



Top 72 Emergency Medicine Research Priorities

16 February 2017

The rankings were established by consensus at the final prioritisation workshop run by the James Lind Alliance Emergency Medicine Priority Setting Partnership on 19 January 2017.

The top 30 research questions are presented in priority order, and are further elaborated with lay summaries and three-part questions where applicable.

Research questions 31 – 72 are not presented in priority order.

Rank	Research questions 1-30 (in priority order)
1	<p>What is the best way to reduce the harms of emergency department crowding and exit block? We need a better measure of crowding that drives sensible improvements for the seriously ill and injured, adolescents and the frail elderly.</p> <p>LAY SUMMARY: What is the best way to reduce the harms of overcrowding (more patients than there are spaces to see them) in emergency departments?</p>
2	<p>Is a traditional ED the best place to care for frail elderly patients? Would a dedicated service for these patients be better (involving either a geriatric ED, or geriatric liaison services within the ED), or given that this population is expanding should our current services be tailored towards this group?</p>
3	<p>How do we optimise care for mental health patients; including appropriate space to see patients, staff training, early recognition of symptoms, prioritisation compared to physical illness, and patient experience?</p>
4	<p>With regards to how ED staff development is managed, what initiatives can improve staff engagement, resilience, retention, satisfaction, individuality and responsibility.</p>
5	<p>How can we achieve excellence in delivering end of life care in the ED; from the recognition that a patient is dying, through symptomatic palliative treatment, potentially using a dedicated member of staff to work with palliative patients and their relatives, and handling associated bereavement issues?</p> <p>LAY SUMMARY: How should we best manage patients who are dying and who present as emergency patients?</p>
6	<p>The effects of implementing new techniques in assessing patients with chest pain (which include new ways of using high sensitivity troponin tests, and decision rules such as the MACS rule and the HEART score) in practice. Would patients like a say in what is an acceptable risk, and should these tools be used alongside shared decision making to provide safe and appropriate care, minimise unnecessary risk and inconvenience for patients?</p>

	<p>LAY SUMMARY: Patients who present to EDs with chest pain are often admitted for investigation, but many are not having a heart attack. This research proposes a way of trying to find out which patients should be admitted, and which could be safely discharged.</p> <p>THREE PART QUESTION: In [adults with chest pain presenting to an ED] do [1. The Manchester Acute Coronary Syndromes (MACS) decision rule 2. The HEART score 3. High sensitivity troponin tests using a 'limit of detection' and '1-hour' rule out strategy] reduce [MACE]?</p>
7	<p>What is the ideal staffing for current UK EM practice, including doctors, nurses, health care assistants, porters, radiographers, clerical and reception staff.</p>
8	<p>QUESTION: Do early undifferentiated (broad spectrum) antibiotics in suspected severe sepsis have a greater benefit and cause less harm to patients than delayed focussed antibiotics in the ED?</p> <p>LAY SUMMARY: Does giving antibiotic treatment earlier in a patient's treatment pathway improve outcome following infection?</p> <p>THREE PART QUESTION: In [patients with severe sepsis] does [administration of early antibiotic treatment compared to delayed treatment] improve [survival]?</p>
9	<p>In adults who are fully alert (GCS 15) following trauma does cervical spine immobilisation (when compared to no cervical spine immobilisation) reduce the incidence of neurological deficit, and what is incidence of complications?</p> <p>LAY SUMMARY: Should we put injured patients who are fully alert in a neck collar (which may cause complications themselves) in case they have a spinal injury or should we leave them without a collar?</p> <p>THREE PART QUESTION: In [adults who are fully alert (GCS 15) following trauma] does [cervical spine immobilisation versus no cervical spine immobilisation] reduce the incidence of [neurological deficit]?</p>
10	<p>Which trauma patients should be transferred to a Major Trauma Centre rather than going to another hospital first?</p> <p>THREE PART QUESTION: In [adults sustaining traumatic injury] [which triage tool] correctly identifies the need for [treatment at a major trauma centre]?</p>
11	<p>A prospective evaluation of a CT head scan rule out pathway (within 6hrs of headache onset) without recourse to lumbar puncture in ED patients with acute severe headache.</p> <p>LAY SUMMARY: In patients with acute severe headache, can an early CT scan accurately identify those patients who might have suffered a bleed into the brain</p>

	<p>without needing to take a sample of spinal fluid through a needle at the base of the back?</p> <p>THREE PART QUESTION: In [adults presenting to ED with thunderclap headache], is [the absence of blood on CT head performed within 6 hours of onset of symptoms] enough to reliably [exclude SAH without needing LP]?</p>
12	<p>What is the optimal management strategy for patients taking anticoagulants who sustain head injuries?</p> <p>LAY SUMMARY: What is the best way to treat patients taking blood thinning medicines who sustain a head injury.</p> <p>THREE PART QUESTION: In [adult patients attending the ED with head injury] does [taking existing anticoagulants] affect [the optimal management strategy]</p>
13	<p>The use of prophylactic anticoagulation for patients with lower limb injury and temporary immobilisation is a key issue for which international equipoise continues. These patients are a common presentation to emergency departments worldwide and a lack of definitive evidence has led to a state of variable practice with little understanding of the clinical or cost effectiveness of local regimens. Should we give VTE prophylaxis in these patients?</p> <p>LAY SUMMARY: In patients who injure their leg requiring them to go into plaster, should we give treatment to thin the blood in case they develop a blood clot in their leg (or lungs) as a result of being immobile in plaster?</p> <p>THREE PART QUESTION: In [a patient with lower limb injury who needs immobilisation] does [VTE prophylaxis] reduce [clinically relevant VTE]?</p>
14	<p>What information can be used to accurately predict which older, frail patients attended by an ambulance crew can be safely and effectively managed at home, without the need to take them to hospital?</p> <p>THREE PART QUESTION: Which screening tools for frailty best predict older, frail patients attended by an ambulance crew who can be safely and effectively managed at home, without the need to take them to hospital?</p>
15	<p>Does a departmental simulation and team training program reduce medical error and improve quality of patient care?</p> <p>LAY SUMMARY: Does a departmental simulation training program (where mannequins are used to simulate patients) reduce medical error and improve quality of patient care?</p>
16	<p>In patients with sepsis does a liberal fluid resuscitation strategy versus early vasopressor use result in increased morbidity and mortality?</p>

	<p>LAY SUMMARY: In patients with severe infection does the use of medication to raise the blood pressure, or just giving fluids intravenously, have a better outcome?</p> <p>THREE PART QUESTION: In [adults with sepsis or severe infection] does [early vasopressor use compared to liberal fluids alone] improve [survival]?</p>
17	<p>There have been many proposed interventions within the last decade designed to streamline diagnosis of suspected pulmonary embolism and avoid costly hospital admissions or problems related from overtesting. These interventions have not been assessed as a composite and the risk benefit profile of their introduction when compared to standard care is unclear.</p> <p>LAY SUMMARY: How should we best investigate people who may have a blood clot in their lungs?</p> <p>THREE PART QUESTION: In [adult patients with suspected PE] does [a diagnostic strategy incorporating the PERC rule, use of age adjusted d-dimer thresholds and ambulatory management based on the SPESI criteria] reduce [adverse outcomes e.g. missed diagnosis, cost, mortality]?</p>
18	<p>Could more be done in the initial few hours in the ED to prevent secondary damage in patients with head injury (e.g. reducing intracranial pressure).</p>
19	<p>What is the impact of emergency medicine Consultant presence in the clinical area on patients, staff and performance of the ED (including quality and safety) - including an assessment of the benefit of 24 hour cover?</p> <p>LAY SUMMARY: What is the impact of having a consultant (the most senior grade of doctor) present in the emergency department 24/7?</p>
20	<p>How can we improve work/life balance amongst ED staff to better retain our staff, including rota design and other working conditions.</p>
21	<p>Does rapid assessment and triage by a senior doctor improve time to admit or discharge? Is there an optimum time to do it? Is it appropriate for both minors and majors patients?</p>
22	<p>Use of biomarkers in adult patients with minor traumatic brain injury (mTBI) in particular protein S-100B, incorporation into NICE adult head injury guidance; There is evidence to suggest that the use of this biomarker may decrease rate of neuroimaging by up to 30% It has a very high sensitivity (reported >97%) and therefore is a good 'rule out' option. Of particular benefit to patients with a minor head injury who are: anticoagulated (warfarin); intoxicated; or the elderly patient (with background dementia or cognitive decline).</p> <p>LAY SUMMARY: For patients with minor head injuries, can a blood test detect significant bleeding in the brain?</p> <p>THREE PART QUESTION: In [adult patients with minor traumatic brain injury] is [protein S-100B] an effective way to [rule out significant intracranial injury]?</p>

<p>23</p>	<p>In adults diagnosed with isolated sub-segmental pulmonary embolism is treatment with anti-coagulation required?</p> <p>LAY SUMMARY: In patients who have small blood clots in their lungs is blood thinning treatment necessary?</p> <p>THREE PART QUESTION: In (a patient with an isolated subsegmental pulmonary embolism) does (anticoagulation therapy or no treatment) lead to (lower rates of mortality and recurrent venous thromboembolism?)</p>
<p>24</p>	<p>How may we best tackle the challenge of people who use the emergency department very frequently in the UK?</p> <p>LAY SUMMARY: What is the best way to care for people who attend emergency departments very frequently?</p>
<p>25</p>	<p>Which factors predict significant traumatic brain injury in head injury patients that present more than 24 hours after the injury?</p> <p>LAY SUMMARY: Which factors predict significant head injuries for patients that present more than 24 hours after the injury?</p>
<p>26</p>	<p>In adult patients with small closed haemothorax secondary to trauma, does attempted drainage v's conservative management result in improved long term morbidity and mortality?</p> <p>LAY SUMMARY: In patients who have suffered a chest injury, and have a small amount of blood in their chest cavity, should we place a drain into the chest to allow the blood to drain away, or is it best left alone?</p> <p>THREE PART QUESTION: In [adults with a closed small (e.g. less than 250ml) haemothorax secondary to chest trauma] does [intercostal drainage] improve [survival; infection; lung function]?</p>
<p>27</p>	<p>Does increased use of clinical 'support' staff (physician assistants, extended role Health Care Assistants) improve efficiency of doctors and nurses, improve flow and is it financially sound?</p>
<p>28</p>	<p>Does early high-dose fibrinogen supplementation with cryoprecipitate reduce mortality in adult trauma patients who have haemorrhagic shock and active bleeding?</p> <p>LAY SUMMARY: In patients with severe bleeding following injury, does giving them a concentrated dose of a protein involved in blood clotting (called fibrinogen) reduce death?</p> <p>THREE PART QUESTION: In [adult patients suffering major trauma haemorrhage and requiring activation of the local major haemorrhage protocol] does [the administration of cryoprecipitate] reduce [mortality]?</p>

29	<p>In adult patients with presumed sepsis in the prehospital environment does the administration of prehospital antibiotics compared to no antibiotics decrease mortality?</p> <p>LAY SUMMARY: In adult patients with presumed severe infection does the administration of antibiotics (given by the ambulance crew rather than when the patient arrives at hospital) decrease mortality?</p> <p>THREE PART QUESTION: In [adult patients with presumed sepsis in the prehospital environment] does [administration of prehospital antibiotics] improve [survival]?</p>
30	<p>How can viscoelastic studies guide transfusion in trauma and other haemorrhage states? Viscoelastic studies allow us to go one step further and effectively offer a bespoke transfusion to the bleeding patient. This allows the patient to receive the products they need, but also allows greater control over limited resources in the blood bank.</p> <p>LAY SUMMARY: Does the use of a blood test to check blood clotting at the bedside improve the amount of blood needed and survival in injured patients?</p> <p>THREE PART QUESTION: In [trauma patients] does [viscoelastic near patient coagulopathy testing] reduce [blood product use, length of stay, mortality]?</p>

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Research questions 31-72 (not in priority order)	
	Patients presenting with acute behavioural disorder/delirium present a mental and physical risk to themselves, staff and patients. They also present a challenge in gaining control of the situation safely. Is there a role for national guidance to provide uniformity across EDs in terms of approach and medications/dose ranges, as well as some legal framework?
	Patient comprehension of discharge advice when leaving emergency departments.
	In adult patients presenting to the emergency department with acute moderate to severe pain is intra-nasal diamorphine delivered by metered dose spray, according to body weight (either estimated or actual) a rapid and effective way of providing excellent analgesia?
	Should we anticoagulate all patients with isolated pulmonary embolism?
	Do femoral nerve blocks benefit demented patients with femoral neck fracture in terms of meaningful outcomes such as use of morphine, mortality or length of stay?
	Validation and use of concussion assessment tools (e.g. the SCAT3 or cog sport) in the ED, and follow up for patients with head injuries with symptoms but no structural injury on CT scan.
	In adults with critical illness and injury does a physician prehospital response compared to standard paramedic response improve survival?

LAY SUMMARY: Does the addition of a doctor to the prehospital team add benefit or save lives in serious illness and injury?

THREE PART In [adults with critical illness and injury] does a [physician prehospital response compared to standard paramedic response] improve [survival]?

There is a clear need for meaningful research surrounding clinical decision making in Emergency Medicine. Understanding differences in the decision making processes of emergency physicians with different levels of experience may help target interventions to improve diagnostic process and decrease over investigation.

LAY SUMMARY: Do we need to study how doctors of different grades make the decisions they do about patient diagnosis and treatment?

THREE PART In [Emergency Medicine physicians or students] does [teaching cognitive debiasing, cognitive forcing strategies or metacognition] lead to [a reduction in error attributable to cognition]?

In adults with symptoms suggestive of an acute coronary syndrome (NSTEMI) presenting to an Emergency Department, is emergent revascularisation guided by a clinical prediction model better than medical therapy at improving survival?

LAY SUMMARY: In patients who are having a heart attack (where a blood vessel supplying oxygen to the heart muscle is typically blocked), is it better to unblock the vessel with a wire and balloon through a tube placed in an artery, or is it better to give drug treatment?

THREE PART In [adults with symptoms suggestive of an acute coronary syndrome presenting to an Emergency Department], is [emergent revascularisation guided by a clinical prediction model better than medical therapy] at [improving survival]?

Patients with lower back pain are treated with a variety of analgesia regimes including paracetamol, NSAIDs, opiates, amitryptilline, gabapentin and diazepam to name a few. What is the optimum treatment regime in the ED?

LAY SUMMARY: Patients with lower back pain are treated with a variety of painkillers including paracetamol, ibuprofen, morphine, amitryptilline, gabapentin and diazepam to name a few. What is the optimum treatment regime in the ED?

Is there a role for intravenous levatiracetam (rather than phenytoin) in patients with status epilepticus?

LAY SUMMARY: Does levatiracetam (a drug used to control seizures or fits) control seizures better than the standard treatment?

THREE PART In [adult patients in status epilepticus] is [levetiracetam better than phenytoin] at [safely terminating seizure activity]?

What is the optimal treatment for patients with paracetamol overdose?

THREE PART In [patients who have taken a paracetamol overdose] can [new biomarkers and treatment protocols] reduce [unnecessary admission, length of stay]?

Do we need geriatric nurse specialists within our emergency departments to assist with person-centred care, clinical decision making and patient flow in elderly patients with acute mental health problems including delirium.

LAY SUMMARY: Do we need geriatric nurse specialists within our emergency departments to assist with person-centred care, treatment decisions and patient flow in elderly patients with mental health problems including delirium.

THREE PART In [elderly patients with acute mental health problems including delirium] what is the impact of [geriatric nurse specialists] on [management of acute environment].

What factors can help prognostication when making 'do not resuscitate' or treatment escalation plan decisions, and make them more evidence based?

What is the experience of palliative care patients attending an emergency department? Why do patients with a known terminal illness attend the ED and how well are their expectations met on having to attend?

THREE PART In [palliative care patients] does [communication to identify ideas, concerns and expectations] achieve [patient preference]?

We should have a better idea of the end-points of fluid resuscitation in a variety of pathological states, particularly sepsis. In patients with severe sepsis, does non-invasive cardiac output monitoring help to guide fluid therapy to optimise fluid balance? We need a study that utilises a standardised non-invasive cardiac output monitor to assess fluid responsiveness, and the effects of fluid therapy on mortality.

LAY SUMMARY: In patients with severe infection does the use of a monitor that measures the volume of blood pumped by the heart help to guide fluid treatment?

THREE PART In [adults attending the emergency department with sepsis] does [non-invasive cardiac output guided fluid therapy] improve [mortality, organ failure, length of stay, or impact on fluid balance] compared to [standard care]?

What is the impact of intoxicated patients on the ED environment, other patients and staff? What else could be done to better manage patients who are acutely intoxicated through alcohol?

THREE PART In patients [presenting to the Emergency Department with uncomplicated acute alcohol intoxication (AAI)], what [interventions (both service interventions and clinical interventions)] are available to [hasten safe discharge]?

With regard to elderly patients, how should we recognise delirium in the ED effectively within the pressure of time and amount of patients, and what are the consequences if we don't?

THREE PART In [elderly patients presenting to the ED] does [a Delirium recognition tool] improve [length of stay, mortality]?

In fluid resuscitation, should we be using specific biochemical targets rather than mechanical for patients who are shocked to prevent the massive fluid accumulation that can be seen in critical care patients. Should inotropes be initialised much sooner in the process as fluid sparing tools?

LAY SUMMARY: In patients needing lots of fluid as part of their treatment, should we be using blood tests to guide the amount of fluid needed?

Can the Ottawa Aggressive Protocol for recent onset atrial fibrillation (RAF) be implemented in the UK? The Ottawa Aggressive Protocol (OAP) is a treatment approach involving procainamide instead of flecainide and IV diltiazem for rate control in patients with RAF.

LAY SUMMARY: In patients with an irregular heart beat, is one type of treatment pathway (used in other countries such as Canada) better than what is currently recommended in the UK?

THREE PART In [adults with recent-onset atrial fibrillation (RAF)] does [the Ottawa Aggressive Protocol] improve [cardioversion; symptom control; mortality]?

Which physiological early warning score should be used for adult ED patients? Three are currently used - mEWS, NEWS, and REMS. It may be possible to derive a new ED-based score that out-performs the three models.

LAY SUMMARY: Doctors use scores of severity of illness, using measurements like pulse and blood pressure, to help guide their assessment and treatment, but several scores are available. Which is the best?

THREE PART In unwell (non-injured) adult Emergency Department patients which physiological early warning score best predicts adverse patient outcomes?

Does candesartan (vs placebo) improve outcome in patients with isolated severe traumatic brain injury (TBI). There is now evidence that candesartan has clinically important local neuroprotective effects in injured brain tissue, and could reduce the development of secondary brain injury.

LAY SUMMARY: Does a drug called candesartan improve outcome in patients who had suffered a severe head injury?

THREE PART In [adult patients presenting to EDs with severe TBI] does [candesartan versus placebo] improve [neurological outcome]?

Improving how we work with mental health (MH) patients - risk assessing the patients we see in the ED, before referring them onto to psychiatry.

THREE PART In [an adult who presents with suicidal ideation or self-harm] is [a risk tool] available to [detect those who are at medium to high risk of further self-harm if discharged]

What role is there for an outreach Physician Response Unit on diverting potential ambulance disposals to ED/hospital from patients who have called for/had an ambulance dispatched to them.

LAY SUMMARY: Does the addition of a doctor to the prehospital team add benefit to patients who call for an ambulance?

THREE PART In [patients who call an ambulance] does [an EM PRU compared to normal ambulance response] reduce [time to discharge / attendance / cost]?

Is topical tranexamic acid (using TXA soaked gauze, 500mg in 5ml) effective at stopping bleeding from minor wounds in patients who are on anticoagulant medication?

LAY SUMMARY: Is it possible to stop bleeding from minor wounds in patients on blood thinning treatment with a simple treatment using a drug, normally given either by mouth or into the veins to stop bleeding, soaked onto a piece of gauze swab and applied directly to the wound?

THREE PART In [anticoagulated patients presenting to the ED with a superficial, non life threatening bleed] does [topical TXA] reduce [the need for reversal of anticoagulation]?

In adult patients with wrist injury and clinical suspicion of a scaphoid fracture, is early definitive imaging (CT or MRI scan) better than routine care with immobilisation and review at 2 weeks?

LAY SUMMARY: In patients who have injured their wrist but have normal Xrays, but in whom a break is still suspected, is it better to do a scan immediately to rule out a break or to put on a splint for 2 weeks, then bring back for review?

THREE PART QUESTION: In [adult patients with wrist injury and clinical suspicion of a scaphoid fracture], is [early definitive imaging (CT or MRI scan) better than routine care with immobilisation and review at 2 weeks] at [optimising pain and functional outcome]?

What characterises a well-structured and safe clinical handover from an ambulance service clinician to the ED (including which mnemonics to use, pre-alerting procedures, medicines handover and accessing the correct ED staff member first time)?

Can the use of an ambulatory patch monitor, in Emergency Department patients with syncope whose cause is unexplained after Emergency Department evaluation, detect serious subsequent arrhythmia?

LAY SUMMARY: In patients who suffer a collapse, does wearing a portable heart monitor help to detect subsequent serious problems with heart rhythm?

THREE PART In 'patients presenting to the ED with syncope' does 'an ambulatory patch monitor that can record the ECG for 14 days' lead to 'increased detection of significant arrhythmia that requires treatment compared to standard diagnostic strategies.'

Propofol Target-controlled infusion (TCI) is commonly successfully used for sedation in other areas in the hospital and allows the operator to more accurately target a specific clinical effect for that particular patient and procedure, potentially eliminating the risk of 'over shooting' and reducing the rate of adverse events. Should it be used in ED patients?

LAY SUMMARY: Propofol is an anaesthetic drug used to put people off to sleep, but it is also used in the ED to sedate people who need a painful procedure (such as putting a dislocated shoulder back in joint). This suggests a way of slowly giving the drug to achieve the desired state of sedation, rather than giving a larger one-off dose.

THREE PART In [adults undergoing reduction of their anterior shoulder dislocation in the Emergency Department] does [Target-controlled infusion of Propofol] vs [bolus administration of Propofol] reduce the [incidence and severity of adverse events] during their sedation?

In patients with syncope, can a novel high-sensitivity troponin I assay along with a brain natriuretic peptide (BNP) biomarker identify patients at low and high risk of adverse outcome for immediate discharge or hospitalisation for further investigation? LAY SUMMARY: In patients who suffer a collapse, can blood tests be used to decide who is safe to go home? THREE PART In [patients presenting to the ED with syncope] does [combined troponin and BNP assay] predict [safe discharge]?

Could point-of-care lactate, used to measure illness severity, revolutionise triage, by being the 6th vital sign?

LAY SUMMARY: Can a blood test done at triage (on arrival at the ED) predict a patient's severity of illness?

THREE PART In [patients attending the emergency department (ED)], could [point-of-care capillary lactate] be used to [measure illness severity]?

For patients with wrist fracture, can we reliably identify which patients should go directly to ORIF rather than undergo MUA first in the ED to prevent the need for two procedures (using a clinical decision tool)?

LAY SUMMARY: For patients with a broken wrist, can we reliably identify which patients should go directly to an operating theatre to have their fracture fixed rather than undergo a procedure in the ED?

For patients with mental health problems, what is the most effective way for EDs to involve and hand over to psychiatric staff?

In patients with acute pain, does inhaled methoxyflurane provide effective pain relief compared to entonox?

LAY SUMMARY: In patients with acute pain, does one type of inhaled painkiller (methoxyflurane) provide better pain relief than the usual 'gas and air' typically given in ambulances (entonox)?

<p>THREE PART In [patients with acute pain in any setting], does [Inhaled methoxyflurane] provide [effective pain relief] compared to entonox?</p>
<p>Do patients who attend the ED with atrial fibrillation have the same risk as the greater population of patients in AF or does the combination of being in AF and attending the ED create a higher risk population that needs investigation in its own right? Should more patients have anticoagulants started in the ED rather than deferring to in patient specialties or the GP, and would this have an impact on morbidity/mortality?</p> <p>LAY SUMMARY: Do patients who are found to have an irregular heart beat have more problems when they attend the ED, and do they need any specific treatment to thin the blood to prevent stroke?</p>
<p>THREE PART QUESTION: In [patients in AF attending the ED] does [starting anticoagulants in the ED if CHADSVASC score is elevated] reduce [morbidity and mortality]?</p>
<p>Does early administration of candesartan (which has been shown to modify local anti-inflammatory and apoptotic pathways, and has beneficial effects on mood and cognition) in patients with mild traumatic brain injury (mTBI) improve outcome?</p> <p>LAY SUMMARY: Does a drug called candesartan improve outcome in patients who had suffered a minor head injury?</p>
<p>THREE PART In [adult patients presenting to EDs with mTBI defined as lack of evidence of intracranial injury on CT] does [candesartan versus placebo] improve [neurological outcome]?</p>
<p>What is the best form of pain relief for patients having manipulation of a broken wrist in the emergency department?</p>
<p>THREE PART In [elderly patients with uncomplicated Colles fractures] is [Biers block or haematoma block or sedation better] at [reducing pain during manipulation, reducing the need for multiple manipulations and improving long term function]?</p>
<p>In adult patients with suspected renal colic (kidney stones) does salbutamol improve pain?</p> <p>LAY SUMMARY: In adult patients with suspected renal colic (kidney stones) does salbutamol (a drug usually given to patients with asthma through an inhaler) improve pain?</p> <p>THREE PART In [adult patients with suspected renal colic] does [IV or nebulised salbutamol] improve [pain]?</p>
<p>Can patient handover between doctors and nurses be streamlined (ED handovers across all staff can lack quality) e.g. using the SBAR approach - short and concise.</p> <p>LAY SUMMARY: Can patient handover between doctors and nurses be streamlined (ED handovers across all staff can lack quality) e.g. using a standardised approach.</p>
<p>What is the best way to prescribe drugs in the ED (e.g. using hospital drug chart or an ED specific drug chart, writing once only or ongoing prescriptions)?</p>

LAY SUMMARY: Sometimes hospitals use different drug charts in the ED or on the wards, and the ED drug chart may be combined with or separate from the rest of the ED notes. What is the best way to ensure mistakes are avoided in ED prescribing?