Fractures

Consultation on draft guideline
Stakeholder comments table

7 August 2015 - 21 September 2015

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

ID	Stakeholder	Document	Page No	Line No	**Comments** Please insert each new comment in a new row	**Developer's response** Please respond to each comment
1	Association of ambulance chief executives	Short	5	27	Vacuum splints are not common across all ambulance services-a range of splints are in use. There will be a significant cost to move to vacuum splints.	Thank you for your comment. When making their recommendation the Guideline Development Group considered the availability and cost of vacuum splints. The Guideline Development Group considered that vacuum splints are already widely used and so did not believe that this would be a large change to current practice for most services. Furthermore, the Guideline Development Group noted that while vacuum splints are more expensive they can be reused.
2	Association of ambulance chief executives	Short	12	5	Re. structured handover process within ED, there are numerous handover tools in use, a standard tool would be more beneficial if there is enough evidence to support one in particular	Thank you for your comment. We did not identify evidence to recommend a specific tool therefore could not provide more detailed guidance.
3	Association of ambulance chief executives	Short	5	15	Pain relief in children-intranasal analgesia, concerns re. the concentration needed and how much is absorbed	Thank you for your comment. The Guideline Development Group noted this concern if intra-nasal opioids are administered through a syringe. However, a generic atomisation device to nebulise opioids can be used to standardise the analgesic dose and this has been added to section on 'Recommendations and links to evidence in the full version of the guideline.
132	British Infection Society	Full	General	General	The BIA is content with this guideline. Thank you.	Thank you for your comment.
4	British Orthopaedic Association	Full	111	14	As over 60% of patients are seen by non doctors in MIUs and ED departments, this recommendation will lead to a massive increase in scans. The cost of a MRI scan cited may be lower than the out-of-hours cost, and there may not be out-of-hours capacity. This could mean patients having to re-attend hospital increasing pressure on the hospital. It is not clear whether ED practitioners will be able to	Thank you for your comment. The Guideline Development Group felt that ED practitioners currently distinguish between suspected wrist and scaphoid fractures when requesting radiographic views of the wrist. This recommendation relates to suspected scaphoid fractures and not to suspected fractures of the wrist. The Guideline Development Group considered the clinical evidence and the evidence from the

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					distinguish between wrist fracture and scaphoid. If they cannot, the MRI be used as a primary investigation for all wrist sprains, which is much more expensive than 2 plain radiographs.	economic model, which indicated that MR imaging is the most clinically and cost-effective first line imaging strategy for suspected scaphoid fractures. Although the economic model did not explicitly account for the cost of out-of-hours MRI scans, the Guideline Development Group believed that the number of attendances during these hours would be very small. They also considered the sensitivity analysis that increased the cost of MRI to £200 and believed that the out-of-hours costs for a small number of MRI scans would fall well within this threshold, thus not impacting the conclusion of the model. This value can be increased further to over £300; more than double the unit cost used, and still remain cost effective and so the increased costs of out-of-hours attendances have essentially been fully accounted. The Guideline Development Group discussed the impact this recommendation may have on services. They also note in the section on 'Recommendations and links to evidence in the full version of the guideline that MRIs should only be considered after a thorough examination to ensure that it is not used in people who are unlikely to have a scaphoid injury. While the Guideline Development Group thought MRI is the best option for first line imaging a weaker recommendation ('consider MR imaging…') was written reflecting the low quality of evidence and the GDG's discussions. This recommendation has been highlighted as having a potential impact on services. The issues are discussed in respective sections on 'Research and links to evidence' in the full version of the guideline. In addition, 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.

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5	British Orthopaedic Association	Full	119	22	This must include MRIs for wrists and knees and so on. Radiological imaging should be used in addition to x rays.	Thank you for your suggestion. This review is limited to the hot reporting of x-rays and therefore we did not examine the evidence for hot reporting of other imaging. As a consequence we are unable to make a recommendation on this.
6	British Orthopaedic Association	Full	142	27	Please include a clear definition of displacement.	Thank you for your comment. The Guideline Development Group discussed the definition of distal radial displacement and decided it is not possible to give a meaningful definition of displacement that requires reduction. Displacement of a distal radial fracture can include angulation, translation, shortening, rotation, articular involvement of the radiocarpal joint and articular involvement of the radio-ulna joint. Each of these can occur alone or in any combination. The magnitudes of each are continuous variables. Consequently there are an almost infinite number of types of displacement with no clear consensus as to what represents significant displacement. As a consequence in the largest of the studies referred to in the guideline (the DRAFFT trial) it was left to the managing surgeon to determine when displacement was significant enough to require reduction. Consequently, the Guideline Development Group decided to also leave it to the managing surgeon to determine when displacement is significant enough to require reduction. We have added this explanation to the other considerations section in the "Recommendations and link to evidence" discussions.
7	British Orthopaedic Association	Full	170	7	If you are recommending only seeing these patients at one week for orthopaedic follow-up, the implication is that the initial examiner must assess the injury, determine risk of stability and exclude more serious injury like syndesmotic injuries. Please recommend that Weber A fractures can be mobilized and Weber B should be referred to an orthopaedic fracture clinic to assess stability, which may include further follow up at one week.	Thank you for your comment. This recommendation is applicable for people with ankle fractures who are being managed by the orthopaedic team (e.g. in a fracture clinic) and not the emergency department staff. The wording of this recommendation and the section heading has been altered to 'orthopaedic management' in order to clarify this.
8	British Orthopaedic Association	Full	172	14	Please clarify why a CT scan for scaphoid is £151 yet after ankle only £85.	Thank you for your comment. The CT scan for scaphoid fractures includes treatment and hospital attendance costs as well. The table of results in the

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						guideline has been edited to clarify that.
9	British Orthopaedic Association	Full	182	1	Deep infection increases costs in early surgery as well as delayed surgery- it is not clear that deep infection costs more in delayed surgery. The timings have to be practical. the recommendation that ankle fracture fixation should ideally occur on the day of injury or the following day will lead to out of hours operating, which surgeons are trying to avoid. Ankle fractures tend to occur in the second half of the day, as they are largely caused by sport, exercise and alcohol. Over 80 % will present later than 3pm which is going to make it vary impractical to suggest operation on day of injury, and so is difficult to justify , especially given the lack of evidence. The BOA suggests the recommendation : Ankle fracture fixation should be achieved within 24-48 hours, or the operation date should be agreed with the patient, within a maximum of 7 days, much like like distal radial fractures. hospitals which have established day case trauma operating can deliver timely fracture fixation, usually at times convenient with patients and their families.	Thank you for your comment. The clinical evidence identified for this review demonstrated an increasing risk of infection when surgery for ankle fractures was delayed. The section on 'Recommendations and links to evidence in the full version of the guideline has been edited to clarify that the increased cost is due to the increased risk of infection rather than the treatment for deep infection being more expensive for those with delayed surgery. Thank you for your suggestion; the Guideline Development Group note that the recommendation suggests that surgery should occur on the day or day following injury, and therefore does not require hospitals to deliver surgery overnight. The Guideline Development Group have recommended that surgery be performed early due to evidence that delayed surgery may result in clinical harm for patients.
10	British Orthopaedic Association	Full	184	13	72 hours for intra-articular distal radial fractures is based on no science and no practice. Acetabular fractures, which have a much better correlation with anatomical reduction and patient outcome have not got this stipulation and the evidence shows 7 days is a suitable time frame. The argument that organised haematoma restricts articular reconstruction, in a joint for which there is no evidence that articular reconstruction improves outcomes, suggests that all intra-articular fractures would be treated in the same manner. This statement, which may be true, but is not supported by evidence, would have a huge effect on how we treat intra-articular fractures.	Thank you for your comment. As no published evidence was identified for this question, the Guideline Development Group used expert consensus to inform their recommendation. The Guideline Development Group discussed the potential risks and benefits of different timings of surgery for intra- and extra-articular fractures of the distal radius. A summary of this discussion is provided in the section on 'Recommendations and links to evidence in the full version of the guideline. Given the potential risks of delaying surgery, the Guideline Development Group felt that provision should be made to perform surgery early. As a consequence they did not agree that providing a date within 48-hours would address this issue. The Guideline Development Group felt that this recommendation is also consistent with current practice

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					It would be appropriate for all these fractures be given a date for surgery within 48 hours but have the surgery before 7 days.	in treating articular fractures.
11	British Orthopaedic Association	Full	204	35	Please define dorsally displaced and specify at what degree of displacement should "reduction" occur. Is there any evidence to support performing open reduction and internal fixation if the radial carpal joint reduction is not possible? Are there any limitations to this, such as low demand or osteoporotic joints?	Thank you for your comment. The clinical review did not look for evidence on the degree of displacement and was unable to provide a clinically relevant definition of a dorsally displaced distal radius. The Guideline Development Group believe this a judgement the treating clinician will need to make. Thank you for the comment. The Guideline Development Group did not address a question on how to decide that surgery is required. The question and recommendation covered relate to which type of surgery should be performed once a surgical approach is indicated.
12	British Orthopaedic Association	Full	209	1	Please change this title proximal humeral fracture as the section deals solely with this indication. Please acknowledge in the recommendation that those with a clear indication were excluded from the trials.	Thank you for your comments. We have added proximal humerus to the title in the short and long versions of the guideline.
13	British Orthopaedic Association	Full	46	25	[-26] The evidence quoted for this is described as poor with a very significant risk of bias.	Thanks you for your comment. The Guideline Development Group acknowledge the poor quality of the evidence, but used the best quality evidence available in making the recommendation. The Guideline Development Group noted the high sensitivity of the Ottawa Knee Rule suggested that the rule would pick up the majority of clinically significant fractures and therefore felt it was appropriate to recommend.
14	British Orthopaedic Association	Full	46	29	[-30] There are many problems with this recommendation. The quality of the evidence is poor. "Suspected scaphoid fracture" assumes that a history and physical findings support this diagnosis. The majority of "Suspected scaphoid fractures" are no such thing – they are wrist sprains with no well-localised scaphoid tenderness to justify the diagnosis. True occult scaphoid fractures are actually very uncommon. With retrospect, most of these so-called occult scaphoid fractures are actually visible on the original radiographs.	Thank you for your comment. The Guideline Development Group considered the clinical evidence and the economic model findings to inform their recommendation, including consideration of the quality of the clinical evidence. In making their recommendation the Guideline Development Group considered that MRI imaging may result in over diagnosis of some minor images. However, they also note in the section on 'Recommendations and links to evidence in the full version of the guideline that MRIs should only be considered after a thorough examination

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					MRI scans will undoubtedly diagnose "occult" scaphoid fractures but this image modality is actually over-sensitive. One study recorded a 40% incidence of occult fractures in the wrist and carpal bones in wrist injuries with normal radiographs. Most of these are actually entirely non-significant bony injuries that require no specific treatment apart from a simple splint and analgesia. Making MRI scanning generally available will result in massive overuse of this investigation for simple sprains, over diagnosis of bone bruises as fractures with unnecessary referral and treatment and greatly increase costs of treating these injuries.	to ensure that it is not used in people who are unlikely to have a scaphoid injury. While the Guideline Development Group thought MRI is the best option for first line imaging a weaker recommendation ('consider MR imaging…') was written reflecting the low quality of evidence and the GDG's discussions.
15	British Orthopaedic Association	Full	47	5	[-10] Our ankle boast currently states patients are reviewed within 2 weeks of injury if nonoperative treatment is planning for an injury considered probably stable but where the risk of displacement cannot be ruled out. If treating an ankle fracture with surgery, consider operating on the day of injury or the next day. I would agree with this. There has been a widespread trend to delay surgery to minimise operative complication rates without good evidence.	Thank you for your comment. The Guideline Development Group agree and have amended the recommendation so the wording to states that review occur within 2 weeks of injury. We were stating almost the same thing.
16	British Orthopaedic Association	Full	47	13	[-14] This may be difficult to achieve in busy units. Generally most extra-articular fractures requiring surgery can be reduced to a satisfactory position within the first 14 days of injury.	Thank you for your comment. The Guideline Development Group chose to recommend that surgery for extra-articular fractures be carried out within 7 days due to a belief that it may be more difficult to achieve a closed reduction after this time and concerns that there may be a higher risk of complications. The Guideline Development Group believe that this recommendation is achievable and will be associated with improved clinical outcomes for patients.
17	British Orthopaedic Association	Full	47	34	[-35] The difficulty here is the definition of displacement. If we use the Neer classification then 45 degrees of fracture fragment angulation is considered displaced and I would agree many of these injuries derive no benefit from surgery. However there is an important subset of these injuries where the shaft is completely medially displaced and also fit into the Neer definition of "displaced" fractures. However this subset do not unite and will not do well with	Thank you for comments. The Guideline Development Group acknowledge a subset of patients in the section on 'Recommendations and links to evidence in the full version of the guideline in which surgical approach may be indicated. However, for the majority of humerus fractures non-surgical management is recommended.

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					non-operative treatment. They develop painful non-union and often require difficult late reconstructive surgery.	
18	British Orthopaedic Association	Short	4	12	[-15] Is the inference that ambulances crews will carry and administer IV paracetamol?	Thank you for your comment. The Guideline Development Group believed that ambulances should carry and administer IV paracetamol, and that this is common practice among many trusts.
19	British Orthopaedic Association	Short	5	23	[-27] Is there any guidance on splint removal? Could it be indicated for patient to keep splint until definitive management?	Thank you for your suggestions. We did not prioritise splint removal as an issue to cover in the guidelines and therefore cannot make a recommendation on this.
20	British Orthopaedic Association	Short	6	8	[-10] Is the inference that no X-ray for suspected scaphoid or MRI after negative X-ray? Thinking about other fractures that may be visible on XR.	Thank you for your query. This recommendation states that MRI be used as the primary imaging strategy for all suspected scaphoid fractures.
21	British Orthopaedic Association	Short	7	1-2	This assumes level of competence at first assessment which is not available at present. Depends on expertise being available. May be possible in virtual fracture clinic scenario	Thank you for your comment. The Guideline Development Group agree with your comment and definitive radiology should be provided at first presentation in consistency with our other guidance on hot reporting.
22	British Orthopaedic Association	Short	7	4	[-10] Should the 6 week statement be more specific on symptoms and signs e.g. pain/stiffness/swelling?	Thank you for your suggestion. This review question did not evaluate which specific signs and symptoms are associated with a need for recall to hospital. The Guideline Development Group believe that the symptoms and signs that may require recall are very non-specific so did not try to add this information to the recommendation.
23	British Pain Society	General	General	General	Chronic pain resulting from fracture injury needs recognising as a major negative outcome. There is potential for minimising the magnitude and impact of this pain by appropriate management by pain teams, who need to be involved at an early stage particularly when acute or early pain is difficult to treat or where there are substance abuse problems. The recognition of and early referral for specialist management of suspected cases of complex regional pain syndrome (CRPS) must be included in the guideline on the management of fractures. CRPS is often diagnosed late and after prolonged immobilisation, which adversely affects outcome. Given the likely wide distribution and use of this document it would be helpful if the criteria for considering or diagnosing the condition were clearly specified.	Thank you for your comment. We did not prioritise a question on the recognition of complex regional pain syndrome so cannot make a recommendation covering this.

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117	British Society for Children's Orthopaedic Surgery	Short	General	General	There is however a real concern that subsuming children's fracture treatment in an 'all age' document such as this may be less than ideal. A separate 'paediatric' subsection or even a separate document would have been more helpful.	Thank you for your comment. The guidelines were commissioned on the basis it applied to all ages which is why there is one guideline. The Guideline Development Group felt the structure was better mixed together because some recommendations apply to both adults and children while in others adults and children are managed differently. Where recommendations are different we have marked them clearly as adults and children. We have also been careful to add the population into individual recommendations.
118	British Society for Children's Orthopaedic Surgery	Short	General	General	Most children's fracture treatment now takes place in designated areas if not separate paediatric A&E departments. This document speaks to a historical situation where children's fractures were treated as a subsection of adult fractures.	Thank you for your comment. The guidelines were commissioned on the basis it applied to all ages which is why there is one guideline. The Guideline Development Group felt the structure was better mixed together because some recommendations apply to both adults and children while in others adults and children are managed differently. Where recommendations are different we have marked them clearly as adults and children. We have also been careful to add the population into individual recommendations.
119	British Society for Children's Orthopaedic Surgery	Short	General	General	The selection of fractures receiving attention is far from comprehensive. There is a risk that this document is seen to encompass all areas of concern and controversy which clearly it does not.	Thank you for your comment. The guideline was commissioned on the basis it covered all fractures. It was clear from the start that a single guideline could not address individually all potential situations. However, since non-complex fractures present a huge burden and workload to the NHS it is a sound objective to provide a guideline to act as a rational basis for patient management embracing and accepting a wide range of circumstances. To this end, the guideline is based around a group of indicative topics chosen in the scoping stage. Instead of tracing the pathway of a

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						single injury, the guideline topics were chosen to inform various stages on a notional pathway of patient care. These topics were chosen on the basis of their prevalence, their relevance to a particular step in the patient pathway of care or perceived variation in current practice. It was inherent in the development of the guideline that, whilst recommendations are necessarily only made in relation to the individual topics of the scope, these recommendations should be considered as representative of the management of non-complex fractures in general.
120	British Society for Children's Orthopaedic Surgery	Short	General	General	The fact that many fracture treatments in paediatric orthopaedics are significantly different is completely lost in this document.	Topics and types of fractures to cover were chosen on the basis of where NICE guidance was thought to be of most use. Where recommendations are different we have marked them clearly as adults and children. We have also been careful to add the population into individual recommendations.
121	British Society for Children's Orthopaedic Surgery	Short	5	18	Femoral nerve blocks (FNB) in children with femoral fractures: the review supports the benefit of a femoral nerve block being performed. Not all units have access to an ultrasound scanner or personnel who are trained in using it. A femoral nerve block can be performed simply without an ultrasound scanner with appropriate training. I believe the review should ensure that FNBs are considered in a timely manner, performed without ultrasound to avoid delay in treating these children, where US guidance is not readily available.	Thank you for your comment. The study included in the clinical review did not use ultrasound guided approach. Therefore the Guideline Development Group did not make a recommendation for the use of ultrasound. The use of ultrasound is mentioned in the section on 'Recommendations and links to evidence in the full version of the guideline.
122	British Society for Children's Orthopaedic Surgery	Short	6	3	Bulloch B et al (2003) determined appropriate validity of the tool although it should really be 'modified Ottawa knee rules' since the first criterion of being over 55 years of age is clearly not relevant to a paediatric population. Appropriate caution is advocated due to evidence level available for this conclusion. No additional comments received.	Thank you for your comment. The clinical evidence review did not consider modified rules, only validated rules were included. The 55 year age cut off is a single criterion of the Ottawa Knee Rule. If a patient meets any of the criteria then an x-ray is indicated. For example a paediatric patient with tenderness at head of fibula should receive an X-ray. The Guideline Development Group accept that this criteria would not apply to all the paediatric population however it does apply to all people over 2 years of age.
123	British Society for Children's Orthopaedic Surgery	Short	6	5	They recommend Ottawa rules for ankle for all patients, although Unni Narayan has shown that different rules need to be used for kids	Thank you for your comment. The Guideline Development Group used the best quality evidence available to make the recommendation. No studies

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						were identified in children. We could not identify the study by Narayan et al.
124	British Society for Children's Orthopaedic Surgery	Short	6	5	The evidence cited for its application in the over 5s was a single review paper, Dowling et al (2009). This review acknowledges that reported specificity in the 12 included papers varied from 7.9 to 50% with wide variation of inclusion criteria and recommends a lower age cut off of 6 not 5 years. Boutis et al. Canadian Medical Association Journal, 185(15) (2013) in their original research paper 'Effect of the Low Risk Ankle Rule on the frequency of radiography in children with ankle injuries' (n=2151) have demonstrated a validated tool for the paediatric population. It is difficult to understand why this has not received any attention in the guideline. Additionally the following could have been usefully referenced: Yeung DE et al. Cochrane review 21 Nov 2013 'Interventions for treating ankle fractures in children' established current evidence levels and a protocol for assessment of interventions in the paediatric population. Seel EH et al, J Pediatr Orthop B. 2011 Jul; 20(4):242-8. Outcome of distal tibial physeal injuries. This paper considers use of CT scanning in children with distal growth plate injuries of the tibia. The residual displacement of fractures was notably less in those patients that received a pre-treatment CT scan compared with those who did not.	Thank you for your comment. The review focused on the highest level evidence available. The GDG prioritised RCT evidence for the recommendations during protocol development and considered these more useful in making recommendation. As an RCT study (Fan et al. 2006) was identified in the literature search, studies which considered diagnostic accuracy studies were not reviewed. However, while no diagnostic accuracy studies were included in the clinical review the Guideline Development Group noted the high sensitivity of the Ottawa ankle rule in the section on 'Recommendations and links to evidence in the full version of the guideline. The Guideline Development Group therefore used the best available evidence to recommend the use of the tool as ruling out ankle fracture was more important.
125	British Society for Children's Orthopaedic Surgery	Short	6	8	The difficulty in obtaining MRI scans in a timely manner in most hospitals is a notable problem. I would consider an initial plain radiograph is essential in managing children to avoid the delay in proper assessment. Other injuries will be missed along with the opportunity to treat early enough if MRI scan is relied upon. It would be appropriate for plain x-rays to be taken with subsequent MRI consideration for those cases where clinical suspicion exists and X-rays are not diagnostic.	Thank you for your comment. The Guideline Development Group considered the evidence for X-ray as primary imaging for suspected scaphoid fractures and found it to be less clinically and cost-effective than MR imaging as the first line investigation. Although no clinical evidence in children was identified, the Guideline Development Group believed that the recommendation should apply equally to both children and adults. The Guideline Development Group further

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						noted that in young children (age 10 years and below), x-ray is even less sensitive for identifying scaphoid fractures as these can be obscured by cartilage. The Guideline Development Group note that this recommendation does not prevent clinicians from using other imaging strategies, and they discuss examples of such situations in the section on 'Recommendations and links to evidence in the full version of the guideline. The Guideline Development Group also discussed the impact this recommendation may have on services (further detail also in the section on 'Recommendations and links to evidence in the full version of the guideline). While the Guideline Development Group thought MRI is the best option for first line imaging a weaker recommendation ('consider MR imaging…') was written reflecting the low quality of evidence and the GDG's discussions.
126	British Society for Children's Orthopaedic Surgery	Short	6	17	Guidelines re distal radial fracture reduction simply suggest considering Biers block in over 16s but no specifics around children at all. Effective splintage is the best analgesia and yet the structure of the guidelines doesn't emphasise that enough.	Thank you for the comment. The Guideline Development Group did not prioritise a question for static pain relief in children as they assumed general anaesthesia would be used for the majority of these patients. Children were therefore excluded from the clinical review and no recommendations provided.
127	British Society for Children's Orthopaedic Surgery	Short	8	7	For distal radius they have not properly considered bayonet reduction	Thank you for your comment. The Guideline Development Group did not identify any evidence on bayonet reduction and could not make any recommendation for this.
128	British Society for Children's Orthopaedic Surgery	Short	8	23	For distal radius they have not properly considered bayonet reduction	Thank you for your comment. The Guideline Development Group did not identify any evidence on bayonet reduction and could not make any recommendation for this.
129	British Society for Children's Orthopaedic Surgery	Full	30	33	Of note 4.3.4.1 highlights data was stratified for age with above/below 18 years as the cut off. There is very little clear indication of this separation in the content of the document; it is extremely difficult to avoid inappropriately misreading adult evidence across to a paediatric situation	Thank you for your comment. We have separated recommendations for adults and children in the guideline where possible to make this clearer. In some cases these will remain together as some recommendations apply to both adults and children.

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					as a result. For example recommendation 15 is apparently 'all age' yet no evidence is advanced in the paediatric population for these recommendations. I would not be happy to leave a child 6 weeks with no improvement in symptoms.	Thank you for your comment regarding the recommendation for non-surgical orthopaedic management of unimalleolar fractures. The Guideline Development Group believed that this recommendation should apply equally to children and adults. The Guideline Development Group believe that there is no additional benefit of recalling children with on-going symptoms prior to the 6-week threshold recommended for adults, and did not believe that this wait would lead to harm. With regards to the cut-off between adults and children the GDG's approach was to divide by skeletal maturity preferentially, as this is the clinical feature that leads to different recovery trajectories and informs different forms of management. Where papers did not specify the skeletal maturity of the sample, age was used as a proxy. The methods section to which you refer has been updated to reflect this.
133	British Society for Children's Orthopaedic Surgery	Short	6	2	[p2&5] J Pediatr Orthop B. 2011 Jul; 20(4):242-8. Outcome of distal tibial physeal injuries. Seel EH, Noble S, Clarke NM, Uglow MG. I believe that this paper shows the clinical advantage of using CT scanning in children with distal growth plate injuries of the tibia. The residual displacement of fractures is notably less in those patients that received a pre-treatment CT scan compared with those who did not.	Thank you for your comment. The study by Seel et al. is not a prediction rule study and therefore was not included in the clinical review.
97	British Society for Surgery of the Hand (BSSH)	General	General		The British Society for Surgery of the Hand (BSSH) has considered the guidelines "Fractures - Non-Complex: Assessment and Management. It makes the following comments. 1. This document does not cover hand fractures. The Society feels that important issues surrounding hand fractures should have been considered when drawing up this guidelines document. Issues which should be addressed include: – a) a small, but significant, number of hand fractures are missed due to an	Thank you for your comment. We could not cover all areas within the guideline and unfortunately questions relating to hand surgery were not prioritised for inclusion.

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					inadequate clinical assessment resulting in no request for X-rays, or a request for inappropriate X-rays; b) the need to identify fractures which will which have a poor outcome if treated inappropriately; c) recognition that some isolated closed hand fractures require treatment by surgeons with a special interest in hand surgery, and that a hand surgery service needs to be readily available to all hospitals with Emergency departments.	
98	British Society for Surgery of the Hand (BSSH)	General	General		2. The Society would also comment on the diagnosis of scaphoid fractures: a) a careful clinical examination followed by standard "scaphoid series" X-rays will detect the vast majority of scaphoid fractures; b) we do not believe that 30% of scaphoid fractures are missed by standard "scaphoid series" X-rays. Clinical experience suggests that less than 5% of scaphoid fractures are not visible or these X-rays; c) Clinical experience suggests that most (>80%) suspected scaphoid fractures (e.g. clinical signs of a scaphoid fracture but normal scaphoid series X-rays) referred from the Emergency Department to Fracture/Hand clinics are not scaphoid fractures; d) our responses b) and c) might alter your cost/benefit calculations; e) most scaphoid fractures are missed because of a failure to detect the clinical signs of a scaphoid fracture, such that inappropriate X-rays, or no X-rays, are obtained. Thus scaphoid fractures will continue to be missed, even with MRI	Thank you for your comment. Point a): The Guideline Development Group considered the evidence for using x-ray as the first line imaging for suspected scaphoid fractures, which indicated that this strategy is less clinically and cost-effective than using MRI as the first line image. The Guideline Development Group discussed the impact this recommendation may have on services. Further detail of this discussion has been added to the section on 'Recommendations and links to evidence in the full version of the guideline. Point b): The Guideline Development Group based their recommendations on the available evidence. This reports that 30% of scaphoid fractures are missed on x-ray. A higher sensitivity of X-rays would have very little effect on the results of the economic model due to the low prevalence of true fractures. There would still be a large proportion of people who have negative X-ray findings and therefore that have further imaging and additional fracture clinical attendances. This means the cost of the X-ray imaging strategy would still result in higher costs than the immediate MRI strategy. Point c): The inputs in the economic model actually resulted in around 95% of referrals to the fracture clinic

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					scanning of all suspected scaphoid fractures; f) MRI scanning will probably detect "scaphoid bone bruises" which do not require treatment, as well as scaphoid fractures which require treatment; g) MRI is unlikely to be cost-effective unless reserved for patients with a diagnosis of a suspected scaphoid fracture made after a clinical examination by a clinician experienced in the assessment of wrist injuries. If the request for MRI is based on the findings of clinical examinations by less experienced health professionals, then the number of patients with negative *(for scaphoid fracture)* scans will increase and may remove any cost benefit. This is an essential matter that we urge NICE to consider. h) Some patients with "suspected scaphoid fractures", who do not in fact have a scaphoid fracture, will complain of persistent pain and need plaster immobilisation for a period, and possibly physiotherapy. Thus a negative MRI does not indicate that a patient can be discharged without follow-up.	having no fracture. This is due to the low prevalence of fracture and the policy of referring people with negative images to the fracture clinic because of the lack of confidence in the X-ray findings due to relatively low sensitivity. This high proportion of people without a scaphoid fracture is the key driver that makes immediate MRI imaging less costly that the follow-up X-rays strategy. They also note in the section on 'Recommendations and links to evidence in the full version of the guideline that MRIs should only be considered after a thorough examination to ensure that it is not used in people who are unlikely to have a scaphoid injury. The recommendation has been revised to state "Consider MRI for first-line imaging in people with suspected scaphoid fractures **following a thorough clinical examination**" Point d): See response to points b) and c) above for details on the effect on the model results. These responses highlight that the conclusion of the model is not likely to be affected by changing the values raised in your comment. Our economic model showed that MRI is the most cost effective strategy so the Guideline Development Group do not agree it is unlikely to be cost effective. Point e): The recommendation has been revised to state "Consider MRI for first-line imaging in people with suspected scaphoid fractures **following a thorough clinical examination**". Point f): In making their recommendation the Guideline Development Group considered that MRI imaging may result in over diagnosis of some minor injuries which may lead to a few unnecessary fracture clinic visits. This was tested in a sensitivity analysis and was found to have no impact on the results of the economic model. Point g): The recommendation has been revised to state "Consider MRI for first-line imaging in people with suspected scaphoid fractures **following a thorough**

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						clinical examination". The Guideline Development Group believe that this addition will ensure that scaphoid images are only performed where there are clinical signs and symptoms that indicate a possible scaphoid fracture. Point h): The guideline did not cover a question on the management of patients after diagnosis of a scaphoid fracture so the Guideline Development Group have not commented on this. While the Guideline Development Group thought MRI is the best option for first line imaging a weaker recommendation ('consider MR imaging…') was written reflecting the low quality of evidence and the group's discussions.
99	British Society for Surgery of the Hand (BSSH)	General	General		3. Dorsally displaced distal radius fractures: a) the Society would suggest that the most important consideration for intra-articular fractures which require operative fixation is that the fracture fixation is performed by a surgeon who is experienced in the management of these fractures in a suitably equipped and staffed operating theatre. The Society believes this is more important than stipulating that surgery is performed within 72 hours, which is not always appropriate and might be inferred from your guidelines; *b)* in section 1.4.6 would "*closed reduction of the radiocarpal joint surface"* read better and be more accurate than *"closed reduction of the radiocarpal joint";* c) your draft guidelines mention evidence that internal fixation of these fractures with a plate may allow a faster recovery of hand function in the first 6-12 weeks after injury. This concurs with the clinical practice of our members. Thus, although we agree that all patients requiring	Thank you for your comment (a) regarding the timing of surgery for intra-articular fractures. The Guideline Development Group used expert consensus to recommend that surgery for these fractures occurs within 72 hours because of their belief that reduction may become more difficult due to the risk of developing organised haematoma, and that this may therefore result in worse patient outcomes. The Guideline Development Group agree that adhering to this recommendation should not undermine the quality of treatment provided, and that suitably trained staff and equipped operating theatres should be available. Thank you for your comment (b) regarding section 1.4.6. The Guideline Development Group agree and we have amended the wording of this recommendation accordingly. Thank you for your comment (c) regarding discussing alternative treatment options. The Guideline Development Group considered all of the clinical evidence comparing K-wire fixation and internal fixation and felt that K-wire fixation was as effective as internal fixation, and was also available at a significantly lower

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					surgical fixation should be offered K-wire fixation, alternative options should also be discussed and offered, if more appropriate to the patient's domestic and work circumstances; d) a suggestion for future research would be to establish and quantify the impact of the radiographic characteristics of the fracture (i.e. dorsal angulation, step in joint surface) on the functional and cosmetic outcomes. We thank you for inviting us to comment and hope this feedback is useful.	cost. Only the most cost-effective option is recommended. Thank you for your comment (d) about future research. In this guideline we did not prioritise a review question on the association between radiographic characteristics and patient outcomes, and therefore cannot prioritise this area for a research recommendation.
24	British Society of Interventional Radiology	Full	General	General	No comments on behalf of BSIR	Thank you for your response.
102	Chief Fire Officers Association	Short	General		We feel that the management of complex fractures in the pre-hospital setting is beyond the current scope of practice for Fire and Rescue Service personnel.	Thank you for your comment. The 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.
103	Chief Fire Officers Association	Short	4		[p4-6] Question 1: The identification and initial management of complex fractures, particularly where there is a considerable amount of soft tissue damage and wound contamination, would be challenging to implement for the Fire and Rescue Service. However, early identification and use of a pelvic binder could help considerably in patient outcomes.	Thank you for your comment. NICE guidelines make recommendations for the NHS and it is outside of the scope of this guideline to specify who carries out specific tasks. The 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		[p4-6] Question 2: Having the appropriate training, equipment and guidance for firefighters to manage these injuries and have access to the appropriate equipment, would help enormously in initial patient management and on-going patient care.	Thank you for your comment. NICE guidelines make recommendations for the NHS and it is outside of the scope of this guideline to specify who carries out specific tasks. The 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.
95	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.

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					I wish to confirm that the Department of Health has no substantive comments to make, regarding this consultation.	
93	John Radcliffe Hospital	Full	General	General	With the well documented improved quality of care in the neck of femur fractures population I am disappointed that other mobility limiting fractures in the elderly have not been considered in these guidelines. Allowing this group of patients to continue to receive second rate care is unacceptable.	Thank you for your comment. Unfortunately, we could not cover all areas for all fractures. Instead of tracing the pathway of a single injury, the guideline topics were chosen to inform various stages on a notional pathway of patient care. Fragility fractures were seen to be covered on this notional pathway by the hip fracture guideline.
25	Leeds Teaching Hospital NHS Trust (Leeds Major Trauma Centre) & West Yorkshire Major Trauma Network (WYMTN)	Full	46	18	The guidance recommends no NSAIDS in older adults. RCEM guidance from Dec 2014 suggests NSAIDS can be used with caution in older adults and may mean reduced opiate requirements. The RCEM wording is perhaps more appropriate - the benefits of short term NSAID use in selected older patients probably outweighs the risks.	Thank you for your comment. This was an area that was debated extensively and voted on by the GDG. The decision to recommend against the use of NSAIDs was the favoured option. While certain groups of older patients could benefit from the safe administration of NSAIDs, identifying these patients was difficult. Overall, they believed that the risks outweighed the benefits because of the seriousness of the potential adverse events. Therefore, they felt it would be safer to not recommend the use of NSAIDs in frail or older patients. Moreover, this is in accordance with the guidance in the NICE hip fracture guideline (CG124), which covers a group of patients similar to the patients discussed in this fractures guideline. There are other options to ensure that frail older adults have adequate pain relief.
26	Leeds Teaching Hospital NHS Trust (Leeds Major Trauma Centre) & West Yorkshire Major Trauma Network (WYMTN)	Full	46	29	Following a normal x-ray MRI is recommended as the next line investigation in the assessment of scaphoid fractures. There is no mention of isotope bone scanning in the investigation of scaphoid fractures. Should this be added as an option to be considered? In addition, whilst recognising that CT is clinically effective and involves minimal radiation the guidance does not seem to support CT as an alternative. Whilst we recognise the effectiveness of MRI, the capacity to provide this service does not exist in many organisations.	Thank you for your comment. The Guideline Development Group considered the clinical evidence and the economic model findings to inform their recommendation, including consideration of the quality of the clinical evidence. Both x-ray followed by MRI and CT were considered, MR imaging was found to be the most clinically and cost effective first line imaging strategy. The Guideline Development Group did not include isotope bone scanning as an intervention to be considered in this review as they believed it to be less

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						accurate in identifying scaphoid fractures than other imaging strategies and is associated with high levels of radioactivity. The Guideline Development Group discussed the impact this recommendation may have on services. They also note in the section on 'Recommendations and links to evidence in the full version of the guideline that MRIs should only be considered after a thorough examination to ensure that it is not used in people who are unlikely to have a scaphoid injury. While the Guideline Development Group thought MRI is the best option for first line imaging a weaker recommendation ('consider MR imaging…') was written reflecting the low quality of evidence and the GDG's discussions. This recommendation has been highlighted as having a potential impact on services. The issues are discussed in respective sections on 'Research and links to evidence' in the full version of the guideline. The Guideline Development Group anticipate that change would occur over a period of time and not happen immediately. In addition, 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.
27	Leeds Teaching Hospital NHS Trust (Leeds Major Trauma Centre) & West Yorkshire Major Trauma Network (WYMTN)	Full	46	31	Radiology reports prior to ED discharge: This may be logistically challenging in many trusts without a significant increase in reporting resource and will be likely to compromise performance against the Emergency Care Standard. The evidence seems slim and we would highlight concerns that seeking rapid reporting may miss the benefits of an unhurried, carefully considered report in the cold light of day. Perhaps a better solution would be defining clear guidelines for the timing of x-ray reporting and the necessity of effective feedback mechanisms to the ED.	Thank you for your comment. The Guideline Development Group considered the clinical evidence, which was taken from a high quality UK-based randomised clinical trial, when making their recommendation. The evidence indicated that hot reporting is associated with improved clinical outcomes and is more cost-effective than cold reporting of radiographs. The Guideline Development Group discussed the impact that this recommendation may have on services. Further detail of this discussion has been included in the section on 'Recommendations and links to evidence in the full version of the guideline.

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						This recommendation has been highlighted as having a potential impact on services. 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. The Guideline Development Group agree that any healthcare professional providing the definitive report of radiographs should be appropriately trained and resourced and should adhere to the standards of the Royal College of Radiologists.
28	Leeds Teaching Hospital NHS Trust (Leeds Major Trauma Centre) & West Yorkshire Major Trauma Network (WYMTN)	Full	46	34	*Analgesia for the manipulation of distal radial fractures* Bier's blocks are heavily favoured but without apparent recognition of the resource implications in terms of medical supervision. Many EDs do not currently use Bier's blocks. Haematoma block should be recognised as a pragmatic compromise.	Thank you for your comment. Our recommendation is based on the best available evidence. Bier's block was shown to be the most effective treatment, but the strength of the recommendation reflects that there is uncertainty. There was also evidence to recommend against the use of nitrous oxide and oxygen alone. However, we did not identify evidence to make any statement on the other options The guideline details the costs included in the consideration of cost effectiveness for this question and highlights that Bier's block requires an additional registrar to apply the double cuff, while the other performs the intravenous injection. The analysis also includes the cost of nurse provision for monitoring purposes. These costs were considered in conjunction with evidence that showed an increase in the need for surgical fixation when haematoma blocks were used and the Guideline Development Group agreed that Bier's blocks were cost effective.
29	Leeds Teaching Hospital NHS Trust (Leeds Major Trauma Centre) & West Yorkshire Major Trauma Network (WYMTN)	Full	145	1	The views on conscious sedation are interesting and appear to be based on opinion rather than evidence: "There was no evidence for conscious sedation but the Guideline Development Group believed it to be no more effective than a haematoma block".	Thank you for your comment. Our recommendation is based on the best available evidence. Bier's block was shown to be the best option but the strength of the recommendation reflects that there is uncertainty. There was also evidence to recommend against the use of nitrous oxide and oxygen alone. However, we did not identify evidence to make any statement on the

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					"Despite the further review showing that the adverse effects of conscious sedation were unlikely to outweigh any benefits of this approach, the clinical review found no clinical evidence for the efficacy of conscious sedation. The Guideline Development Group consensus was therefore that there was insufficient evidence to be able to make a recommendation for this technique. Furthermore, the Guideline Development Group felt that the potential risk of serious adverse events might be too high when an anaesthetist is not present to oversee the procedure, and that this may not have been reflected in the new evidence" These statements appear to be at odds with the published RCEM / RCoA guidance on safe sedation within the ED.	other options.
30	Leeds Teaching Hospital NHS Trust (Leeds Major Trauma Centre) & West Yorkshire Major Trauma Network (WYMTN)	Full	47	5	Unimalleolar ankle fractures - immediate weight bearing The guidance recommends that Weber A & B fractures of the ankle do not require a period of non-weight bearing but are not clear on what support should be provided	Thank you for your comment. We have clarified this recommendation so that it is clear it relates to orthopaedic management. This review question evaluated weight bearing strategies only, and therefore we did not evaluate additional support that should be provided following discharge.
31	Leeds Teaching Hospital NHS Trust (Leeds Major Trauma Centre) & West Yorkshire Major Trauma Network (WYMTN)	Full	49	28	Face to face follow up The guidance appears to recommend against the use of 'virtual' fracture clinics despite citing some evidence in support of them - further clarity is needed.	Thank you for your comment. We have removed this recommendation to avoid this interpretation. There was an absence of evidence looking at the effectiveness of virtual fracture clinics so we have made a research recommendation to investigate their effectiveness.
32	Leeds Teaching Hospital NHS Trust (Leeds Major Trauma Centre) & West Yorkshire Major Trauma Network (WYMTN)	Full	49	14	Patients and images The guidance recommends that people should be given the opportunity to see images of their injury taken before and after treatment. The supporting text states that this should be easy on the ward as most wards have mobile devices that would allow this. This would not be the case in most EDs and no evidence is presented to support this	Thank you for your comment. The Guideline Development Group discussed that most patients like to see their images. There is also value in showing this image to demonstrate what has happened when a bone has been fractured, and to demonstrate that the bone is normal if it has not been fractured. The Guideline Development Group discussed the possibility that some units may not have a portable device available to do

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					approach. The guidance should recognise that this may not be practical in the majority of emergency department.	this, and believed that in this case clinicians should be able to provide a hard copy of the image. This discussion is summarised in the section on 'Recommendations and links to evidence in the full version of the guideline. The costs of this were considered and the Guideline Development Group believed that providing hard copies would incur a minimal cost where portable displays are not available.
91	MSD UK	Short	6	1	MSD welcomes the opportunity to review and comment on the Clinical Guideline for 'Fractures (non-complex): assessment and management. MSD would like to provide comments on the diagnosis of a fracture (under section 1.2 Acute Stage assessment and diagnostic imaging), we believe it is in the interest of patient care for health care professionals to consider the use of DEXA scans to identify the underlying risk factors related to the fracture at the acute stage, which would facilitate the effective, long-term management of conditions such as osteoporosis to prevent recurrent fractures and minimise the impact on NHS resources.	Thank you for your comment. Identifying underlying risk factors related to fractures was not prioritised as an issue to cover in the guideline.
92	MSD UK	Short	9	26	MSD believes there is further opportunity for the guideline to strengthen the recommendations under section 1.5 related to 'Documentation, information and support'. A key responsibility for the initial healthcare professionals is to provide a full report of the patient's diagnosis and management plan to the GPs, as highlighted in section 1.5.4. We agree with this recommendation to facilitate the optimal rehabilitation for patients and effectively minimise the longer-term risk of recurrent fractures. As such, we strongly recommend that treatment recommendations for patients with osteoporosis are cross referenced within this section (i.e. TA160, TA161, TA204).	Thank you for your comment. The management of pathological conditions is not covered by this guideline. The short version of the guideline now provides a link to the relevant section on NICE's web page.
82	NHS England	Short	4	12	I appreciate you have focused upon pharmacological pain relief but should the guide not point out that fracture splinting gives the most effective pain relief. I've just realised that it does so later. Perhaps you could alter the order so that it follows the sequence that occurs in clinical practice?	Thank you for this. Thank you for your comments. We have moved the splinting recommendation up the order so that it precedes femoral nerve blocks. Pain assessment and pharmacological pain management have been placed first as it applies to all patients whereas splinting, which immediately follows this, only applies to those with a long bone fracture of the leg.
83	NHS England	Short	5	19	This means that patients are given a nerve block before	Thank you for your comment, The Guideline

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					diagnosis is confirmed. It may result in children with a bruised thigh having a nerve block and then being admitted. Surely the diagnosis should be confirmed first?	Development Group believe that a femoral nerve block is an effective analgesic approach if the child is in severe pain, and that pain management should be based on the child's pain at presentation. Moreover, in practice displaced femoral fractures are rarely diagnosed incorrectly.
84	NHS England	Short	5	22	See comment 1 above. Consider moving this to the top.	Thank you for your comments. We have moved the splinting recommendation up the order so that it precedes femoral nerve blocks. Pain assessment and pharmacological pain management have been placed first as it applies to all patients whereas splinting, which immediately follows this, only applies to those with a long bone fracture of the leg.
85	NHS England	Short	6	9	Do you really mean this? It is not the conclusion of the studies quoted in the full guideline. The issue in the Emergency Department is that patients are not differentiated. They have a painful wrist injury. All could be suspected of having a scaphoid fracture. If interpreted as written, all of this group would need an urgent MRI as first line imaging. Thus, every ED in the country would require immediate access to MRI, 24/7. On a winter, icy day in a busy department, this would involve over 100 MRI scans so you would actually needs 3 MRI scanners just for ED. This is simply not a realistic prospect. I suspect that what you really mean is, "MRI is the next line of investigation for patients with clinical suspicion of scaphoid fracture and normal wrist or scaphoid X-rays".	Thank you for your comment. The Guideline Development Group considered the evidence for X-ray as primary imaging for suspected scaphoid fractures and found it to be less clinically and cost-effective than MR imaging as the first line investigation. The Guideline Development Group discussed the impact this recommendation may have on services. They also note in the section on 'Recommendations and links to evidence in the full version of the guideline that MRIs should only be considered after a thorough examination to ensure that it is not used in people who are unlikely to have a scaphoid injury. This has also been added this to the recommendation to make it clear. The economic model showed that the cost of an MRI scan can increase to over £300 and still remain cost effective, which more than accounts for out-of-hours costs assuming 24/7 access is required as per your comment. Given that a thorough examination is recommended to identify those who require an MRI scan, the number of people imaged is not likely to require such a large service change as that alluded to in your comment. The Guideline Development Group believes that a reconfiguration may be achievable within current resource use for imaging by utilising extremity scanners that have lower capital and operating costs. While the Guideline Development

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						Group thought MRI is the best option for first line imaging a weaker recommendation ('consider MR imaging…') was written reflecting the low quality of evidence and the GDG's discussions.
86	NHS England	Short	7	16	This is a tough target and will have a lot of resource implications, particularly at busy times such as an icy day. However, I have no doubt that this will improve the quality of care for patients.	Thank you for your comment.
87	NHS England	Short	9	21	Should you flag that very young children with femur fracture are likely to have non-accidental injury? PS. I see you cover this in 1.5.10 but it is so important that you might consider moving the section on NAI.	Thank you for your comment. We have moved this recommendation so that it follows the recommendation on treatment of femoral fractures.
88	NHS England	Short	10	2	Plain English is important but has its limitations in medical records, which need to be a precise description of the injury and its treatment and these precise words do not necessarily exist in plain English. Basically, you have three audiences: The patient, the GP and the medical team treating the patient. Each requires something different from this record but producing 3 different records for each clinic attendance would require a triplication of admin and is not practical	Thank you for your comment. We have amended the point on plain English to state "including a summary written in plain English understandable by patients, family members and carers". This should allow the report to provide information of use to both clinicians and the patient.
89	NHS England	Short	11	20	I believe you should give information on two specific things 1. Target for return to work. This is helpful for patients, physiotherapists, GPs and employers. 2. Estimated return to driving.	Thank you for your comment. The Guideline Development Group agree that it would be useful for patients to receive guidance about when they are likely to be able to return to work and to driving. They believe that these activities are covered by the recommendation 'expected outcomes of treatment, including time to returning to usual activities'. The term 'usual activities' was picked to cover any activity that is important to the patient, not just driving and work.
100	North Bristol NHS Trust	Full	119	22	**Fractures** **7.4.6 Recommendations** **Line 10. A radiologist, radiographer or other trained reporter should deliver the definitive written report of emergency department X-rays of suspected fractures before the patient is discharged from the emergency department.** Implications for the radiologists and ED.	Thank you for your comment. The Guideline Development Group considered the clinical evidence, which was taken from a high quality UK-based randomised clinical trial, when making their recommendation. The evidence indicated that hot reporting is associated with improved clinical outcomes and is more cost-effective than cold reporting of radiographs. The Guideline Development Group agree that any healthcare professional providing the definitive report of radiographs should be appropriately trained

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					This is unlikely to be helpful as not all emergency radiologists will have musculoskeletal expertise and may increase the incidence of erroneous reports thereby compounding the problem. A better recommendation would be a definitive report within 24 hours of the attendance with a robust local feedback system.	and should adhere to the standards of the Royal College of Radiologists. This is discussed in the section on 'Research and links to evidence' in the full version of the guideline where we have amended the wording to clarify this further. This recommendation has been highlighted as having a potential impact on services. The issues are discussed in respective sections on 'Research and links to evidence' in the full version of the guideline. In addition, 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.
101	North Bristol NHS Trust	Full	184	13	**9.4.6 Recommendations and link to evidence** **17. When needed for distal radius fractures, perform surgery:** **-within 72 hours of injury for intra-articular fractures** **-within 7 days of injury for extra-articular fractures.** **18. When needed for re-displacement of distal radius fractures, perform surgery within 72 hours of the decision to operate.** There is no rationale for the choosing of 72hours. This needs to read as a recommendation not the mandate that it currently reads (i.e. '…consider performing surgery'). This will lead to litigation and huge, unnecessary risk in this regard without conferring patient advantage.	Thank you for your comment. As no published evidence was identified for this question, the Guideline Development Group used expert consensus to inform their recommendation. The Guideline Development Group discussed the potential risks and benefits of different timings of surgery for intra- and extra-articular fractures of the distal radius. A summary of this discussion is provided in the section on 'Recommendations and links to evidence in the full version of the guideline. Despite the lack of clinical evidence, the Guideline Development Group felt that this was too urgent an issue for a research recommendation. It was felt that at present many intra-articular distal radius surgeries are carried out too late leading to possibly poorer outcomes. Such delays were usually made for non-clinical reasons. It was therefore felt that a clinical recommendation was needed to encourage a change in practice. The time frames suggested are based upon clinical experience, knowledge of physiological healing times, and consideration of what is achievable within current practice.
33	North Devon District Hospital	Full	111	14	Is there a role for immediate plane radiograph as the primary investigation, followed by MRI if the radiographs do not demonstrate a fracture? I think the availability of MRI	Thank you for your comment. The Guideline Development Group considered the evidence for using x-ray as the first line imaging for suspected scaphoid

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					(especially out of hours) is very limited at present and will present material difficulty in implementing this.	fractures, which indicated that this strategy is less clinically and cost-effective than using MRI as the first line image. The Guideline Development Group discussed the impact this recommendation may have on services. They also note in the section on 'Recommendations and links to evidence in the full version of the guideline that MRIs should only be considered after a thorough examination to ensure that it is not used in people who are unlikely to have a scaphoid injury. While the Guideline Development Group thought MRI is the best option for first line imaging a weaker recommendation ('consider MR imaging…') was written reflecting the low quality of evidence and the GDG's discussions. This recommendation has been highlighted as having a potential impact on services. The issues are discussed in respective sections on 'Research and links to evidence' in the full version of the guideline. The Guideline Development Group anticipate that change would occur over a period of time and not happen immediately. In addition, 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	North Devon District Hospital	Full	114	1	Hot reporting has potential to improve quality of care for patients and reduce unnecessary clinic visits. However, I think this will be very difficult to implement because of lack of resources.	Thank you for your comment. The Guideline Development Group considered the clinical evidence, which was taken from a high quality UK-based randomised clinical trial, when making their recommendation. The evidence indicated that hot reporting is associated with improved clinical outcomes and is more cost-effective than cold reporting of radiographs. The Guideline Development Group discussed the impact that this recommendation may have on services. Further detail of this discussion has been included in the 'Research and links to evidence' section of the full version of the guideline.

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						This recommendation has been highlighted as having a potential impact on services. The issues are discussed in respective sections on 'Research and links to evidence' in the full version of the guideline. In addition, 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.
35	Optasia Medical	Short	9	18	We are concerned that the guideline does not cover conditions predisposing to fractures e.g. osteoporosis. A presenting fracture to A&E may have occurred when falling from less than standing height i.e. a fragility fracture due to underlying osteoporosis or low bone density. Not all patients presenting to A&E departments can be assumed to have traumatic fractures; many present with fragility fractures (defined as a fracture occurring after a fall from less than standing height). However, these patients are often sent home after management of the acute event without any assessment, or referral for assessment, of the underlying chronic cause, representing a significant missed opportunity for intervention in their osteoporotic fracture journey. We would like the guideline to more explicitly state that it is for traumatic fractures, and that not all presenting fractures should be assumed to be traumatic. For example, the Context on p15 of the Short Guideline does not use the word trauma, or traumatic at all. We acknowledge, however, that it does exclude conditions predisposing to fractures including osteoporosis on p16 line 2-3.	Thank you for your comment. Because other NICE guidance cover these conditions they have not been included here as well. Guidelines covering these conditions include osteoporosis (https://www.nice.org.uk/guidance/cg146), Osteoarthritis (https://www.nice.org.uk/guidance/cg177), Hip fracture (https://www.nice.org.uk/guidance/cg124), . The Guideline Development Group believe the guideline is clear when using the term 'fracture'. Some of the guidance written could apply to fragility fractures too.
67	RNIB	General	General		RNIB is pleased to have the opportunity to respond to this consultation	Thank you for your comment.
68	RNIB	General	General		We would also like the following statement to be included: There is a higher risk of fractures in older people with sight loss than their sighted peers, and the risks of fractures due to falls can be reduced considerably through various interventions such as home adjustments and safety changes.	Thank you for your comment. Falls risk and prevention was excluded from the guideline as it is covered in another NICE guideline (http://www.nice.org.uk/guidance/cg161). Consequently, we have not made recommendations in this relating to falls in this guideline.

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36	Royal College of Emergency Medicine	Full	46	18	The guidance recommends no NSAIDS in older adults. RCEM guidance from Dec 2014 suggests NSAIDS can be used with caution in older adults and may mean reduced opiate requirements. The RCEM wording is perhaps more appropriate - the benefits of short term NSAID use in selected older patients probably outweighs the risks.	Thank you for your comment. This was an area that was debated extensively and voted on by the GDG. The decision to recommend against the use of NSAIDs was the favoured option. While certain groups of older patients could benefit from the safe administration of NSAIDs, identifying these patients was difficult. Overall, they believed that the risks outweighed the benefits because of the seriousness of the potential adverse events. Therefore, they felt it would be safer to not recommend the use of NSAIDs in frail or older patients. Moreover, this is in accordance with the guidance in the NICE hip fracture guideline (CG124), which covers a group of patients similar to the patients discussed in this fractures guideline. There are other options to ensure that frail older adults have adequate pain relief.
37	Royal College of Emergency Medicine	Full	46	29	Following a normal x-ray MRI is recommended as the next line investigation in the assessment of scaphoid fractures. There is no mention of isotope bone scanning in the investigation of scaphoid fractures. Should this be added as an option to be considered? In addition, whilst recognising that CT is clinically effective and involves minimal radiation the guidance does not seem to support CT as an alternative. Whilst we recognise the effectiveness of MRI, the capacity to provide this service does not exist in many organisations.	Thank you for your comment. The Guideline Development Group considered the clinical evidence and the economic model findings to inform their recommendation, including consideration of the quality of the clinical evidence. Both x-ray followed by MRI and CT were considered, MR imaging was found to be the most clinically and cost effective first line imaging strategy. The Guideline Development Group did not include isotope bone scanning as an intervention to be considered in this review as they believed it to be less accurate in identifying scaphoid fractures than other imaging strategies and is associated with high levels of radioactivity. The Guideline Development Group discussed the impact this recommendation may have on services. They also note in the section on 'Recommendations and links to evidence in the full version of the guideline that MRIs should only be considered after a thorough examination to ensure that it is not used in people who are unlikely to have a scaphoid injury. While the Guideline Development Group thought MRI is the best option for first line imaging a weaker recommendation

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						('consider MR imaging…') was written reflecting the low quality of evidence and the GDG's discussions. This recommendation has been highlighted as having a potential impact on services. The issues are discussed in respective sections on 'Research and links to evidence' in the full version of the guideline. The Guideline Development Group anticipate that change would occur over a period of time and not happen immediately. In addition, 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.
38	Royal College of Emergency Medicine	Full	46	31	Radiology reports prior to ED discharge: This may be logistically challenging in many trusts without a significant increase in reporting resource and will be likely to compromise performance against the Emergency Care Standard. The evidence seems slim and we would highlight concerns that seeking rapid reporting may miss the benefits of an unhurried, carefully considered report in the cold light of day. Perhaps a better solution would be defining clear guidelines for the timing of x-ray reporting and the necessity of effective feedback mechanisms to the ED.	Thank you for your comment. The Guideline Development Group considered the clinical evidence, which was taken from a high quality UK-based randomised clinical trial, when making their recommendation. The evidence indicated that hot reporting is associated with improved clinical outcomes and is more cost-effective than cold reporting of radiographs. The Guideline Development Group discussed the impact that this recommendation may have on services. Further detail of this discussion has been included in the section on 'Recommendations and links to evidence in the full version of the guideline. This recommendation has been highlighted as having a potential impact on services. 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. The Guideline Development Group agree that any healthcare professional providing the definitive report of radiographs should be appropriately trained and resourced and should adhere to the standards of the Royal College of Radiologists.
39	Royal College of	Full	46	34	*Analgesia for the manipulation of distal radial fractures*	Thank you for your comment. Our recommendation is

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	Emergency Medicine				Bier's blocks are heavily favoured but without apparent recognition of the resource implications in terms of medical supervision. Many EDs do not currently use Bier's blocks. Haematoma block should be recognised as a pragmatic compromise.	based on the best available evidence. Bier's block was shown to be the most effective treatment, but the strength of the recommendation reflects that there is uncertainty. There was also evidence to recommend against the use of nitrous oxide and oxygen alone. However, we did not identify evidence to make any statement on the other options The guideline details the costs included in the consideration of cost effectiveness for this question and highlights that Bier's block requires an additional registrar to apply the double cuff, while the other performs the intravenous injection. The analysis also includes the cost of nurse provision for monitoring purposes. These costs were considered in conjunction with evidence that showed an increase in the need for surgical fixation when haematoma blocks were used and the Guideline Development Group agreed that Bier's blocks were cost effective.
40	Royal College of Emergency Medicine	Full	145	1	The views on conscious sedation are interesting and appear to be based on opinion rather than evidence: "There was no evidence for conscious sedation but the Guideline Development Group believed it to be no more effective than a haematoma block". "Despite the further review showing that the adverse effects of conscious sedation were unlikely to outweigh any benefits of this approach, the clinical review found no clinical evidence for the efficacy of conscious sedation. The Guideline Development Group consensus was therefore that there was insufficient evidence to be able to make a recommendation for this technique. Furthermore, the Guideline Development Group felt that the potential risk of serious adverse events might be too high when an anaesthetist is not present to oversee the procedure, and that this may not have been reflected in the new evidence" These statements appear to be at odds with the published RCEM / RCoA guidance on safe sedation within the ED.	Thank you for your comment. Our recommendation is based on the best available evidence. Bier's block was shown to be the best option but the strength of the recommendation reflects that there is uncertainty. There was also evidence to recommend against the use of nitrous oxide and oxygen alone. However, we did not identify evidence to make any statement on the other options.

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41	Royal College of Emergency Medicine	Full	47	5	Unimalleolar ankle fractures - immediate weight bearing The guidance recommends that Weber A & B fractures of the ankle do not require a period of non-weight bearing but are not clear on what support should be provided	Thank you for your comment. We have clarified this recommendation so that it is clear it relates to orthopaedic management. This review question evaluated weight bearing strategies only, and therefore we did not evaluate additional support that should be provided following discharge.
42	Royal College of Emergency Medicine	Full	49	28	Face to face follow up The guidance appears to recommend against the use of 'virtual' fracture clinics despite citing some evidence in support of them - further clarity is needed.	Thank you for your comment. We have removed this recommendation to avoid this interpretation. There was an absence of evidence looking at the effectiveness of virtual fracture clinics so we have made a research recommendation to investigate their effectiveness.
43	Royal College of Emergency Medicine	Full	49	14	Patients and images The guidance recommends that people should be given the opportunity to see images of their injury taken before and after treatment. The supporting text states that this should be easy on the ward as most wards have mobile devices that would allow this. This would not be the case in most EDs and no evidence is presented to support this approach. The guidance should recognise that this may not be practical in the majority of emergency department.	Thank you for your comment. The Guideline Development Group discussed that most patients like to see their images. There is also value in showing this image to demonstrate what has happened when a bone has been fractured, and to demonstrate that the bone is normal if it has not been fractured. The Guideline Development Group discussed the possibility that some units may not have a portable device available to do this, and believed that in this case clinicians should be able to provide a hard copy of the image. This discussion is summarised in the section on 'Recommendations and links to evidence in the full version of the guideline. The costs of this were considered and the Guideline Development Group believed that providing hard copies would incur a minimal cost where portable displays are not available.
45	Royal College of Nursing	General	General	General	The Royal College of Nursing (RCN) welcomes proposals to develop this clinical guidance. The RCN invited members of the RCN Society of the Orthopaedics and Theatre Nursing, Emergency Care Association and Acute Care Nursing to review the draft consultation document. The comments below include comments from our members.	Thank you for your comments.
46	Royal College of Nursing	General	General	General	Our members consider that the draft guidelines seem appropriate.	Thank you for your comment.
47	Royal College of Nursing	General	General	General	They consider that it would be better to have separate guidelines for adult and child treatments rather than having the guidelines mixed up all together mixed throughout the	Thank you for your comment. The guidelines were commissioned on the basis it applied to all ages which is why there is one guideline.

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					document. Adult and children sections of the guideline would be more appropriate and would save time and effort when seeking guidelines specific for an adult or a child without having to search the whole document to find the area you are looking for. If the treatment was the same then it would be acceptable to have the whole document mixed but some treatments are completely and appropriately different. One example is analgesia (page 5 line 1), it is recommended that Codeine can be used for moderate pain (for adults over 16 years). Codeine cannot be administered to children. It is only when one reads further down that the guidelines tells you what to give a child for moderate pain. Documents like these need to be fool proof so that when clinicians are working outside of their normal remit they have the best advice readily and available to hand.	The Guideline Development Group felt the current structure was better mixed together because some recommendations apply to both adults and children while in others adults and children are managed differently. Where recommendations are different we have marked them clearly as adults and children. We have also been careful to add the population into individual recommendations.
48	Royal College of Nursing	Short	6	27	This would suggest that no protection is applied. Should the recommendation be to apply a futura splint in preference to a rigid cast?	Thank you for your comment. The clinical review did not find evidence for the type of splint to be used for torus fractures of the distal radius in children. Therefore, the Guideline Development Group decided to make a research recommendation in this area.
49	Royal College of Nursing	Short	7	17	7 days seems a long time for fracture management? It would be helpful to add the rationale for this recommendation.	Thank you for your comment. The Guideline Development Group chose to recommend that surgery for these fractures is performed early, and believe that 7 days will be the maximum safe delay.
50	Royal College of Nursing	Short	7	22	Should this not be a back slab initially?	Thank you for your comment. The clinical evidence review did not consider evidence comparing cast type and can only make reference to generic plaster casts.
51	Royal College of Nursing	Short	7	5	Our members consider that it would be helpful to add a recommendation on what non weight bearing apparatus to use. This would aid consistent practice.	Thank you for your suggestion. This review question did not evaluate the best apparatus to support non weight bearing, and therefore it is not possible to make a recommendation on this in this guideline.
52	Royal College of	Short	10	7	Need to expand on this to say what the patient would want	Thank you for your comment. This recommendation is

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	Nursing				someone with them for – e.g for treatment and/or Discharge?	in line with the patient experience guideline (CG138) where it is recommended that clinicians clarify with the patient at the first point of contact whether and how they would like other people to be involved (see recommendations 1.3.10 & 1.3.11 in https://www.nice.org.uk/guidance/cg138/ for more information). There could be a variety of reasons each as important at the other. The Guideline Development Group feel that adding more text will not make the recommendation clearer.
53	Royal College of Nursing	Short	11	4	This could be better linked with 1.5.16 as the written information will likely discuss further investigations, diagnosis and prognosis.	Thank you for your comment. The recommendations and order were extensively discussed during development. There was some inevitable overlap but the Guideline Development Group felt this was acceptable to ensure all points were listed. This recommendation is about how to communicate 1.5.16 is about the content to include.
54	Royal College of Nursing	Short	14	7	Access to the required healthcare personnel is important. 7 day working for relevant healthcare personnel would require more resources to enable implementation.	Thank you for your comment. The Guideline Development Group agree that more resources will be required to implement some recommendations. The issues are discussed in respective sections on 'Research and links to evidence' in the full version of the guideline. In addition, these issues have been raised with the Resource Impact Assessment team at NICE that 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	Royal College of Nursing	Short	18	1	If CT scan would be required for this treatment at any time, there would need to be some guidelines around this.	We are sorry but we are not sure we understand your comment. Within this context section we mention diagnostic imaging as a whole without making reference to any specific modality. CT imaging was considered for imaging questions but the only recommendation we have made is a research recommendation relating to ankle fractures where the

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						evidence on the most effective modality was inconclusive.
94	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 *Fractures*. We have not received any responses for this consultation.	Thank you for your comment.
130	Sheffield Teaching Hospital NHS Foundation Trust	Short	6	9	Sending every patient with a suspected scaphoid fracture for an MRI would be extremely resource intensive. All of our suspected scaphoid fractures from the ED are being seen in fracture clinic in the first instance and this pathway works well.	Thank you for your comment. The Guideline Development Group considered the evidence for X-ray as primary imaging for suspected scaphoid fractures and found it to be less clinically and cost-effective than MR imaging as the first line investigation. The Guideline Development Group discussed the impact this recommendation may have on services. They also note in the section on 'Recommendations and links to evidence in the full version of the guideline that MRIs should only be considered after a thorough examination to ensure that it is not used in people who are unlikely to have a scaphoid injury. While the Guideline Development Group thought MRI is the best option for first line imaging a weaker recommendation ('consider MR imaging…') was written reflecting the low quality of evidence and the GDG's discussions.
131	Sheffield Teaching Hospital NHS Foundation Trust	Short	6	12	Our radiology department are discussing this but this would likely be expensive to implement, especially out of hours. Some ED patients are seen, x rayed and discharged very quickly which would make this standard even more challenging.	Thank you for your comment. The Guideline Development Group discussed the impact that this recommendation may have on services. Further detail of this discussion has been included in the section on 'Recommendations and links to evidence in the full version of the guideline. The Guideline Development Group discussed how this recommendation allows services some flexibility in how they choose to deliver hot reporting. For example, services may choose to provide trained reporters on site or, given the smaller number of patients who present with suspected fractures during the night, services may choose to outsource their hot reporting service overnight. This recommendation has been highlighted as having a potential impact on services. The issues are discussed

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						in respective sections on 'Research and links to evidence' in the full version of the guideline. In addition, 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.
90	St John Ambulance	Full	51	General	Chief Medical Officer and Chief Paramedic Officer state; The contents of the draft guidelines at Section 6 refers to 'Initial pain management and immobilisation'. However, it only deals with pharmacological pain management and does not refer to immobilisation at all. Immobilisation, as well as preventing further damage from an unstable fracture, also contributes to pain management. It may well be beyond the scope of the guideline, but advice on the type and nature of immobilization in the acute care setting (including the first aid and pre-hospital care setting) would be a useful addition,	Thank you for this. We have updated the section heading removing reference to immobilisation. There is a review on the use of splints in long bone fractures in the complex fracture guideline section 9.3. The recommendation written as a result of that review is also included as part of the short version of this guideline. However, as the review was done as part of the complex fracture guideline no report is presented in this document.
69	Stockport NHS Foundation Trust	Short	4	9	Should there be something about handing over with the same pain tool so they can see what the initial person has done	Thank you for your comment. We have recommended this in our pain assessment recommendation
70	Stockport NHS Foundation Trust	Short	5	27	With appropriate padding	Thank you for your comment. The Guideline Development Group agree that all splinting devices should be used appropriately. The GDG also mentioned that vacuum splints do not require additional padding as the splint conforms to the shape of the patient/patients fracture during immobilisation. For the purposes of this review we have only recommended which device to be considered for use and not all the details and training around this.
71	Stockport NHS Foundation Trust	Short	7	17	7 days seems a long time for fracture management	Thank you for your comment. The Guideline Development Group chose to recommend that surgery for these fractures is performed early, and believe that 7 days will be the maximum safe delay.
72	Stockport NHS Foundation Trust	Short	7	22	Should this not be a back slab initially	Thank you for your comment. The clinical evidence review did not consider evidence comparing cast type and can only make reference to generic plaster casts.
73	Stockport NHS Foundation Trust	Short	8	5	Does the paper not need a recommendation on what non weight bearing apparatus to use	Thank you for your suggestion. This review question did not evaluate the best apparatus to support non

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						weight bearing, and therefore it is not possible to make a recommendation on this in this guideline.
74	Stockport NHS Foundation Trust	Short	12		What if amputation is required	Thank you for your comment. Fractures that lead to, or are at a high risk of, amputation are covered by the complex fracture guideline and were excluded from this guideline. Please see guidance on amputation in the complex fractures guideline.
75	Stockport NHS Foundation Trust	Short	14	7	7 day working for all staff more resources would be required	Thank you for your comment. The Guideline Development Group agree that more resources will be required to implement some recommendations. The issues are discussed in respective sections on 'Research and links to evidence' in the full version of the guideline. In addition, these issues have been raised with the Resource Impact Assessment team at NICE that 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.
76	Stockport NHS Foundation Trust	Short	18		Is there any time CT scan would be required if so there needs to be guidelines	We are sorry but we are not sure we understand your comment. Within this context section we mention diagnostic imaging as a whole without making reference to any specific modality. CT imaging was considered for imaging questions but the only recommendation we have made is a research recommendation relating to ankle fractures where the evidence on the most effective modality was inconclusive.
77	The Newcastle upon Tyne Hospital NHS Foundation Trust	Full	47	13	[Recommendation 17] There is no evidence that intra-articular fractures require operation within 72 hrs and extra-articular within 1 week. Surgery should be on an individual clinical basis taking account of resources and skills mix. We cannot be that prescriptive in the management of all wrist fractures and common sense need to be applied	Thank you for your comment. As no published evidence was identified for this question, the Guideline Development Group used expert consensus to inform their recommendation. The Guideline Development Group discussed the potential risks and benefits of different timings of surgery for intra- and extra-articular fractures of the distal radius. A summary of this discussion is provided in the section on

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						'Recommendations and links to evidence in the full version of the guideline. Given the potential risks of delaying surgery, the Guideline Development Group felt that provision should be made to perform surgery early.
44	The Royal College of General Practitioners	Full	General	General	The non-complex fracture guideline is mainly targeted at A&E and orthopaedic colleagues. It had some useful advice about analgesia and was generally well written and informative. I could find no issues or concerns to raise.	Thank you for your comments
56	The Royal College of Radiologists	Full	6	9	The guidelines on early MRI imaging for all suspected scaphoid fractures do not include reference to lack of access to MRI nor do they specify which (maybe all) patients with suspected scaphoid fractures should have an MRI (the unabridged version addresses this at length). The brevity of the recommendation is understandable but it is not clear whether this is a specific enough recommendation to be clinically useful. The UK has a very low number of CT and MRI scanners as compared to other OECD countries, with around 7 MRI scanners per million population: • Germany has 11 MRI per million population • Spain has 15 MRI per million population • France has 9 MRI per million population and this makes timely access for MRI imaging of suspected scaphoid fractures currently undeliverable in most centres. **References:** https://www.cancerresearchuk.org/sites/default/files/horizon_scanning_exec_sum_final.pdf http://www.healthindicators.eu/healthindicators/object_document/o6121n29138.html	Thank you for your comment regarding the resource implications of this recommendation. All discussions are in the full version of the guideline as you point out. It is NICE's policy that only the recommendations are contained in the short version of the guideline. The Guideline Development Group discussed the impact this recommendation may have on services. While the Guideline Development Group thought MRI is the best option for first line imaging based on the clinical evidence and economic model, a weaker recommendation ('consider MR imaging…') was written reflecting the low quality of evidence and GDG's discussions. This recommendation has been highlighted as having a potential impact on services. The issues are discussed in respective sections on 'Research and links to evidence' in the full version of the guideline. The Guideline Development Group anticipate that change would occur over a period of time and not happen immediately. In addition, 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	The Royal College of Radiologists	Full	6	12	'Hot reporting: a definitive report should be delivered before the patient is discharged from the ED'. This is a very reasonable recommendation from a clinical	Thank you for your comment. The Guideline Development Group considered the evidence included in this review, which indicated that hot reporting is more clinically and cost-effective that usual practice. The

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					perspective. It will require significant changes in manpower to deliver - the suggestion that reporting radiographers are appointed to do 24/7 ED reporting (in the unabridged version) does require there to be enough radiographers capable of this throughout the UK, and for there to be sufficient funding for them.	Guideline Development Group discussed the impact that this recommendation may have on services. Further detail of this discussion has been included in the section on 'Recommendations and links to evidence in the full version of the guideline. The Guideline Development Group discussed how this recommendation allows services some flexibility in how they choose to deliver hot reporting. For example, services may choose to provide trained reporters on site or, given the smaller number of patients who present with suspected fractures during the night, services may choose to outsource their hot reporting service overnight. This recommendation has been highlighted as having a potential impact on services. 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.
58	The Royal College of Radiologists	Full	General		We find the guidelines on knee and ankle fractures to be uncontroversial.	Thank you for your comment
59	The Royal College of Radiologists	Full	General		The Royal College of Radiologists believes that the last sentence of this could be worded better. This could be read as meaning that untrained professionals, or those not working in a suitable environment, do not need to adhere to the standards specified by the RCR. The statement should read that "all those providing the definitive written report of radiographs must be appropriately qualified and trained, be working in a suitable environment (quiet, undisturbed, appropriately illuminated and with high quality image display monitors on PACS workstations) and adhere to the standards specified by the RCR." **Reference:** **RCR Position statement on the recording of the identity of healthcare professionals who report imaging investigations.**	Thank you for your comment. We have now amended the wording of this sentence in the 'other considerations' sections of the hot reporting section on 'Recommendations and links to evidence in the full version of the guideline.

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60	The Royal College of Radiologists	Full	General		There will be a significant requirement for numbers of reporting radiographers / radiologists / others able to provide the definitive written report required for trauma radiology, out of hours, that are not currently available. Greater recognition that reporters ("trained" or otherwise) make errors is required. Non medically qualified reporters (e.g. reporting radiographers) may not have the background medical knowledge required to judge the clinical urgency of abnormalities they do identify and may suggest/recommend unnecessary or inappropriate further investigations (e.g. CT or MRI). Non-radiologist reporters should have regular audit of their reporting skill by a suitable radiologist. Increased provision for the training of reporting staff would be required.	Thank you for your comment. The Guideline Development Group discussed the impact that this recommendation may have on services. Further detail of this discussion has been included in the section on 'Recommendations and links to evidence in the full version of the guideline. The Guideline Development Group discussed how this recommendation allows services some flexibility in how they choose to deliver hot reporting. For example, services may choose to provide trained reporters on site or, given the smaller number of patients who present with suspected fractures during the night, services may choose to outsource their hot reporting service overnight. The Guideline Development Group agree that any healthcare professional providing the definitive report of radiographs should be appropriately trained and should adhere to the standards of the Royal College of Radiologists. We have amended the wording to clarify this further. The Guideline Development Group agree that regular audit of health services is important.
61	The Royal College of Radiologists	Full	General		The Nature of trauma, pre-test probability, timing and sequence of imaging, deteriorating NHS financial crisis, Radiologist as well as Radiographer staffing shortages, 24/7 nature of trauma referrals with surges, lack of MRI capacity, and to a lesser extent CT capacity, all should be factored in to these guidelines to ensure they are achievable.	Thank you for your comment. Across the suite of trauma guidelines we have discussed implications to practice for specific recommendations within their respective section on 'Research and links to evidence' in the full version of the guideline. The Guideline Development Group had extensive discussions on the implications of the imaging recommendations to current practice. On balance, while both recommendations have a likely to have a big impact on imaging services the GDG still believed these recommendations are in the best interest of patients.

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						In addition, for the fractures guideline scaphoid imaging and hot reporting have been highlighted as having a potential impact on services. 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.
62	The Royal College of Radiologists	Full	General		MR as the first investigation of suspected scaphoid fracture would avoid the missed fractures but the capacity issue identified above (in the major trauma section) does apply. The UK has a very low number of CT and MRI scanners as compared to other OECD countries, with around 7 MRI scanners per million population: Germany has 11 MRI per million population Spain has 15 MRI per million population France has 9 MRI per million population" **References:** https://www.cancerresearchuk.org/sites/default/files/horizon_scanning_exec_sum_final.pdf http://www.healthindicators.eu/healthindicators/object_document/o6121n29138.html	Thank you for your comment. The Guideline Development Group discussed the impact this recommendation may have on services. While the Guideline Development Group thought MRI is the best option for first line imaging based on the clinical evidence and economic model, a weaker recommendation ('consider MR imaging…') was written reflecting the low quality of evidence and GDG's discussions. This recommendation has been highlighted as having a potential impact on services. The issues are discussed in respective sections on 'Research and links to evidence' in the full version of the guideline. The Guideline Development Group anticipate that change would occur over a period of time and not happen immediately. In addition, 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.
63	The Royal College of Radiologists	Full	General		Some scaphoid fractures are visible on the initial plain radiographs and MR could be then limited to those cases with an initial apparently normal radiograph. I also suspect most treating surgeons would require plain radiographs in addition to the MR in any demonstrated fracture. Joining up the scaphoid imaging advice with the need for an immediate definitive report requires the MR scan to be reported out of hours (by a trained reporter). Some scaphoid fractures are visible if a full series of	Thank you for your comment. The Guideline Development Group noted that a proportion of scaphoid fractures are visible on plain radiographs and will not require MR imaging for diagnosis. However, the evidence included in this review demonstrated that performing an initial X-ray on all people with a suspected scaphoid fracture is not as clinically or cost-effective as using MRI as first line imaging. The Guideline Development Group did not believe that

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					scaphoid radiographic views are performed.	most surgeons would require plain radiographs in addition to the MRI for all fractures. However, the Guideline Development Group noted that this recommendation does not prevent clinicians from ordering additional imaging if required to inform a patient's management plan. A weaker recommendation ('consider MR imaging…') was written reflecting the low quality of evidence and GDG's discussions. Thank you for your comment about the need for out of hours' reporting of MR imaging. This has now been clarified in the section on 'Recommendations and links to evidence in the full version of the guideline.
64	The Royal College of Radiologists	Full	General		In Radiology we see many cases where delayed diagnosis occurs despite repeated re-attendances at healthcare facilities with persistent/ongoing symptoms, despite which no review of the initial radiographs, nor repeat radiology, considered. Immediate definitive reporting of the initial radiographs will not address this. We would recommend that the guidance should include a requirement for persisting symptoms to be radiologically re-investigated.	Thank you for your comment. In this guideline we did not prioritise a review question on effective management of patients with persistent symptoms, and therefore we are not able to make a recommendation on repeat investigations. This question is limited to the hot reporting of initial radiographs in the emergency department.
65	The Royal College of Radiologists	Full	General		The status of the reporter should always be indicated in the report.	Thank you for your comment. The Guideline Development Group believed that all reports completed by healthcare professionals would have their name on and therefore did not feel it was necessary to specify this.
66	The Royal College of Radiologists	Full	General		Many non-trauma peripheral skeletal radiographs are performed from A&E requests. Review and opinion by a radiologist is recommended.	Thank you for your comment. We did not cover non-trauma in this guideline and therefore we cannot make a recommendation for this.
78	The Society and College of Radiographers	Full	46	29	This recommendation will be a challenging change in practice for the management of suspected scaphoid fractures as access to MRI is rarely available on demand and there may be insufficient capacity to provide an adequate service. The timescale within which the imaging should occur requires definition. The alternative suggested imaging should be defined for patients who are not suitable	Thank you for your comment. The Guideline Development Group considered the clinical evidence and the economic model findings to inform their recommendation, including consideration of the quality of the clinical evidence. MR imaging was found to be the most clinically and cost effective first line imaging strategy.

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					for MRI scans due to contraindications or lack of access. The Society and College of Radiographers feels that x-ray should still be first line imaging and those that are negative and still suspected should have MRI. The burden on MRI departments to have all suspected scaphoid injuries scanned would be too high. Capacity; access to scanners – as detailed above many units do not operate 24/7 many units are remote from emergency departments Unrealistic referrer and patient expectations – The Society and College of Radiographers feels that there is not yet enough research to justify this although we are aware of current research being undertaken and that units with extremity scanners in the emergency dept would be able to facilitate this.	The Guideline Development Group discussed the impact this recommendation may have on services. They also note in the section on 'Recommendations and links to evidence in the full version of the guideline that MRIs should only be considered after a thorough examination to ensure that it is not used in people who are unlikely to have a scaphoid injury. While the Guideline Development Group thought MRI is the best option for first line imaging a weaker recommendation ('consider MR imaging…') was written reflecting the low quality of evidence and the GDG's discussions. The review question only addresses the most clinically and cost-effective first line imaging strategy and not issues of timing. More detail about the clinical and cost effectiveness of alternative strategies is in the section on 'Recommendations and links to evidence in the full version of the guideline but the Guideline Development Group only recommend the best option and not alternatives. This recommendation has been highlighted as having a potential impact on services. The issues are discussed in respective sections on 'Research and links to evidence' in the full version of the guideline. The Guideline Development Group anticipate that change would occur over a period of time and not happen immediately. In addition, 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.
79	The Society and College of Radiographers	Full	46	31	This recommendation will be a challenging change in practice in many x-ray departments where 24/7 access to 'hot reporting' is not available. Consideration to the role of radiographer comments is suggested.	Thank you for your comment. The Guideline Development Group considered the clinical evidence, which was taken from a high quality UK-based randomised clinical trial, when making their recommendation. The evidence indicated that hot reporting is associated with improved clinical outcomes and is more cost-effective than cold

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						reporting of radiographs. The Guideline Development Group discussed the impact that this recommendation may have on services. Further detail of this discussion has been included in the section on 'Recommendations and links to evidence in the full version of the guideline This recommendation has been highlighted as having a potential impact on services. The issues are discussed in respective sections on 'Research and links to evidence' in the full version of the guideline. In addition, 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.
80	The Society and College of Radiographers	Full	50	12	The Society and College of Radiographers are interested in the outcome to this important question as should it be proven that real time imaging provides improved outcome for patients with distal writ fractures there will be a challenge to the change in practice for both human and capital resources. i.e. number of radiographers, access to an image intensifier, appropriate physical space to perform the procedure with due regard to radiation protection.	Thank you for your comment.
81	The Society and College of Radiographers	Short	4	12	1.1.4 Initial management of pain – the timeframe for this is not specified. It would be useful to have analgesia prior to imaging, what is the expected timeframe for oral cocodamol to work in the present of moderate pain? The Society and College of Radiographers feels that the use of the Ottawa knee, ankle and foot rules are highly questionable. Knee injury and age 55 or older = knee radiography without any other clinical signs?	Thank you for your comment. The Guideline Development Group believe that the word initial implies that analgesia should be offered following pain assessment. Thank you for your comment. The Guideline Development Group noted that the Ottawa knee rule was very sensitive and picked up clinically relevant knee fractures. While the diagnostic evidence was not presented for the ankle and foot rules (due to hierarchy of evidence), the Guideline Development Group noted the high sensitivity (100%) of the ankle and foot rules. Moreover, the section on 'Recommendations and links to evidence in the full version of the guideline detailed a multicentre before and after trial testing the Ottawa ankle rules that demonstrated a significant reduction in

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						ankle radiology without an increased rate of missed fractures.

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