patient, clinician and procedural outcomes?	6.0

Questions scored from 1 to 9 with 1 indicating should not be studied, and 9 indicating the question is of highest priority. Questions scoring 6.0 or greater i.e. of slightly high priority or more were brought forward to the ranking stage.