

Major trauma services

Consultation on draft guideline Stakeholder comments table

07/08/15 - 21/09/15

Comments forms with attachments such as research articles, letters or leaflets cannot be accepted.

					Comments	Developer's response
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1	Association of ambulance chief executives	Short	12	21	Ambulance services will struggle to deliver RSI at the scene and within 30 mins 24/7 to all appropriate patients. This is clearly a skill for medics who may not be available.	Thank you for your comment. These recommendations were extensively discussed by the Major trauma and the Major trauma service delivery guideline development groups. The guideline development groups took into account the available evidence, including the quality, for all of the recommendations and their discussions are captured in the 'Linking evidence to recommendation' sections (chapter 6 of the Major trauma guideline and chapter 17 Major Trauma: Service delivery guideline.). Note that this recommendation has been altered to 45 minutes from 30 minutes. The guideline development group were in clear agreement about the benefits, harms and cost-effectiveness and also took into account the current trauma service configuration and major trauma service specifications. Drawing on the evidence and their experience appropriate recommendations were made for the interventions in the guideline and this is reflected in the strength of the recommendations. For more information on the wording of recommendations: the manual



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2	Association of ambulance	Short	16	7	We welcome the suggestion of research into national pre-	(chapter 9). The Resource Impact Assessment team at NICE is responsible for identifying the resource impact that may occur as a result of commissioning and implementing services in line with NICE guidance and quality standards. Thank you for your comment. The research
	chief executives				hospital triage tool for major trauma, but think that this should also incorporate any patient with life threatening needs e.g. medical needs and not just be specific for trauma patients	recommendation reflects the review question that was conducted for the guideline.
135	British Association of Paediatric Surgeons (BAPS)	General	General		Thank you for requesting feedback from the British Association of Paediatric Surgeons (BAPS) on these two draft documents commissioned by the National Institute for Health and Care excellence and written by the National Clinical Guideline Centre. The documents cover adults, young people and children who present with a suspected major traumatic injury with a full literature search, critical appraisal and evidence review for a series of questions. Team members represented Paediatric Emergency Medicine, Anaesthetics, Nursing Radiology, Paediatric Intensive Care, Emergency Medicine, Psychiatry, Trauma & Orthopaedics, Neurosurgery, the Ambulance Service and Patients – but it is notable there was no Paediatric Surgical representation. In general the guidelines are to be highly commended and reflect a significant workload. The lay out with a series of questions followed by a dissection of the evidence is clear and very helpful in identifying where current clinical practise has a strong or weak basis.	Thank you for your comment. As noted the composition of the guideline development groups and the project executive team across the five trauma guidelines included many disciplines and within the disciplines different specialities. It is impossible to have the representation of all specialities on a guideline and in the scoping phase the stakeholders identified the specific disciplines and specialities for recruitment to the groups. All the guideline development groups either had members or access to expert clinicians with extensive experience in paediatric trauma and we are confident that the role of the paediatric surgeon and the impact of these recommendations were considered.
136	British Association of Paediatric Surgeons (BAPS)	General	General		Trauma: Service delivery In this document 43 recommendations are made of which 5 mention children.	Thank you for your comments. Recommendation 15 refers to trauma units and recommendation 17 for MTCs.
					No 2. Chose a pre-hospital major trauma triage tool that includes assessment of physiology and anatomical injury and	The guideline development group defined



ID	Stakeholder	Document	Page No	Line No	Please insert each new comment in a new row takes into account the different needs of older patients, children and other high-risk populations No 15. Have a paediatric trauma team available immediately for children with major trauma No 17 Have a paediatric trauma team available immediately for children with major trauma. How the tiered teams may look in UK MCTs: No 32. Provide education and training courses for healthcare professionals and practitioners who deliver care to	Please respond to each comment immediately as straight away. The guideline development group considered that if an ED is receiving a child with major trauma there should be immediate access to a trauma team that is skilled in managing paediatric trauma; this is likely to include access to paediatric surgery. The guideline development group discussed that paediatric trauma involves a large number
					and other high-risk populations No 15. Have a paediatric trauma team available immediately for children with major trauma No 17 Have a paediatric trauma team available immediately for children with major trauma. How the tiered teams may look in UK MCTs: No 32. Provide education and training courses for healthcare professionals and practitioners who deliver care to	guideline development group considered that if an ED is receiving a child with major trauma there should be immediate access to a trauma team that is skilled in managing paediatric trauma; this is likely to include access to paediatric surgery. The guideline development group discussed that paediatric trauma involves a large number
					children with major trauma that include the following components: Safeguarding Taking into account the radiation risk of CT to children when discussing imaging for them The importance of the major trauma team, the roles of team members and the team leader, and working effectively in a major trauma team Managing distressed relatives and breaking bad news The importance of clinical audit and case review No 35. Allocate a dedicated member of staff to contact the next of kin and provide support for unaccompanied children and vulnerable adults Comment We support the recommendation to develop an improved prehospital triage for children. Recommendations 15 & 17 are duplicated – but 17 seems to be truncated with a missing portion after 'How the tiered teams may look in UK MCTs:' There is not a definition of 'immediate' in the document – this should be clarified. If it were to imply – within 5 minutes – this would be an issue for Paediatric Surgery as our speciality does not have resident 24/7 cover.	of children arriving in the ED as 'walk-ins' and this lack of pre hospital triage and care made an immediate response by a trauma team even more important. See the linking to evidence recommendation section in chapter 8. The guideline development group considered that most MTCs do not see enough paediatric trauma to justify a tiered response and children should have immediate access to a full paediatric trauma team (defined as the standard multispecialty trauma team with paediatric expertise) to ensure they receive the best care. See the linking to evidence recommendation section in chapter 8. Under 16s has been included in the recommendation about trauma teams 'Have a paediatric trauma team available immediately for children (under 16s) with major trauma.' The guideline development group agree that the provision of education and training courses for healthcare professionals and practitioners who deliver care to children with major trauma is important.
					Recommendation 16 – Consider a tiered team response to receive patients in major trauma centres – does not specifically	



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					mention children but is discussed in section 8 (p56-69).	
					Suggested Tiered team memberships in Paediatric Trauma (p69) are :-	
					ED response – ED Consultant or registrar (ST 3 or 4), Nurse (grade 6 or 7)	
					Standard multi-disciplinary trauma team – ED response plus a second nurse, paediatric surgeon, anaesthetist and paediatrician	
					Specialist involvement – plus specialist surgeons: orthopaedic, vascular, cardio/thoracic, obstetrics and gynaecology, urology, maxillofacial, neurological, plastics, paediatric and radiologist	
					In view of the rarity of paediatric major trauma (approx 300 cases per year in the UK), it would seem unnecessary for specialist paediatric surgery to be part of the standard multidisciplinary trauma team as this would require the provision of 24/7 specialist paediatric surgical cover resident on site. This would have enormous cost implications, have a detrimental impact on training with the European working directive and, in most Trusts, would be undeliverable as numbers would need to increase.	
					Consequently we would support the use of tiered trauma team responses in the Major Trauma Centres where the Paediatric Surgical Registrar should be notified at the time of pre-alert and selectively attend or be called by ED if there is concern after primary survey following admission. This can be achieved in the document by moving the paediatric surgeon from the standard multi-disciplinary team to Specialist Involvement.	
					Additionally we would recommend a review of the age group selected for triggering adult v's paediatric trauma team based on local arrangements. May we suggest that adolescents between 16 and 18 may be best managed by adult surgeons with the involvement of paediatric surgeons depending on local guidelines.	



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	- Clarion Gladi	20041110111	. ago .to		Please insert each new comment in a new row We support the provision of education and training courses for	Please respond to each comment
					healthcare professionals and practitioners who deliver care to	
					children with major trauma.	
3	British Orthopaedic Association	Full	General	General	There is an emphasis in the guideline towards transferring more people to MTCs but with no clear definition on what exactly major trauma includes. The BOA has concerns about unnecessary transfers, deskilling in Trauma Units and whether these guidelines ignore local network solutions that have been developed to overcome problems like rurality.	Thank you for your comment. Major trauma is defined in the guideline as a potentially life threatening injury or injuries with the potential to cause the loss of a limb. The guideline development group are clear that the optimal destination for major trauma patients should be a major trauma centre and a patient should only be diverted to a trauma unit for a lifesaving intervention and then transferred to a major trauma centre. In addition recommendation 1.2.1 clearly states that the optimal destination for a patient with major trauma is a MTC but this may vary due to specific geographic or patient characteristics. The guideline development group extensively discussed the available evidence, including the quality, for all of the recommendations and their discussions are captured in the 'Linking evidence to recommendation' sections throughout the guideline. The guideline development group were in clear agreement about the benefits, harms and cost-effectiveness and also took into account the current trauma service configuration and major trauma service specifications. Drawing on the evidence and their experience appropriate recommendations were made for the interventions in the guideline and this is reflected in the strength of the recommendations. For more information on the wording of recommendations see Developing NICE guidelines: the manual
4	British Pain Society	General	General	General	There is no reference to pain services for patients with major	(chapter 9). Thank you for your comment. The scope



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					trauma beyond initial assessment. This will have a major effect by limiting mobilisation and rehabilitation and prolonging hospital stay. It follows that there will be financial penalties for inadequate recognition and management of pain. The guidelines that should be followed are contained within the draft Core Standards for Pain Management Services in the UK (2015) published by the Faculty of Pain Medicine of the Royal College of Anaesthetists	of this guideline was the immediate management of trauma and therefore the initial management of pain. We have edited the linking evidence to recommendation section to highlight the important of referring patients for on-going management if appropriate.
5	British Society of Interventional Radiology	Full	General	General	No comments on behalf of BSIR	Thank you for your comment.
	BSRM; British Society of Rehabilitation Medicine	Full	General	Chapter 5	We recognise that there has been a need to focus on the early parts of the trauma pathway in this work. However, it is also important to recognise that the long term outcomes from early interventions reported in the cited literature rarely indicate the amount or quality of rehabilitation that the patients have received after those interventions. It is therefore erroneous to consider that the outcomes are only influenced by the very early interventions. We would strongly recommend that further work looks not only at the amount and type of rehabilitation received by patients but also at the longer term outcomes other than mortality, in particular return to work, costs of care and patients and family morbidity. Indeed there is potentially a resource to start to do this. The UK Rehabilitation Outcomes Collaborative (UKROC) provides a national clinical database for Specialist Rehabilitation, which now provides the commissioning dataset for NHS England. Funded by the NIHR, it has recently reported data to NIHR on rehabilitation needs, inputs and outcomes for all patients admitted for Specialist Rehabilitation (all Level 1 and Level 2 units) in England between 2010 and 2014. The HQIP National Clinical Audit for Specialist Rehabilitation following Major Trauma will link the TARN and UKROC databases, and for the first time support tracking of patients from the acute pathways into medium-longer term rehabilitation. If successful in its first 3 years, there are plans to extend the audit to the trauma units in years 4 and 5. This linkage offers a major resource for future research on outcomes such as return to independence, carer burden and cost-efficiency. Collated	Thank you for your comment. The guideline development group agree that rehabilitation is a key part of the trauma pathway. Rehabilitation was one part of the scope and the guideline development group prioritised an evidence review identifying barriers to providing early rehabilitation assessment (chapter 16). The guideline development group was surprised at the paucity of evidence and made a research recommendation. For your information NICE has recently been commissioned by NHS England to develop guidelines on the following: • Rehabilitation for chronic neurological disorders including traumatic brain injury • Rehabilitation after traumatic injury • Rehabilitation in people with severe and enduring mental illness



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					Please insert each new comment in a new row through UKROC these can also take account of the type and	Please respond to each comment
					intensity of the rehabilitation programmes provided.	
6	BSRM; British Society of Rehabilitation Medicine	Full	General		BSRM welcome the opportunity to respond to the NICE consultation on trauma services, since rehabilitation is a key part of the trauma pathway and essential to ensure improved outcomes for patients that were intended by the set up of the trauma networks. There is some important information that does not seem to have been recognised in the guideline so far. Without effective rehabilitation to keep patients moving along the pathway towards recovery and re-enablement, the trauma networks will simply fail. This was recognised in the original DoH publication setting out the requirements a for Major Trauma Networks (DoH 2010), and the Rehabilitation Prescription was developed at the request of the NHSe Director for Trauma and has been an effective way of encouraging many acute trusts and networks to start addressing the rehabilitation needs of trauma patients from a very early stage following injury. When Major Trauma Centres were set up there was a need for Rehabilitation Prescriptions to be completed to secure a best practice tariff. The BSRM has subsequently developed standards for specialist rehabilitation for patients with highly complex needs following trauma (reference is given below). This includes the requirement for involvement of a consultant in Rehabilitation Medicine at an early stage and the formulation of a Specialist Rehabilitation Prescription. Specialist Rehabilitation following Major Trauma is currently the subject of a National Clinical Audit commissioned by the Health Quality Improvement Programme (HQIP).	Thank you for your comment. The guideline development group agree that rehabilitation is a key part of the trauma pathway. Rehabilitation was a small part of the scope and therefore was not fully addressed. The guideline development group prioritised an evidence review identifying barriers to providing early rehabilitation assessment (chapter 16). The guideline development group was surprised at the paucity of evidence and made a research recommendation. To address this gap, NICE has recently been commissioned by NHS England to develop guidelines on the following: • Rehabilitation for chronic neurological disorders including traumatic brain injury • Rehabilitation after traumatic injury • Rehabilitation in people with severe and enduring mental illness
7	BSRM; British Society of Rehabilitation Medicine	Full	General		When the Trauma Networks were established in 2011/12, the actual provision of rehabilitation within the pathway was considered only as an afterthought in many regions. The current severe lack of both in and out patient rehabilitation resources in most parts of England and Wales presents a challenge to all Trauma Networks and the transfer processes within them. Thus, it is essential that all patients' rehabilitation needs are not only	Thank you for your comment. The guideline development group agree that rehabilitation is a key part of the trauma pathway. Rehabilitation was one part of the scope and the guideline development group prioritised an evidence review identifying barriers to providing early rehabilitation



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					identified but documented as part of the overall trauma pathway otherwise the situation will not improve and the current gaps in service not understood.	assessment (chapter 16). The guideline development group was surprised at the paucity of evidence and made a research recommendation. For your information NICE has recently been commissioned by NHS England to develop guidelines on the following: • Rehabilitation for chronic neurological disorders including traumatic brain injury • Rehabilitation after traumatic injury • Rehabilitation in people with severe and enduring mental illness
8	BSRM; British Society of Rehabilitation Medicine	Full	General		We are very concerned that there is limited reference made to the Rehabilitation Prescription and none to the Specialist Rehabilitation Prescription. This is an important omission. It would seem to be a major missed opportunity ('adding insult to injury' even) if NICE were to neglect this important aspect of care, that very many clinicians throughout England have worked so hard to establish.	Thank you for your comment. The guideline development group agree that rehabilitation is a key part of the trauma pathway. Rehabilitation was one part of the scope and the guideline development group prioritised an evidence review identifying barriers to providing early rehabilitation assessment (chapter 16). The guideline development group was surprised at the paucity of evidence and made a research recommendation. For your information NICE has recently been commissioned by NHS England to develop guidelines on the following: • Rehabilitation for chronic neurological disorders including traumatic brain injury • Rehabilitation after traumatic injury • Rehabilitation in people with severe and enduring mental illness
9	BSRM; British Society of Rehabilitation Medicine	Full	109	General	The first Rehabilitation Prescription can be used even for early transfer to Trauma Units and is already being used for this purpose in some areas.	Thank you for your comment. This chapter evaluates the evidence for a trauma service and not about documentation.



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						Documentation on transfer and discharge is covered in more detail in the Major Trauma Clinical Guideline in the chapter on information and support.
10	BSRM; British Society of Rehabilitation Medicine	Full	83	General	[P83-85] The Rehab Prescription is intended to be used for transfer to other rehabilitation services including on discharge. It is designed to be a patient-centred document, and a copy should be given to the injured person and their relatives as well as the receiving service and the primary care physician.	Thank you for your comment. This chapter evaluates the evidence for a trauma service and not about documentation. Documentation on transfer and discharge is covered in more detail in the Major Trauma Clinical Guideline in the chapter on information and support.
11	BSRM; British Society of Rehabilitation Medicine	Full	118	21 table	[p118-119] It is our understanding that there is a 2-tier best practice tariff with MTCs receiving £2900 for submission of Rehabilitation Prescriptions for people with ISS>15.	Thank you for your comment. The two tier best practice tariff has been added to the description of current services in the linking evidence to recommendation section.
12	BSRM; British Society of Rehabilitation Medicine	Full	83	General	[P83-85] Section 10.6; the discussion of a trauma coordinator does not refer at all to a Trauma Centre trauma rehabilitation coordinator or Trauma Network Rehabilitation Coordinator. Both roles being designated as essential during the initial commissioning of the Major Trauma Centres and Networks. These roles have been established in some centres to great effect. It is also important to acknowledge that trauma coordinators and trauma rehab coordinators need the support and guidance of Rehabilitation Medicine Consultants to advise on the rehabilitation needs and interventions of those with complex impairments after trauma. In practice this means they should be in close discussion with Rehabilitation Medicine consultants or encouraged to complete a patient categorisation assessment and have Rehabilitation Medicine support in completing a Specialist Rehabilitation Prescription for patients with ISS>15. The most effective models in use have been to have MDT reviews of all trauma inpatients several times/week in the Major Trauma Centres.	Thank you for your comment. The recommendation has been edited to include acute specialist trauma rehabilitation services.
13	BSRM; British Society of Rehabilitation Medicine	Full	132	General	In this discussion of current practice it does not mention that Rehabilitation Prescriptions can be (and in some networks are being) used to ensure primary care doctors do receive useful information about the trauma and the treatment their patients have received and any further treatments and rehabilitation that	Thank you for your comment. This chapter evaluates the evidence for a trauma service and not about documentation. Documentation on transfer and discharge including that to primary care doctors is



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					they may need.	covered in more detail in the Major Trauma Clinical Guideline in the chapter on information and support.
14	BSRM; British Society of Rehabilitation Medicine	Full	40	7	Point 26; it is probably over ambitious to expect one key worker to be able to advise and link with Specialist Rehabilitation services as well as to understand the various surgical interventions that patients may need coordinating. We suggest that there is a distinction made here, so that trusts and commissioners appreciate that while a key worker system is to be worked towards for less complex trauma, it is also very important that the key worker is able to seek advice and guidance from senior rehabilitation professionals, in particular Rehabilitation Medicine consultants for those trauma patients with Specialist Rehabilitation needs.	Thank you for your comment. The guideline development group agreed that it is clear that the key worker is not there it advise on rehabilitation or the surgical procedures the patient may need but to facilitate and ensure there is excellent communication between the different specialities and services that a person with major trauma may need. The key worker is perhaps more important in complex trauma to ensure there is joined up collaborative working.
16	BSRM; British Society of Rehabilitation Medicine	Full	General	Section 10.1-2	Rehabilitation Medicine consultants would help offer this overview.	Thank you for your comment. The guideline development group agree that the trauma rehabilitation services have an important role to play in providing continuity of care and have added this to recommendation 1.6.2.
17	BSRM; British Society of Rehabilitation Medicine	Full	General	Section 10.4	This section should refer to the UKROC programme, as a major nationally funded programme. More information can be obtained from the UKROC website or by contacting the UKROC team http://www.kcl.ac.uk/lsm/research/divisions/cicelysaunders/research/studies/ukroc/index.aspx	Thank you for your comment. Chapter 10 refers to the evidence review and results on the benefit of multidisciplinary trauma wards care versus specialist ward care. The UKROC programme was not identified and as such is not referenced.
18	BSRM; British Society of Rehabilitation Medicine	Full	General	Section 13	The audit section should include the HQIP National Clinical Audit for Specialist Rehabilitation following Major Trauma described above. This 3-year audit represents a collaboration between UKROC, TARN and King's College London. It started in June 2015. Further information can be obtained from its lead investigator	Thank you for your comment. This has been added into the linking to evidence section 13.7.
19	BSRM; British Society of Rehabilitation Medicine	Full	General		We welcome the references to the need for further research on the benefits and various models of rehabilitation after trauma. There does however need to be a critical mass of rehabilitation professionals and services available to set up useful studies. Unless guidelines such as these refer to such professionals as existing (that is Rehabilitation Medicine consultants), acknowledging that they are one of the many key professionals	Thank you for your comment. The guideline development group agree that further research is needed in this area. For your information NICE has recently been commissioned by NHS England to develop guidelines on the following: • Rehabilitation for chronic



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					involved in major trauma pathways, the situation will not improve	neurological disorders including traumatic brain injury Rehabilitation after traumatic injury Rehabilitation in people with severe and enduring mental illness
20	BSRM; British Society of Rehabilitation Medicine	Full	General		As noted above, the BSRM has published Core Standards for specialist rehabilitation in the trauma pathway. We are very concerned that these have been overlooked and have not been referred to in the discussion or references. The standards are freely available on the BSRM website (http://www.bsrm.co.uk/publications/BSRM%20Core%20standards%20for%20Major%20Trauma%2024-10-13-NewLogo-chk-1-12-14.pdf)	Thank you for your comment. The guideline development group prioritised an evidence review identifying barriers to providing early rehabilitation assessment (chapter 16). The guideline development group was surprised at the paucity of evidence and made a research recommendation. The linking evidence to recommendation section discusses the general principles and importance of early specialist rehabilitation for this population but agreed that they were unable to single out a specific set of standards for referral. For your information NICE has recently been commissioned by NHS England to develop guidelines on the following: • Rehabilitation for chronic neurological disorders including traumatic brain injury • Rehabilitation after traumatic injury • Rehabilitation in people with severe and enduring mental illness
21	BSRM; British Society of Rehabilitation Medicine	Full	General		While we agree that more research is needed, we would also like to point out that there is already a significant body of evidence that rehabilitation is both effective and cost efficient. This includes evidence from Cochrane reviews (eg Multidisciplinary rehabilitation following Acquired Brain Injury (Turner-Stokes et al) and from UKROC. In particular recent analyses from UKROC have shown that specialist in patient rehabilitation can significantly reduce the	Thank you for your comment. The guideline development group agree that rehabilitation is a key part of the trauma pathway. Rehabilitation was one part of the scope and the guideline development group prioritised an evidence review identifying barriers to providing early rehabilitation assessment (chapter 16). Therefore the clinical and cost effectiveness of



ID	Stakeholder	Document	Page No	Line No	Comments	Developer's response
	Stakenolder	Document	Tage No	Line No	Please insert each new comment in a new row costs of care after discharge to the extent that any cost of the inpatient episode can be recouped within a matter of months even for those with relatively moderate disability. Figures from the database in general are submitted and currently under review by the NIHR. Figures specifically for trauma patients are in the process of preparation for publication, but are available from the UKROC team if this would be helpful.	Please respond to each comment rehabilitation versus no rehabilitation or late rehabilitation was not looked at. The guideline development group was surprised at the paucity of evidence and made a research recommendation. For your information NICE has recently been commissioned by NHS England to develop guidelines on the following: • Rehabilitation for chronic neurological disorders including traumatic brain injury • Rehabilitation after traumatic injury • Rehabilitation in people with severe and enduring mental illness
102	Chief Fire Officers Association	Short	General		The conveyance and transference of patients does not currently fall under the remit of the Fire and Rescue Service, however there is a scheme being evaluated by Lincolnshire Fire and Rescue Service called the Joint Ambulance Conveyance Project, where Firefighters attend medical emergencies in an ambulance and then have the option to convey patients to hospital, under the guidance of the attending clinician. There is also scope for the Fire and Rescue Service to be more involved within pre-hospital triage.	Thank you for your comment.
103	Chief Fire Officers Association	Short	4		Question 1: The Fire and Rescue Service already carry out a triage process within the pre-hospital setting. However there is no real national standard at this time within the Fire and Rescue Service and the triage process may differ in some instances to the Ambulance Service.	Thank you for your comment. NICE guidelines make recommendations for people receiving care in the NHS and it is hoped that organisations providing care for similar or the same population would adopt this guidance. The Major Trauma: service delivery guidance makes a recommendation that all staff should be competent and trained to carry out the interventions they are required to give.
104	Chief Fire Officers Association	Short	4		Question 2: The recognition of a national standard for pre- hospital triage and the appropriate guidance on the role of the Fire and Rescue Service within this area, would help greatly. It	Thank you for your comment. NICE guidelines make recommendations for people receiving care in the NHS and it is



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	Cianonolaei	Dodamont	1 ago 110	Zillo No	Please insert each new comment in a new row would also have the benefit of assisting in patient care and possible outcome at a very early stage of their care pathway; as	Please respond to each comment hoped that organisations providing care for similar or the same population would adopt
					well as improving the overall management of resources at an incident in the pre-hospital setting.	this guidance. The Major Trauma: service delivery guidance makes a recommendation that all staff should be competent and trained to carry out the interventions they are required to give.
105	Department of Health	General	General		Thank you for the opportunity to comment on the draft for the above clinical guideline.	Thank you for your comment.
					I wish to confirm that the Department of Health has no substantive comments to make, regarding this consultation.	
106	Faculty of Pain Medicine	General	General		The FICM Board have reviewed the consultation on Major Trauma Services and made the comments below:	Thank you for your comment. We have referred to the document in the context section of the NICE guideline.
					The consultation does not make any mention of critical care. It was felt this should be considered as part of a major trauma service. The Board felt there should be a reference to the need for a critical care unit that meets the D16 service specification.	· ·
80	Hywel Dda University Health Board	Short	5	13	1.2.4/1.5.1 - A major barrier to this is referral pathways. Our region (South Wales) does not have a trauma network. This severely limits the ability to transfer onwards after initial stabilisation. I understand that an excellent example of referral pathway exists between Royal Stoke University Hospital (MTC) and trauma units in North Wales and the north of the West Midlands Trauma Network. Referral is direct to TTL in ED. A recommendation regarding how patients are referred to MTCs would be helpful – specifically a single point of contact rather than the need to ring around in patient specialty teams.	Thank you for your comment. Recommendation 1.5.1 is directed at the ambulance and hospital trust boards, it is anticipated they would work together to develop a protocol that would facilitate transfer within a region or a trauma network. The protocol would include the specifics of referral to a MTC that are appropriate to the region.
81	Hywel Dda University Health Board	Short	7	11	As above [see comment ID80]	Thank you for your comment which refers to the major trauma clinical guideline. The recommendation specifies suspected bleeding and the linking evidence to recommendation section has been edited to incorporate your point.
22	Leeds Teaching Hospital NHS Trust (Leeds Major	Full	143		We would suggest that the recommendation for IR in solid organ injury should be stronger eg "Use IR techniques in patients with	Thank you for your comment. The guideline development group extensively



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	Trauma Centre) & West Yorkshire Major Trauma Network (WYMTN				active arterial bleeding in solid organ trauma, or in conjunction with open surgery if the patient requires a laparotomy for other injuries"	discussed the available evidence, including the quality, for all of the recommendations on interventional radiology and their discussions are captured in the 'Linking evidence to recommendation' section11.5.6. The guideline development group were in clear agreement about the benefits, harms and cost-effectiveness and also took into account the current trauma service configuration and major trauma service specifications. Drawing on the evidence and their experience appropriate recommendations were made for interventional radiology and this is reflected in the strength of the recommendations. For more information on the wording of recommendations see Developing NICE guidelines: the manual (chapter 9).
23	Leeds Teaching Hospital NHS Trust (Leeds Major Trauma Centre) & West Yorkshire Major Trauma Network (WYMTN)	Full	168	14	The guidance recommends that within an MTC access to IR and open surgery should be 'equal'. The guidance recognises that this objective will be challenging but suggests that the cost of a change in practice will be minimal if 'other staff' are used to prepare the IR suite prior to the team's arrival. This seems optimistic - real life experience in the ED suggests that available resource will be sufficiently occupied dealing with the patient who is in need of intervention.	Thank you for your comment. The guideline development group extensively discussed the available evidence, including the quality, for all of the recommendations on interventional radiology and their discussions are captured in the 'Major trauma - Linking evidence to recommendation' section 11.5.6. The guideline development group were in clear agreement about the benefits, harms and cost-effectiveness and also took into account the current trauma service configuration and major trauma service specifications. Drawing on the evidence and their experience appropriate recommendations were made for equal access to interventional radiology. The guideline development group agreed that equal access will be initially challenging and that re-allocating staffing resources to prepare the suite may be a feasible approach to setting up the IR suite



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						but recognised that may not always be possible. We have identified this recommendation as having an impact on services (see appendix The Major Trauma: service delivery guideline) and the Resource Impact Assessment team at NICE is responsible for identifying the resource impact that may occur as a result of commissioning and implementing services in line with NICE guidance and quality standards.
24	National Bereavement Alliance/Childhood Bereavement Network	Full	16		[line 1-26] It is not clear whether the guideline includes services provided if the patient dies. If this is excluded, then this should be explicit and the guideline should clearly signpost to alternative guidance covering these services. If this is not excluded, then the guideline needs significant additions in relation to the provision of information and support to bereaved relatives.	Thank you for your comment. We have added a cross-reference to the NICE guidelines on 'Care of the dying adult' (due to be published December 2015), 'End of life care for infants, children and young people' (due to be published 2016) and Improving supportive and palliative care in adults (update) (due to be published January 2018) A clinical guideline is in development on End of life care for infants, children and young people (due to be published December 2016)
25	National Bereavement Alliance/Childhood Bereavement Network	Full	129		[p129-133] The section on information and support to families and carers does not include guidance on the sort of support that will be needed if the patient dies. If this is a deliberate exclusion, then it would be helpful to make this explicit, and state somewhere in the guideline which alternative NICE guidance covers this. If this is not deliberate, then the guideline will need to be expanded to include this.	Thank you for your comment. We have added a cross-reference to the NICE guidelines on guidelines on 'Care of the dying adult' (due to be published December 2015), 'End of life care for infants, children and young people' (due to be published 2016) and Improving supportive and palliative care in adults (update) (due to be published January 2018)
82	NHS England	Short	6	1	It should not be the responsibility of the paramedics to determine the level of response at the TU or MTC. The situation is different if there is a pre-hospital doctor in attendance. All MTCs and TUs within a Major Trauma Network should have	Thank you for your comment which refers to the major trauma clinical guideline. This has been removed from the recommendation.



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	NII 0 E 1 1	01 1		4.4	agreed written guidelines for the activation of the Trauma Team.	
83	NHS England	Short	6	11	determine the response in the Emergency Department according to agreed and written local guidelines. If you do not include this, you loose resilience in the system, leaving it to individuals to decide the level of response and greatly increasing the variation.	Thank you for your comment. The recommendation has been edited in accordance with your suggestion
84	NHS England	Short	7	11	Should the statement also include comment on standardisation of transfer equipment across the Major Trauma Network?	Thank you for your comment. The guideline development group did not address specifically the question about which equipment should be used and were unable to recommend exactly what transfer equipment should be used.
85	NHS England	Short	8	5	Should this specify that all major trauma patients over 65 years should have a consultant review by a HCOP within 72 hours of admission (similar standard to that set for hip fracture care)? If you want to push up standards, this will do it.	Thank you for your comment. Specific reference to the acute specialist services for the elderly has been added to recommendation 1.6.2 making it clear this is an essential part of a trauma service.
86	NHS England	Short	8	23	Consider adding an extra point, 'provide a point of contact for the patient following discharge from the major trauma service"	Thank you for your comment. The guideline development group discussed this and noted the recommendation was directed at highlighting the importance of the key worker when the patient was in hospital but agreed that this contact could be maintained post discharge. This has been added to the LETR section.
87	NHS England	Short	9	14	Please consider an extra point (as the evidence for the effectiveness of good audit is fully established). "All Major Trauma Centres and Trauma Units within a Major Trauma Network must submit data to TARN with regular review of case ascertainment and data quality". This would be so helpful.	Thank you for your comment. The guideline development group think this is implicit in section 1.8.
88	NHS England	Full	16	31	This list could be strengthened by the addition of links to other related NICE Quality Standards such NICE Quality Standards 86 and 16 (Falls in older people: assessment after a fall and preventing further falls and hip fracture respectively)	Thank you for your comment. Reference to the two NICE quality standards has been made here.
89	NHS England	Full	16	34	Typo, should read Osteoporosis	Thank you for your comment. This has been corrected.
Tha	NIHR NETSCC	Full	41	Section 5.2	SERVICE RESEARCH RECOMMENDATIONS: We agree those stated are important service research recommendations. and that 1-3 have important service implications. In addition we recommend further research is undertaken on the clinical and	Thank you for your comment. The guideline development group agree this is an interesting question but research recommendations are based on key



ID	Stakeholder	Document	Page No	Line No	Comments	Developer's response
			. age		Please insert each new comment in a new row cost effectiveness and acceptability to patients and families of repatriation of patients /step down from the major trauma service once the most acute phase is completed to the secondary care and community services close to home that will be bypassed in the centralised system.	Please respond to each comment uncertainties identified through the evidence review that are likely to inform decision making but the GDG did not identify this as a topic for such a recommendation.
27	NIHR NETSCC	Full	41	Section 5.2	Arising from previous research: 06/303/20: CRASH2 Trial, a large randomised placebo controlled trial among trauma patients with significant haemorrhage of the effects of an antifibrinolytic treatment on death and transfusion requirement. Published 2013 Vol 17 (10) 09/22/165: Development and validation of a risk score for trauma patients with haemorrhage The CRASH-2 score. Published 2013 Vol 17(24) 07/37/29: Risk Adjustment In Neurocritical care (RAIN): prospective validation of risk prediction models for adult patients with acute traumatic brain injury to use to evaluate the optimum location and comparative costs of neurocritical care. Published 2013 Vol 17(23) Recommendations for future research Recommendation 4: Further research is required to better understand the alternative pathways of care for patients following acute TBI and the impact of these on costs and outcomes	Thank you for your comment. Thank you for your comment. The guideline development group agree this is an interesting question but research recommendations can only be made based on the review question that was specified by the guideline development group and your question on acute TBI falls outside of this.
28	NIHR NETSCC	Full	41	Section 5.2	Arising from previois research: Alistair Pickering-09/1001/37: A Systematic Review of clinical outcome and cost effectiveness comparing a policy of triage and direct transfer to specialist care centres with delivery to the nearest local hospital. Published Jan 2014. http://www.nets.nihr.ac.uk/projects/hsdr/09100137 8.2.4 Impact of Emergency Services Reconfiguration 1. An evaluation of the acceptance of risk by service users in different geographical settings for the emergency care of major trauma, head injury and stroke.	Thank you for your comment. The systematic review by Pickering includes a question to compare a policy of triage and direct transfer to specialist care centres compared with initial transfer to the local hospital. This review did not meet the inclusion criteria for any of the protocols for this guideline but the included studies were checked to see if they were relevant but none met the inclusion criteria.



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qualitative research interviewing service users within different geaphical regions. This output may influence some element of service organisation but there is considerable crossover with the NIHR Policy Research Programme and may be better suited to this stream. 2. An assessment of the impact of Clinical Commissioning Boards on key performance indicators for the three specified clinical conditions. a. An outcomes based review on the effect of the new infrastructure on specialist and non-specialist centre services, as measured by national audit databases, such as TARN and the Sentinel stroke audit, standard process and outcome measures. The assertion is made specifically and more generally throughout the document that patients with major trauma are best treated at a major trauma centre. This does not take into account local arrangements that networks have successfully developed over the last few years to manage specific issues such as rurality and faitone for patients & relatives from the MTC. I am concerned that there is a risk of unnecessary transfers and deskilling of staff in trauma units. This development group extensively discussed the available evidence, includin the quality, for all of the recommendation sections throughout the guideline. The guideline development group extensively developed over the last few years to manage specific issues and their discussions are captured in the "Linking evidence to recommendation" sections throughout the guideline. The guideline development group were in clear that there is a risk of unnecessary transfers and deskilling of staff in trauma units. Description of the research programment and their discussions are captured in the "Linking evidence to recommendation" sections throughout the guideline. The guideline development group were in clear the programment of the quality for all of the recommendation sections throughout the guideline. The guideline development group were in clear the programment of the programment of the programment of the programment of the p
interventions in the guideline and this is reflected in the strength of the recommendations. For more information of the wording of recommendations see Developing NICE guidelines: the manual (chapter 9).
the wording of recommendations see Developing NICE guidelines: the manual



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						that the optimal destination for major trauma patients should be a major trauma centre and a patient should only be diverted to a trauma unit for a lifesaving intervention and then transferred to a major trauma centre for definitive treatment. In addition recommendation 1.2.1 clearly states that the optimal destination for a patient with major trauma is a MTC but this may vary due to specific geographic or patient characteristics.
30	North Devon District Hospital	Full	General	General	Related to point 1, there is no specification of what constitutes "major trauma (eg ISS > 16).	Thank you for your comment. The guideline development group defined major trauma as a potentially life threatening injury or injuries with the potential to cause the loss of a major limb. The term is defined in the glossary
31	Royal College of Emergency Medicine	Full	143		We would suggest that the recommendation for IR in solid organ injury should be stronger eg "Use IR techniques in patients with active arterial bleeding in solid organ trauma, or in conjunction with open surgery if the patient requires a laparotomy for other injuries"	Thank you for your comment. The guideline development group extensively discussed the available evidence, including the quality, for all of the recommendations on interventional radiology and their discussions are captured in the 'Linking evidence to recommendation' section11.5.6. The guideline development group were in clear agreement about the benefits, harms and cost-effectiveness and also took into account the current trauma service configuration and major trauma service specifications. Drawing on the evidence and their experience appropriate recommendations were made for interventional radiology and this is reflected in the strength of the recommendations. For more information on the wording of recommendations see Developing NICE guidelines: the manual
32	Royal College of Emergency Medicine	Full	168	14	The guidance recommends that within an MTC access to IR and open surgery should be 'equal'. The guidance recognises that	Thank you for your comment. The guideline development group extensively



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					this objective will be challenging but suggests that the cost of a change in practice will be minimal if 'other staff' are used to prepare the IR suite prior to the team's arrival. This seems optimistic - real life experience in the ED suggests that available resource will be sufficiently occupied dealing with the patient who is in need of intervention.	discussed the available evidence, including the quality, for all of the recommendations on interventional radiology and their discussions are captured in the 'Major trauma - Linking evidence to recommendation' section 11.5.6. The guideline development group were in clear agreement about the benefits, harms and cost-effectiveness and also took into account the current trauma service configuration and major trauma service specifications. Drawing on the evidence and their experience appropriate recommendations were made for equal access to interventional radiology. The guideline development group agreed that equal access will be initially challenging and that re-allocating staffing resources to prepare the suite may be a feasible approach to setting up the IR suite but recognised that may not always be possible.
						having an impact on services (see appendix The Major Trauma: service delivery guideline) and the Resource Impact Assessment team at NICE is responsible for identifying the resource impact that may occur as a result of commissioning and implementing services in line with NICE guidance and quality standards.
36	Royal College of Nursing	General	General	General	The Royal College (RCN) welcomes proposals to develop this guideline. The RCN invited members who work in the trauma and orthopaedic settings to review the consultation document. The comments below reflect the views of our members.	Thank you for your comment.
37	Royal College of Nursing	Short	5	27	Could add 'analgesia given' as this may be missed	Thank you for your comment which refers to the Major trauma clinical guideline. The wording 'treatment given' includes



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						analgesia. The list of examples would be
						very long and the guideline development group preferred the use of a general term
						rather than examples or trying to produce
						an exhaustive list.
38	Royal College of Nursing	Short	10	3	Addition of end of life care and consideration of patient's spiritual	Thank you for your comment. We have
					and religious needs.	added a cross-reference to the NICE
						guidelines on 'Care of the dying adult' (due
						to be published December 2015), 'End of
						life care for infants, children and young
						people' (due to be published 2016) and Improving supportive and palliative care in
						adults (update) (due to be published
						January 2018)
39	Royal College of Nursing	Short	13	1	Interventional radiology would need to be a seven day service to	Thank you for your comment. The guideline
					enable effective implementation	on major trauma service delivery makes
						recommendations on the organisation of
						trauma services including consultant led care 24/7
						care 24/7
40	Royal College of Nursing	Short	13	14	Our members consider that the area that would have biggest	Thank you for your comment. The guideline
	, , ,				impact on service would be seven day working for relevant staff	on major trauma service delivery makes
					including medical and radiology staff.	recommendations on the organisation of
						trauma services including consultant led
						care 24/7.
41	Royal College of Nursing	Short	14	16	More resources would be needed to enable effective	The Resource Impact Assessment team at
					implementation.	NICE is responsible for identifying the
						resource impact that may occur as a result
						of commissioning and implementing
						services in line with NICE guidance and quality standards.
42	Royal College of Nursing	Short	15	6	Early rehabilitation may be difficult to achieve at times due to	Thank you for your comment. We have not
					lack of beds or staff, for example spinal injury or head injury	looked at the effectiveness of early
					beds	rehabilitation as an intervention. However
						we did look at the barriers to
						implementation of early rehabilitation and
						have made a research recommendation on this given the paucity of evidence.
						uns given the paucity of evidence.



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						The Resource Impact Assessment team at NICE is responsible for identifying the resource impact that may occur as a result of commissioning and implementing services in line with NICE guidance and quality standards.
						For your information NICE has recently been commissioned by NHS England to develop guidelines on the following: • Rehabilitation for chronic neurological disorders including traumatic brain injury • Rehabilitation after traumatic injury • Rehabilitation in people with severe and enduring mental illness
43	Royal College of Nursing	Short	15	8	Potential shortages of beds in specialist wards alongside access to other multidisciplinary health care professionals when required, e.g. 7 day working for social workers, occupational therapists etc	Thank you for your comment. The guideline on major trauma service delivery makes recommendations on the organisation of trauma services including consultant led care 24/7. Impact Assessment team at NICE is responsible for identifying the resource impact that may occur as a result of commissioning and implementing services in line with NICE guidance and quality standards.
44	Royal College of Nursing	Short	15	26	A dedicated transfer team would all on-site trauma staff to remain in department allowing a clinically effective workforce at all times for trauma.	Thank you for your comment. Due to the lack of evidence the guideline development group were unable to make a recommendation on transfer teams and made a research recommendation.
107	Royal College of Paediatrics and Child Health	General	General		Thank you for inviting the Royal College of Paediatrics and Child Health to comment on the NICE Draft guideline on <i>Major trauma services</i> . We have not received any responses for this consultation.	Thank you for your comment.
90	Royal College of Surgeons of Edinburgh	Full	41	19	'as soon as possible and within 30 minutes of the initial call to the emergency services'	Thank you for your comment. This recommendation has been edited to 45



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					This target is only achieved by a minority of urban advanced prehospital services and rarely in rural areas. It might also drive the conduct of pre-hospital anaesthesia outside well governanced physician-paramedic teams and reduce patient safety. Alternatives might be: ' as soon as safely possible after the onset of airway compromise' 'As far as possible this should be achieved by a physician led team at the scene and not by diverting to a trauma unit.'	minutes. The guideline development group confirmed that the recommendation should state the time within which RSI should be performed and not for example the time of arrival of an enhanced care team. The former provides clearer guidance and is auditable. Focusing the recommendation on when RSI should be delivered also emphasises the importance of the early identification of the need for this intervention and to ensure an enhanced care team is alerted. The recommendations state that if the journey time to the major trauma centre is longer than 60 minutes then divert to a trauma unit. We have edited this recommendation to make it clearer that the only reason to divert to a trauma unit is if a patent airway cannot be maintained.
91	Royal College of Surgeons of Edinburgh	Full	50	9	The term 'endotracheal' is used throughout the guideline. The term 'tracheal' is more up to date.	Thank you for your comment. This change has been made to the major trauma and major trauma: service delivery guidelines.
92	Royal College of Surgeons of Edinburgh	Full	50	18	To prevent ambiguity 'is 60 minutes or less' rather than 'less than 60 minutes' which is less precise and might be less open to confusion.	Thank you for your comment this has been edited. This is in the major trauma guideline.
93	Royal College of Surgeons of Edinburgh	Full	50	32	Although mentioned later in the text emphasis that open thoracostomy should only be performed in patients with positive pressure ventilation might be necessary at this point in the text too	Thank you for your comment. This recommendation has been edited. This is in the major trauma guideline.
94	Royal College of Surgeons of Edinburgh	Full	57	18	The term 'laryngeal mask' is used to describe supraglottic airways. There is reasonable evidence that second generation supraglottic devices are more effective than first generation devices – specifying the use of 'second generation supraglottic devices' may improve safety / effectiveness.	Thank you for your comment. A reference to second generation devices has been made in the linking evidence to recommendation section. This is in the major trauma guideline.
95	Royal College of Surgeons of Edinburgh	Full	59	Table 9	Thiopentone is currently very rarely used in pre-hospital RSI and suxamethonium is also less commonly used.	Thank you for your comment. This has been amended and now includes Ketamine



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						as the anaesthetic and Rocuronium as the muscle relaxant.
96	Royal College of Surgeons of Edinburgh	Full	62	Section 6.6	This section suggests that doctors or paramedics with specific training who hold this competency. We are unaware that there	Thank you for your comment. The linking evidence to recommendation section describes current UK practice and has
					are paramedics currently operating in the UK with specific training and competency meeting this description.	been amended where it was implied that paramedics can currently undertake RSI. We have not made any recommendations about who should undertake this procedure.
97	Royal College of Surgeons of Edinburgh	Full	73	Table 17	Open thoracostomy involves blunt dissection into the pleural cavity – no instrument to perform this is included in the costing for this procedure.	Thank you for your comment. The costing for the equipment required for an open thoracostomy in table 17 includes gloves, a cleansing wipe, and a scalpel.
98	Royal College of Surgeons of Edinburgh	Full	Costings tables		Costing alternatives are given for a number of pre-hospital procedures. Most of these procedures would however be carried out on arrival in hospital if they were not done in the pre-hospital phase of care.	Thank you for your comment. We believe you may be referring to the major trauma guideline as there are no costing tables included in the service delivery guideline. It is mentioned in the LETRs for some of the major trauma reviews that the costs may apply later in hospital if the intervention did not already take place pre-hospital. The costs are illustrative to show the difference in costs between the different interventions, and would apply regardless of setting (although there may be some differences in costs in the different settings with different staff for example).
45	Royal College of Surgeons of England	Full	General	General	The Royal College of Surgeons of England is about to publish a document outlining a framework for delivering a sustainable and highly skilled surgical workforce for the major trauma service. This work will facilitate the implementation of the guidelines set out in the draft document under consideration by ensuring that the appropriate skills are available at each level of the major trauma service.	Thank you for your comment. This information has been passed on to the implementation team at NICE
46	Royal College of Surgeons of England	Short	11	17	[p17-24] These guidelines would be strengthened by reference to the healthcare professional being able to demonstrate competency in the required interventions. This is at present very hard to measure and so would benefit from clarifying.	Thank you for your comment. There is a recommendation that all staff have the training and skills to deliver, safely and effectively, the interventions specified in the guideline



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101	Salford Royal NHS Foundation Trust	General	General		Service Delivery Documentation detail was helpful but felt to be generally over prescriptive as good documentation is required for any patient treated within the NHS. Training to appropriate standards- but to what standard and core skill set required have not been described.	Thank you for your comment. Documentation was highlighted by stakeholders as an important topic for inclusion in the scope for this guideline. The guideline development group agree that good documentation is required for any patient but noted that this is not always achieved. The guideline development group did not agree that the recommendations were over prescriptive and all the recommendations were addressing important areas that were noted as often neglected in the patient notes. The guideline development group were keen to make a recommendation that all healthcare professionals should be trained in the care they provide but it was outside the scope of the guideline to provide the detail of the training for each intervention and for each profession. The standard and core skill set and specific skills are areas that professional colleges address.



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99	Sheffield Teaching Hospital NHS Foundation Trust	Short	8	1-11, 14-23	We quite recognise the need for the roles and services described here, and are in the process of writing a business case for these. Affordability however needs to be considered and we have received no additional funding from NHS England to help set up these services.	Thank you for your comment. The guideline development group extensively discussed the available evidence, including the quality, for all of the recommendations and their discussions are captured in the 'Linking evidence to recommendation' sections throughout the guideline. The guideline development group were in clear agreement about the benefits, harms and cost-effectiveness and also took into account the current trauma service configuration and major trauma service specifications. NICE make recommendations that are cost effective, even if it would have a cost impact to implement for the population as a whole. The Resource Impact Assessment team at NICE is responsible for identifying the resource impact that may occur as a result of commissioning and implementing services in line with NICE guidance and quality standards.
100	Sheffield Teaching Hospital NHS Foundation Trust	Short	9	5-10	Our MTC works within several networks – Yorkshire and the Humber, East Midlands and South Yorkshire, making standardisation of documentation very challenging. Do we need national standardisation?	Thank you for your comment. The guideline development group agree that documentation should be standardised within networks and across networks to facilitate the safe transfer of patient care.
47	South Western Ambulance Service NHS Foundation Trust	General	General		Thanks you for the opportunity to comment on these guidelines. These are in addition to the comments that will be supplied by AACE	Thank you for your comment.
48	South Western Ambulance Service NHS Foundation Trust	Short	15	25 on	There has been much discussion of retrieval teams from MTCs in our region but there is the inevitable risk of adding delay whilst the team mobilises to the TU as mentioned in the document. Retrieval systems work well for tertiary children's referrals, even over a wide geographical area, principally because most transfers are urgent but not time-critical; secondary care centres still transfer (very effectively) any time-critical children rather than wait for retrieval. Of key importance to TUs is the ability to maintain a viable transfer service for specialist ICU transfers,	Thank you for your comment. Due to the lack of evidence the guideline development group were unable to make a recommendation on transfer teams and made a research recommendation.



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					repatriations and non-trauma transfers. In our centre, less than 20% of transfers are for major trauma. If were to rely on a service covering the whole region we risk diluting the experience available. It also becomes more difficult to justify maintaining transfer equipment when the number of patients transferred falls below a critical mass. This will compromise the timeliness and effectiveness of care provided to patients requiring non-trauma transfer. Unless the service is able to guarantee a full and comprehensive transfer service for all centres in the region to other centres as well as the local MTC e.g.national liver and burns units, ICU repatriations around the UK for example, their role may be relatively limited and may have a detrimental impact. The emphasis could be on establishing a core of consultant-level specialists within each centre who are capable of providing timely advanced-level transfer services to all	
49	Stockport NHS Foundation Trust	Short	5	27	patients from that hospital, not just major trauma patients. Needs adding analgesia given as maybe missed	Thank you for your comment which refers to the major trauma clinical guideline. The wording 'treatment given' includes analgesia. The list of examples would be very long and the guideline development group preferred the use of a general term rather than examples or trying to produce an exhaustive list.
50	Stockport NHS Foundation Trust	Short	7	20	Do we need to add in they need to be stable before transfer so 30 minutes or when stable	Thank you for your comment. Section 1.2 makes it clear that patients are diverted to a trauma unit for a life-saving intervention, when this has been completed the patient should be transferred to a MTC.
51	Stockport NHS Foundation Trust	Short	10		There is no mention of end of life and access to relevant religious care	Thank you for your comment. We have added a cross-reference to the NICE guidelines on 'Care of the dying adult' (due to be published December 2015), 'End of life care for infants, children and young people' (due to be published 2016) and Improving supportive and palliative care in adults (update) (due to be published January 2018)
52	Stockport NHS Foundation Trust	Short	13	1	Interventional radiology would need to be a seven day service	Thank you for your commentThe guideline on major trauma service delivery



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						makes recommendations on the organisation of trauma services including consultant led care 24/7
53	Stockport NHS Foundation Trust	Short	14	14	Biggest impact would be seven day working for medical staff and radiology staff	Thank you for your comment. The guideline on major trauma service delivery makes recommendations on the organisation of trauma services including consultant led care 24/7
54	Stockport NHS Foundation Trust	Short	14	16	Need more resources	The Resource Impact Assessment team at NICE is responsible for identifying the resource impact that may occur as a result of commissioning and implementing services in line with NICE guidance and quality standards.
55	Stockport NHS Foundation Trust	Short	15	6	Early rehabilitation would be difficult at times due to lack of beds in busy times for example spinal injury or head injury beds	Thank you for your comment. We have not looked at the effectiveness of early rehabilitation as an intervention. However we did look at the barriers to implementation of early rehabilitation and have made a research recommendation on this given the paucity of evidence. The Resource Impact Assessment team at NICE is responsible for identifying the resource impact that may occur as a result of commissioning and implementing services in line with NICE guidance and quality standards. For your information NICE has recently been commissioned by NHS England to develop guidelines on the following: Rehabilitation for chronic neurological disorders including traumatic brain injury Rehabilitation after traumatic injury Rehabilitation in people with



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						severe and enduring mental illness
56	Stockport NHS Foundation Trust	Short	15	8	Need more beds and 7 day working for social workers	Thank you for your comment. The NICE guidelines on Acute Medical Emergencies and Diagnostic Services both currently in development are covering seven day working The Resource Impact Assessment team at NICE is responsible for identifying the resource impact that may occur as a result of commissioning and implementing services in line with NICE guidance and quality standards.
57	Stockport NHS Foundation Trust	Short	15	26	A dedicated transfer team would take pressure off the trauma staff as they would not have to go off site meaning more staff available for the other major traumas	Thank you for your comment. Due to the lack of evidence the guideline development group were unable to make a recommendation on transfer teams and made a research recommendation.
67	The Emergency Medical Retrieval & Transfer Service Cymru	Short	4	1.1.1	Standard indications for RSI included here – but now mention of expectant clinical course or as part of resuscitation strategy.	Thank you for your comment which refers to the major trauma clinical guideline. The guideline development group reviewed the most clinically and cost effective way of managing the airway and compared different types of interventions, the review did support making recommendations on the expectant clinical course or as part of resuscitation strategy.
68	The Emergency Medical Retrieval & Transfer Service Cymru	Short	4	1.1.3	If RSI not possible then take patient to MTC if within 60mins BUT should include if adequate oxygenation and ventilation can be maintained (concerned that ambulance service in absence of pre-hospital enhanced care will transfer head injured patients without protected airway over longer distance rather than pit stop at a TU – clearly not an issue if enhanced care present).	Thank you for your comment. This recommendation has been edited to make it clear to divert to a trauma unit if a patent airway cannot be maintained.
69	The Emergency Medical Retrieval & Transfer Service Cymru	Short	5	1.2.2	Should mention that eFAST of chest best carried out pre- intubation to pre-empt decision to decompress chest.	Thank you for your comment which refers to the major trauma clinical guideline. The guideline development group were in clear agreement about the benefits, harms and cost-effectiveness of performing pre-hospital eFAST. Drawing on the evidence and their experience appropriate



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						recommendations were made for eFAST and this is reflected in the strength of the recommendations (see Chapter 7.2 Major trauma guideline). For more information on the wording of recommendations see Developing NICE guidelines: the manual (chapter 9). There was no evidence to support a recommendation on using eFAST to pre-empt the decision to decompress the chest. Clinical signs and symptoms are sufficient to identify a tensions pneumothorax. Please see the linking evidence to recommendations section of the major trauma guideline (section 7.2)
70	The Emergency Medical Retrieval & Transfer Service Cymru	Short	5	1.2.7	Surely a three way occlusive dressing or better still a dedicated chest seal would be better for an open pneumothorax?	Thank you for your comment which refers to the major trauma clinical guideline. In the absence of evidence the guideline development group were not able to recommend any particular type of dressing over another and felt that the simplicity and cost effectiveness of using a simple airtight occlusive dressing (whilst anticipating and checking for the development of a tension pneumothorax) would promote rapid movement towards transporting the patient to an appropriate hospital. The linking evidence to recommendation has been edited to make this point clearer (see chapter 7.4 in the Major trauma guideline)
71	The Emergency Medical Retrieval & Transfer Service Cymru	Short	7	1.4.3	Concern here has come from overuse of the pelvic binder but decision should be made on mechanism only as physiology may not be significantly deranged and we don't examine for a pelvic fracture – noting that in patients with an altered mental status that will be difficult. Whilst I understand the potential complications of the device, if properly applied and the pelvis appropriately imaged then the pelvis can be 'cleared quickly without pressure sores developing etc. The danger of being too restrictive in the indication will mean that the device will not be applied when it is indicated.	Thank you for your comment which refers to the major trauma clinical guideline. The guideline development group disagrees that a pelvic binder should be applied for all patients suspected of having a pelvic fracture based on mechanism alone. The guideline development group confirmed that a pelvic binder should only be applied if there is suspected active bleeding (the recommendation has been edited) from a



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					Trease insert each new comment in a new row	pelvic fracture following blunt high-energy trauma and not all suspected pelvic fractures. The decision is not based on mechanism alone. The justification for this recommendation is in the linking evidence to recommendation section that explains that the only function of a pelvic binder is to control bleeding and that the over-use of pelvic binders may not cause any harm to the individual patient, but that the NHS would incur the costs of equipment, possible transfer to inappropriate locations or unnecessary investigations with no
72	The Emergency Medical Retrieval & Transfer Service Cymru	Short	7	1.4.6	Should make a bigger deal of TXA in suspected bleeding as it is this group that is often gets missed in NOT the obviously bleeding trauma patient.	corresponding benefit in outcome. Thank you for your comment which refers to the major trauma clinical guideline. The recommendation specifies suspected bleeding and the linking evidence to recommendation section has been edited to incorporate your point.
73	The Emergency Medical Retrieval & Transfer Service Cymru	Short	9	1.4.21	This is a real shift as to date we have maintained a radial pulse not central in blunt trauma certainly with concerns that any less than this may cause hypo perfusion of the brain, heart and kidneys. Hypotension is still bad and if we are transporting the patient for up to 60mins to an MTC that's a long time in the absence of blood products	Thank you for your comment which refers to the major trauma guideline. The guideline development group disagree and are clear that a central pulse (carotid or femoral) should be used. This is explained in the linking evidence to recommendation section 10.7.6. The GDG discussed the various indicators of shock, but felt that a simple assessment tool, such as assessment of central pulse (carotid or femoral), would be more reliable for the pre-hospital clinician and allow patients to be transported quicker for definitive care. The GDG also discussed the measurement of radial pulse, but felt a central indicator of pulse matched the blood pressure targets used in the clinical studies (pre and hospital). The central pulse is also easier to palpate than a radial pulse.



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74	The Emergency Medical Retrieval & Transfer Service Cymru	Short	12	1.6.4	Fentanyl if available for analgesia and competence available to deliver it. Ketamine preferred if patient required a procedure (e.g. extrication, fracture manipulation).	The guideline development group were in clear agreement that although the evidence was not strong, it favoured maintaining blood pressure in the region of MAP of 50 which equates to a maintaining a palpable central pulse rather than previous recommendations for supporting higher blood pressure targets during active bleeding. The guideline development group understands hypoperfusion is undesirable but recognised that attempting to maintain higher blood pressure during active haemorrhage results in worse outcomes. Thank you for your comment. The recommendations on pain were extensively discussed by the Major trauma, spinal injuries and complex fractures guideline development groups. The guideline development groups took into account the available evidence, including the quality, for all of the recommendations and their discussions are captured in the 'Linking evidence to recommendation' sections (chapter 14 of the Major trauma guideline). The guideline development group were in clear agreement about the benefits, harms and cost-effectiveness of different analgesia, these included fentanyl and ketamine. Drawing on the evidence and their experience appropriate recommendations were made for in the guideline and this is reflected in the wording and the strength of the recommendations. For more information on the wording of recommendations see Developing NICE guidelines: the manual (chapter 9).	



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75	The Emergency Medical Retrieval & Transfer Service Cymru	Short	General	General	I know that this is a clinical guideline BUT it should include something about trauma networks having physician led enhanced care teams 24/7.	Thank you for your comment. The guideline development group have recommended the optimal care for patients in the pre hospital setting based on the evidence reviews and taking into their experience. The guideline development group discussed the complexities of providing care in the pre- hospital setting and the variations regionally but were unable to recommend a specific model of delivering care and this included specifically recommending physician led enhanced care teams 24/7. The guideline development group have recommended that healthcare professionals should have up to date training and skills to deliver the interventions they are required to give.
76	The Emergency Medical Retrieval & Transfer Service Cymru	Short	General	General	Lactates – not a good marker as lots of variables can put the lactate up – Base deficit better! See page 20	Thank you for your comment which refers to the guideline on major trauma. The research recommendation reflects the review question that was conducted for the guideline.
77	The Emergency Medical Retrieval & Transfer Service Cymru	Short	General	General	In presence of hypovolaemia avoid vasopressors and use blood products. Empiric use of calcium after each 4U's of blood product (need a reference for this).	Thank you for your comment which refers to the guideline on major trauma. This was not identified by stakeholders at the scoping stage as important area for inclusion. NICE guideline scopes particularly address areas where there is uncertainty or national variation in practice, and it is rarely feasible to cover all areas. Please refer to the NICE guidelines manual (2012) (section 2.3.2) for further details. The avoidance of vasopressors was outside of the scope of this guideline.
78	The Emergency Medical Retrieval & Transfer Service Cymru	Short	General	General	The timings that have been set can't be applied to all geographical areas equally, for example in London it may be reasonable to expect a patient to be in an MTC within an hour or be intubated within a short period of time, but in more rural	Thank you for your comment. The guideline development group agreed that 30 minutes could be initially difficult to achieve in some parts of the country and the



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					settings such as Wales this is not going to be possible as it is often that it requires 25 minutes of flying to get to the patient and then another 35 minutes to get to a trauma centre. Also as we don't have trauma networks or an MTC yet in Wales it will be difficult to transpose all of those timings and recommendations to our setting	recommendation has been edited and the time increased to 45 minutes. The Major Trauma and Service delivery guideline development groups extensively discussed the available evidence, including the quality, for all of the airway recommendations and their discussions are captured in the 'Linking evidence to recommendation' sections (chapter 6 of the Major trauma guideline and chapter 17 of the Major Trauma Service delivery guideline). The guideline development group were in clear agreement about the benefits, harms and cost-effectiveness and also took into account the current trauma service configuration and major trauma service specifications. Drawing on the evidence and their experience appropriate recommendations were made for the interventions in the guideline and this is reflected in the strength of the recommendations. For more information on the wording of recommendations see Developing NICE guidelines: the manual (chapter 9).
79	The Emergency Medical Retrieval & Transfer Service Cymru	Full	62	6.6 - 4	'Trained doctors or paramedics with specific training hold this competency' with reference doing RSI I have severe reservations about paramedics performing RSI. Whilst there is no RCT data there is considerable observational data that there are safety concerns with paramedics doing RSI. I also disagree on the 30min window for performing RSI. This will make it years difficult for the opposed ears to the area.	Thank you for your comment. The linking evidence to recommendation section describes current UK practice and has been amended where it was implied that paramedics can currently undertake RSI. We have not made any recommendations about who should undertake this procedure in the future.
					will make it very difficult for the enhanced care teams who are currently providing this care and to a very high level.	The guideline development group agreed that 30 minutes could be initially difficult to achieve in some parts of the country and the recommendation has been edited and the time increased to 45 minutes.
R	The Royal College of	General	General	General	What would help users overcome any challenges? (For	Thank you for your comment. The NICE



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	General Practitioners				example, existing practical resources or national initiatives, or examples of good practice.) Having a tiered approach with "Generalist pre-hospital doctors" (e.g. BASICS GPs) dispersed throughout the country with intermediate level skills such as PALM, plus "Specialist pre-hospital doctors" (such as those trained in the PHEM programme) available for large geographical areas using HeliMed (air ambulance) during the day and dedicated land vehicles by night.	implementation team are working with the guideline development group to identify examples of good practice and other initiatives to support the implementation of the guideline.
33	The Royal College of General Practitioners	Full	159	1	The guidance suggests that the cut off for waiting for a practitioner to arrive to perform RSI at scene should be 30 minutes. There are times when patients will inevitably be held at scene for this time, or longer, due to entrapment or where there are a number of casualties to transport. However, where transport is immediately available a 30 minute delay seems to long. These are patients who, in the majority of cases, will have time-critical injuries requiring early blood transfusion and early surgery. See http://emj.bmj.com/content/22/11/817.full for explanation of the "Platinum 10 minutes". I would suggest that patients should not wait longer that 10 minutes for RSI if they are otherwise ready for transport. Exceptions might be where it is impossible to meet the transport <i>en route</i> such as with a helicopter or boat transfer. Helicopters should however bring RSI capability with them to maximise the benefit of the large investment in the service. Additionally the guidance should include the following: 1. There should be local networks of RSI competent providers who organise themselves to provide a 24/7 service. For example by using helicopters by day when traffic is heavy and flying is easy, and road-based teams at night when flying is treacherous but roads are more open. These networks should include ambulance trusts, helimed services and voluntary services such as BASICS as well as directly employed doctors such as members of MERIT teams and ambulance trust senior clinicians. 2. Provision of training in advanced airways skills, including RSI, should be arranged to enable existing pre-hospital doctors to acquire RSI skills independently	Thank you for your comment. The guideline development group confirmed that RSI should be delivered as soon as possible and it is preferable to have RSI performed at the scene and the patient to be taken directly to a MTC. This may result in waiting at the scene for a limited period of time rather than taking the patient to a trauma unit for RSI. This of course does not preclude using other forms of airway management until a team that can deliver RSI arrives. The guideline development group are clear that the optimal destination for major trauma patients should be a major trauma centre. These recommendations were extensively discussed by the Major trauma and the Major trauma service delivery guideline development groups. The guideline development groups took into account the available evidence, including the quality, for all of the recommendations and their discussions are captured in the 'Linking evidence to recommendation' sections (chapter 6 of the Major Trauma: Service delivery guideline.). Additional detail has



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					from formal training in anaesthesia.	been added to the LETR acknowledging the resource considerations. The guideline development group were in clear agreement about the benefits, harms and cost-effectiveness and also took into account the current trauma service configuration and major trauma service specifications. Drawing on the evidence and their experience appropriate recommendations were made for the interventions in the guideline and this is reflected in the strength of the recommendations. For more information on the wording of recommendations see Developing NICE guidelines: the manual (chapter 9). The Resource Impact Assessment team at NICE is responsible for identifying the resource impact that may occur as a result of commissioning and implementing services in line with NICE guidance and quality standards.
34	The Royal College of General Practitioners	General	General	General	Which areas will have the biggest impact on practice and be challenging to implement? Please say for whom and why. Bringing RSI to the scene will be hugely problematic due to the scarcity of trained practitioners and the difficult of both obtaining initial training and maintaining skills.	Thank you for your comment. In Major Trauma: service deliver y the appendix identifies the recommendations that may have particular implications for service delivery. The guideline development group recognise that this will be a resource and implementation issue and discussed this is in detail but agreed that providing RSI at the scene was the optimal care for the patient who cannot maintain their own airway. Further detail has been added in the evidence to recommendations section. In addition, the Resource Impact Assessment team at NICE is responsible for identifying the resource impact that may



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						occur as a result of commissioning and implementing services in line with NICE guidance and quality standards.
137	The Royal College of Radiologists	General	General		There is very little detail on the composition of the radiology team (e.g. seniority of ST), the necessity or not for a radiologist to be on site 24/7 in an Major Trauma Centres (MTC) and the timelines for imaging and reporting are not defined within the document. The Royal College of Radiologists recommends that this be included to avoid any ambiguity. It is likely that MTCs will look to NICE (and local networks) for guidance on these matters and it is vital that they get a sensible steer that is achievable. Adequate human and financial resourcing for this is required. There is a radiology manpower crisis in the UK – evidence of this is available in the following 3 documents: i) New RCR survey finds patients still waiting too long for test results https://www.rcr.ac.uk/posts/new-rcr-survey-finds-patients-still-waiting-too-long-test-results ii) RCR and BSIR respond to shortfall in interventional radiology provision https://www.rcr.ac.uk/posts/rcr-and-bsir-respond-shortfall-interventional-radiology-provision iii) RCR Workforce Census 2014: https://www.rcr.ac.uk/sites/default/files/publication/bfcr153_census_20082015.pdf	Thank you for your comment. The guideline development group have not included detail on the composition of any of the speciality teams within a trauma service. Timelines for imaging and reporting are referred to in Major Trauma, Spinal injuries and the Complex fractures clinical guidelines for specific injuries and situations. Throughout the five trauma guidelines the guideline development group have discussed the considerations to staffing implications for specific interventions and recommendations and these are expressed in the specific LETRs.
138	The Royal College of Radiologists	General	General		The Royal College of Radiologists notes that there were no radiologists on the guideline development group	Thank you for your comment. The guideline development group co-opted radiologists to the clinical guidelines and they have been added to the expert members list.
	The Royal College of	General	General		The only question posed to the group that involved radiology	Thank you for your comment. The guideline



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	Radiologists				was "What is the optimal timing of interventional radiology".	development group prioritised the optimal timing of interventional radiology and reviewed this evidence. Chapter 17 describes the prioritisation process for this review. There were two stages in the service delivery prioritisation, in the first stage the guideline development group reviewed all the recommendation in the trauma guidelines and identified those that could have significant service delivery issues. The next stage was to prioritise specific interventions taking into account:
						Economies of scope or scale may mean that overall clinical benefit of an intervention may be under or over estimated.
						Resource and cost involved in implementing a service to ensure uniform access may be sufficiently high when this is taken into account that the clinical net benefit no longer outweighs the net cost of the intervention.
						 Local factors within a given health economy could highly influence what health strategies or interventions may be appropriate or most cost effective.
						Social values and context (i.e. requirement for equity of access, equity of health outcome, maximisation of patient satisfaction, promotion of local decision making and empowerment) were as important in determining optimal service configuration and guidance as the need to consider maximisation of population health under a budget constraint.
						Training and education
						As a result the GDGs identified the



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						recommendations below to potentially have large service implications, and prioritised these areas for further work to support the clinical recommendations):
						Airway management in the pre-hospital setting, in particular access to expertise in RSI
						Access to imaging, in particular access to timely CT within trauma units and MRI more generally
						Access to interventions which control for bleeding, in particular interventional radiology
						Access to interventions that may require orthopaedic and plastic surgery expertise
						Throughout the trauma guidelines other questions addressed radiology.
140	The Royal College of Radiologists	Short	10		WHOLE BODY CT: Only blunt trauma is referred to here - guidelines on penetrating trauma will also be of value.	Thank you for your comment. Penetrating injury is likely to be confined to one or two body cavities and therefore whole body CT is rarely indicated
141	The Royal College of Radiologists	Short	10		There is no discussion of value of CT in specific injuries. The Royal College of Radiologists recommends including the following:	Thank you for your comment. The diagnostic accuracy of specific types of CT scan was outside of the scope of this guideline
					"While standard CT protocol should be the default in Trauma, the Trauma Team Leader will need to confer with the Trauma Team Radiologist regarding CT protocol for specific patients: for example (i) the use of luminal contrast media (per oral, per rectum) in penetrating injury (ii) if renal injury is suspected, delayed urographic phase CT should be considered".	galdonno
58	The Royal London Hospital	Short	5	15	Specify the definitive treatment of trauma patients	Thank you for your comment. Definitive treatment refers to the most appropriate and optimal care for the patient.



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59	The Royal London Hospital	Short	8	1	Stress the importance of early multidisciplinary and multispeciality input, including mental health services	Thank you for your comment. There is a recommendation in the Major trauma guideline on contacting the mental health team as soon as possible where relevant. The linking evidence to recommendation on continuity of care: the role of the trauma coordinator (chapter 11) has been edited in accordance with your point.
60	The Royal London Hospital	Short	8	1	More focus on treatment of the elderly and frail	Thank you for your comment. Specific reference to the acute specialist services for the elderly has been added to recommendation 1.6.2 making it clear this is an essential part of a trauma service.
61	The Royal London Hospital	Short	9	17	Include discussion of TARNLET	Thank you for your comment. The guideline development group make specific reference and support to TARNLET in the LETR.
62	The Royal London Hospital	Short	11	14	We are concerned at the lack of explicit comment regarding elder trauma including training and access	Thank you for your comment. Specific reference to the acute specialist services for the elderly has been added to recommendation 1.6.2 making it clear this is an essential part of a trauma service.
63	The Royal London Hospital	Short	21	12	Include recommendations for key workers in penetrating trauma	Thank you for your comment. The recommendation on keyworker are for all major trauma patients including those with penetrating trauma
64	The Society and College of Radiographers	Full	13	1	[1.11.3] The Society and College of Radiographers feel that currently many radiology departments do not have the resources and infrastructure for interventional radiology to be immediately available. Many interventional radiology teams cover multiple hospitals therefore 'immediately available' within this context needs to be carefully considered.	Thank you for your comment. The guideline development group extensively discussed the available evidence, including the quality, for all of the recommendations on interventional radiology and their discussions are captured in the 'Linking evidence to recommendation' section 11.5.6. The population that would benefit from interventional radiology is very small, and considerations to staffing implications were discussed and are expressed in the LETR. The guideline development group were in clear agreement about the benefits, harms and cost-effectiveness and also took



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						into account the current trauma service configuration and major trauma service specifications. Drawing on the evidence and their experience appropriate recommendations were made for interventional radiology and this is reflected in the strength of the recommendations. For more information on the wording of recommendations see Developing NICE guidelines: the manual (chapter 9). We have identified this recommendation as having an impact on services (see appendix The Major Trauma: service delivery guideline) and the Resource Impact Assessment team at NICE is responsible for identifying the resource impact that may occur as a result of commissioning and implementing services in line with NICE guidance and quality standards.
65	West Midlands Ambulance Service Foundation Trust	Full	50	General	We have established an elderly trauma working group to identify the issues facing pre hospital providers with this patient group and provide advice, we have identified markers that can be used to red flag high risk patients and would be happy to share our work	Thank you for your comment. The guideline provides recommendation on the control of external haemorrhage for the topics outlined in the scope. NICE guidelines do not signpost to guidance with is not produced or accredited by NICE.
66	West Midlands Ambulance Service Foundation Trust	Full	123	General	We are developing a free online learning course for pre hospital paediatric care with Birmingham University and Birmingham Children's Hospital using the Future Learn platform and would be happy to share our work	Thank you for your comment. We look forward to the publication of your work.

Registered stakeholders