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NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

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Guideline scope

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Rehabilitation after traumatic injury

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The Department of Health in England and NHS England have asked NICE to develop a guideline about rehabilitation after traumatic injury.

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The guideline will be developed using the methods and processes outlined in [developing NICE guidelines: the manual](#).

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This guideline will also be used to develop NICE quality standards.

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1 Why the guideline is needed

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Trauma is a significant cause of early death and morbidity – particularly in the working population. Major trauma is the biggest cause of death in children and adults under the age of 40.

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This guideline defines traumatic injury as any injury that requires admission to hospital at the time of injury. This could include musculoskeletal injuries, visceral injuries, nerve injuries, soft tissue damage, spinal injury, limb loss and burns. Minor injuries can also lead to a hospital admission.

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In England, 45,000 people are affected by very severe or major trauma every year. Half a million people experience less severe trauma, and a proportion of those will require hospital admission because of pre-existing conditions, disability or frailty.

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After a traumatic injury, people require rehabilitation assessment and interventions that take account of any pre-existing conditions and focus on helping them regain optimum function and independence as quickly as possible.

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1 Trauma affects all age groups, but there are 2 peaks: younger age and older
2 age. People may have different rehabilitation needs that reflect different
3 functional expectations and priorities. Trauma negatively affects quality of life
4 both physically and mentally. It can lead to problems with mobility, pain,
5 breathing, eating, drinking, toileting, and sensory problems, and can lead to
6 psychological difficulties. The impact of these problems may be influenced by
7 pre-existing conditions.

8 This guideline will focus on people with complex rehabilitation needs following
9 traumatic injury. Complex needs will cover multiple needs, and will always
10 involve coordinated multidisciplinary input from 2 or more allied health
11 professional disciplines, and could also include the following:

- 12 • Vocational or educational social support for the person to return to their
13 previous functional level, including return to work, school or college.
- 14 • Equipment or adaptations.
- 15 • Ongoing recovery from injury that may change the person's rehabilitation
16 needs (for example, restrictions of weight bearing, cast immobilisation in
17 fracture clinic).

18 Currently, patients have a rehabilitation assessment and prescription carried
19 out during the hospital admission. Further assessments are performed over
20 time to capture changing needs.

21 There are limitations in access to the appropriate rehabilitation services for
22 people following trauma, which may be related to geography and age. There
23 is significant variation in practice, with no national network of services.

24 Improvement in survival rates resulting from the introduction of Major Trauma
25 Networks in 2012 has led to increased need for rehabilitation.

26 Military experience has shown better outcomes with improved rehabilitation.
27 Early, intense rehabilitation can improve function, pain, quality of life and
28 mental health outcomes. It can also improve outcomes for carers of those
29 affected by traumatic injury.

1 Costs to treat trauma patients are high in the acute phase, and there are also
2 long-term care costs to the NHS through ongoing treatment. Social care costs
3 may be high for people who need ongoing care and support in the community.
4 There are wider costs to the community if people are unable to return to work
5 or education. Rehabilitation may be able to reduce these costs through
6 improving overall function. Interventions may improve outcomes at a number
7 of stages.

8 There is already a wide range of NICE guidelines about the assessment,
9 treatment and management of specific injuries for adults and children. There
10 is guidance about service delivery, assessment and management of major
11 trauma and rehabilitation after critical illness and stroke. There are also a
12 number of guidelines about the transition between hospital and home and
13 children's to adult services and about home care services. Rehabilitation
14 following traumatic brain injury will be covered in another NICE guideline due
15 to begin development in 2019. Where complex rehabilitation needs result
16 primarily from traumatic brain injury this will be explicitly excluded from the
17 guideline.

18 This guideline will seek to signpost to areas of other guidance that will be
19 helpful for readers. These links will also be illustrated across related NICE
20 pathways. This scope focuses on areas not already covered by these other
21 guidelines.

22 **2 Who the guideline is for**

23 This guideline is for:

- 24 • Healthcare professionals in primary and secondary care
- 25 • Social care practitioners
- 26 • Local authorities and clinical commissioning groups that provide and/or
27 commission rehabilitation services
- 28 • Providers of rehabilitation services in the community, including voluntary
29 and private sectors

- 1 • People who have experienced traumatic injury, their families and carers
2 and the public.

3 It may also be relevant for:

- 4 • Advocates for people who have experienced traumatic injury
5 • Practitioners working in other related services, including employers,
6 education, housing, leisure, job centres and welfare advice services.

7 Although recommendations are not intended to apply in prisons or military
8 hospitals, the guideline may be of interest to professionals working in these
9 settings.

10 NICE guidelines cover health and care in England. Decisions on how they
11 apply in other UK countries are made by ministers in the [Welsh Government](#),
12 [Scottish Government](#), and [Northern Ireland Executive](#).

13 ***Equality considerations***

14 NICE has carried out [an equality impact assessment](#) during scoping. The
15 assessment:

- 16 • lists equality issues identified, and how they have been addressed
17 • explains why any groups are excluded from the scope.

18 The guideline will look at inequalities relating to geography in accessing
19 inpatient rehabilitation and how lower socioeconomic groups can be
20 disproportionately affected because of impact on family life and income. It will
21 also consider age-related service expectations, hospital discharge for people
22 who are homeless, and the communication needs of people whose first
23 language is not English.

1 **3 What the guideline will cover**

2 **3.1 *Who is the focus?***

3 **Groups that will be covered**

- 4 • People with complex rehabilitation needs resulting from traumatic injury
- 5 that requires admission to hospital.

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7 Specific consideration will be given to:

- 8 • people with pre-existing physical and/or mental health conditions, physical
- 9 and learning disability, or frailty
- 10 • people who require safeguarding

11 **Groups that will not be covered**

- 12 • People whose complex rehabilitation needs result primarily from traumatic
- 13 brain injury including anoxic brain injury, for example, drowning and
- 14 strangulation
- 15 • People with minor injuries who do not have complex rehabilitation needs
- 16 and do not require admission to hospital.

17 **3.2 *Settings***

18 **Settings that will be covered**

19 All settings in which rehabilitation services following traumatic injury are

20 provided

- 21 • Inpatient settings
 - 22 – Major trauma centres
 - 23 – Trauma units
 - 24 – Local emergency hospitals
 - 25 – Intermediate care and inpatient rehabilitation units
- 26 • Community settings
 - 27 – GP surgeries
 - 28 – People's own homes

- 1 – Supported living environments, including care homes
- 2 – Community rehabilitation facilities, including those run by third sector
- 3 organisations
- 4 – Schools

5 **Settings that will not be covered**

- 6 • Accident and emergency departments
- 7 • Critical care units.

8 **3.3 *Activities, services or aspects of care***

9 **Key areas that will be covered**

10 We will look at evidence concerning complex rehabilitation needs following
11 traumatic injury, including physical, psychological and psychosocial
12 interventions, in the areas below when developing the guideline, but it may not
13 be possible to make recommendations in all the areas.

- 14 1 Identification and assessment of rehabilitation needs following traumatic
15 injury.
- 16 2 Rehabilitation packages and programmes for people with complex
17 rehabilitation needs after traumatic injury (for example, exercise-based
18 therapies, manual therapies, gait training, vocational support, talking
19 therapies and adjuncts to therapy such as blood flow occlusion therapy).
- 20 3 Specific packages and programmes for limb loss, nerve injury and chest
21 injury.
- 22 4 Coordination of rehabilitation services.
- 23 5 Principles of care.

24 We will consider identifying and assessing needs, coordinating services and
25 principles of care for people with complex rehabilitation needs resulting from
26 traumatic injury that requires admission to hospital, including those with
27 traumatic brain injury, spinal cord injury, sight loss, hearing loss and speech
28 loss.

1 We will consider the relationship between rehabilitation services and social
2 care services (for example, home care) in identifying and assessing needs,
3 coordinating services, principles of care and establishing long-term
4 rehabilitation arrangements.

5 **Areas that will not be covered**

- 6 1 Specialist rehabilitation packages and programmes relating to traumatic
7 brain injury, spinal cord injury, sight loss, hearing loss and speech loss
- 8 2 Social care interventions (for example, home care or personal
9 assistance).
- 10 3 Long-term care and rehabilitation packages for people with long-term
11 care needs.
- 12 4 Specific pain management interventions (pain management as part of a
13 package or programme will be included).
- 14 5 Nutritional support.

15 **Key related NICE guidance**

16 ***Published (see also Appendix 1)***

- 17 • [Trauma](#) (2018) NICE quality standard 166
- 18 • [Fractures \(complex\): assessment and management](#) (2016 updated 2017)
19 NICE Guideline NG37
- 20 • [Hip fracture: management](#) (2011 updated 2017) NICE guideline CG124
- 21 • [Intermediate care including reablement](#) (2017) NICE guideline NG74
- 22 • [Intramuscular diaphragm stimulation for ventilator-dependent chronic](#)
23 [respiratory failure caused by high spinal cord injuries](#) (2017) NICE
24 interventional procedures guidance 594
- 25 • [Rehabilitation after critical illness in adults](#) (2017) NICE quality standard
26 158
- 27 • [Fractures \(non-complex\): assessment and management](#) (2016) NICE
28 guideline NG38
- 29 • [Home care for older people](#) (2016) NICE quality standard 123
- 30 • [Major trauma: assessment and initial management](#) (2016) NICE guideline
31 NG39

- 1 • [Major trauma: service delivery](#) (2016) NICE guideline NG40
- 2 • [Mental wellbeing and independence for older people](#) (2016) NICE quality
3 standard 137
- 4 • [Spinal injury: assessment and initial management](#) (2016) NICE guideline
5 NG41
- 6 • [Transition between inpatient hospital settings and community or care home
7 settings for adults with social care needs](#) (2016) NICE quality standard 136
- 8 • [Transition from children's to adults' services](#) (2016) NICE quality standard
9 140
- 10 • [Transition from children's to adults' services for young people using health
11 or social care services](#) (2016) NICE guideline NG43
- 12 • [Home care: delivering personal care and practical support to older people
13 living in their own homes](#) (2015) NICE guideline NG21
- 14 • [Older people with social care needs and multiple long-term conditions](#)
15 (2015) NICE guideline NG22
- 16 • [Older people: independence and mental wellbeing](#) (2015) NICE guideline
17 NG32
- 18 • [Transition between inpatient hospital settings and community or care home
19 settings for adults with social care needs](#) (2015) NICE guideline NG27
- 20 • [Dementia: independence and wellbeing](#) (2013) NICE quality standard 30
- 21 • [Myocardial infarction: cardiac rehabilitation and prevention of further
22 cardiovascular disease](#) (2013) NICE guideline CG172
- 23 • [Stroke rehabilitation in adults](#) (2013) NICE guideline CG162
- 24 • [Rehabilitation after critical illness in adults](#) (2009) NICE guideline CG83
- 25 • [Mental wellbeing in over 65s: occupational therapy and physical activity
26 interventions](#) (2008) NICE guideline PH16
- 27 • [Post-traumatic stress disorder: management](#) (2005) NICE guideline CG26

28 ***In development***

- 29 • [Post-traumatic stress disorder \(update\)](#) NICE guideline. Publication
30 expected December 2018
- 31 • [Rehabilitation in people with severe and enduring mental illness](#) NICE
32 guideline. Publication expected June 2020

1 **NICE guidance about the experience of people using NHS services**

2 NICE has produced the following guidance on the experience of people using
3 the NHS. This guideline will not include additional recommendations on these
4 topics unless there are specific issues related to rehabilitation after traumatic
5 injury:

- 6 • [Medicines optimisation](#) (2015) NICE guideline NG5
- 7 • [Patient experience in adult NHS services](#) (2012) NICE guideline CG138
- 8 • [Service user experience in adult mental health](#) (2011) NICE guideline
9 CG136
- 10 • [Medicines adherence](#) (2009) NICE guideline CG76

11

12 **3.4 Economic aspects**

13 We will take economic aspects into account when making recommendations.
14 We will develop an economic plan that states for each review question (or key
15 area in the scope) whether economic considerations are relevant, and if so
16 whether this is an area that should be prioritised for economic modelling and
17 analysis. We will review the economic evidence and carry out economic
18 analyses, using either a public sector and/or societal perspective, as
19 appropriate.

20 **3.5 Key issues and draft questions**

21 Please note that all questions relate to adults, children and young people with
22 complex needs following traumatic injury, but the word ' people' has been
23 used throughout. While writing this scope, we have identified the following key
24 issues and draft questions related to them:

25 1 Identification and assessment of rehabilitation needs following traumatic
26 injury

27 1.1 What should be included in rehabilitation needs assessment for
28 people following traumatic injury, including consideration of the interface
29 with social care?

- 1 1.2 How should ongoing assessments be managed beyond the first
2 assessment (not including long-term care needs)?
- 3 2 Rehabilitation programmes and packages for people with complex
4 rehabilitation needs after traumatic injury (for example, exercise-based
5 therapies, manual therapies, gait training, vocational support, talking
6 therapies and adjuncts to therapy such as blood flow occlusion therapy.)
- 7 2.1 What rehabilitation programmes and packages are effective and
8 acceptable for people with complex rehabilitation needs after traumatic
9 injury? (This question will consider the effectiveness and acceptability of
10 different rehabilitation programmes as well as their timing, intensity and
11 setting.)
- 12 2.2 What particular considerations, in terms of content, timing, frequency
13 and follow-up of rehabilitation programmes and packages, are needed
14 for people with complex rehabilitation needs after traumatic injury who
15 are in specialist settings, for example, burns units?
- 16 2.3 What is the optimal follow-up for rehabilitation after traumatic injury?
- 17 3 Specific programmes and packages
- 18 3.1 For people with complex rehabilitation needs after traumatic injury
19 that results in limb loss or amputation, what specific rehabilitation
20 programmes and packages, including prosthetics, are effective and
21 acceptable? (This question will consider the effectiveness and
22 acceptability of different rehabilitation programmes as well as their
23 timing, intensity and setting.)
- 24 3.2 For people with complex rehabilitation needs after traumatic injury
25 that involves nerve injury, what specific rehabilitation programmes and
26 packages are effective and acceptable? (This question will consider the
27 effectiveness and acceptability of different rehabilitation programmes as
28 well as their timing, intensity and setting.)
- 29 3.3 For people with complex rehabilitation needs after traumatic injury
30 that involves chest injury, what specific rehabilitation programmes and
31 packages are effective and acceptable for people? (This question will
32 consider the effectiveness and acceptability of different rehabilitation
33 programmes as well as their timing, intensity and setting)
- 34 4 Coordination of rehabilitation services

- 1 4.1 What is the best way to coordinate ward-based, inpatient
2 rehabilitation services for people with complex rehabilitation needs
3 following traumatic injury?
4 4.2 What is the best way to coordinate rehabilitation services for people
5 with complex rehabilitation needs after traumatic injury when preparing
6 for hospital discharge?
7 4.3 What is the best way to coordinate community and outpatient
8 rehabilitation services for people with complex rehabilitation needs after
9 traumatic injury, following hospital discharge?
10 4.4 For people with long-term care needs following traumatic injury, what
11 is the optimal method and time point to coordinate the establishment of
12 long-term rehabilitation arrangements, including communication between
13 rehabilitation services and social care?

14 5 Principles of care

- 15 5.1 What are the views and preferences of people who have used
16 rehabilitation services following traumatic injury about the principles of
17 care and support that are important to them?
18

19 The key issues and draft questions will be used to develop more detailed
20 review questions, which guide the systematic review of the literature.

21 **3.6 Main outcomes**

22 The main outcomes that may be considered when searching for and
23 assessing the evidence are:

- 24
25 1 Health-related quality of life
26 2 Changes in impairment status, including pain
27 3 Changes in functional status, activities of daily living and independence
28 4 Changes in mood and psychological function
29 5 Patient preference
30 6 Patient acceptability
31 7 Mortality
32 8 Impact on family and carers
33 9 Length of hospital stay

1 10 Impact on health and social care service costs

2 11 Participation in work, leisure and education.

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4 **4 NICE quality standards and NICE Pathways**

5 **4.1 NICE quality standards**

6 **NICE quality standards that may need to be revised or updated when**
7 **this guideline is published**

- 8 • Trauma (2018) NICE quality standard 166

9 **NICE quality standards that will use this guideline as an evidence source**
10 **when they are being developed**

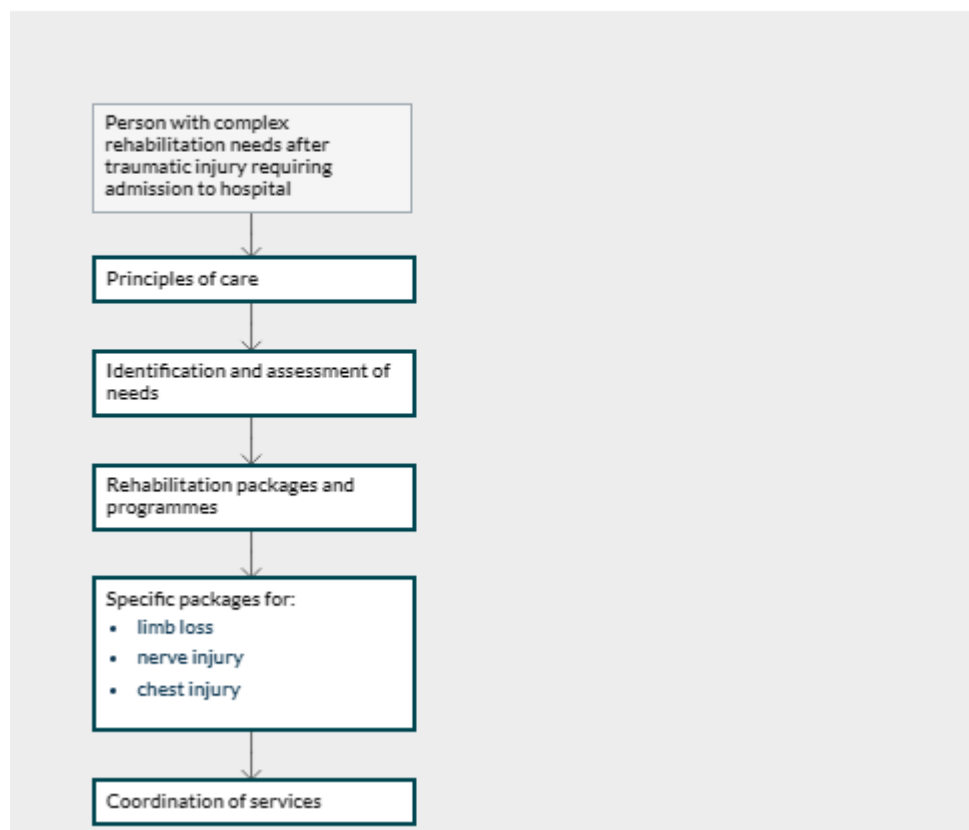
- 11 • To be confirmed

12 **4.2 NICE Pathways**

13 [NICE Pathways](#) bring together everything we have said on a topic in an
14 interactive flowchart. When this guideline is published, the recommendations
15 will be included in the NICE Pathway on rehabilitation after traumatic injury (in
16 development).

17 An outline based on this scope is included below. It will be adapted and more
18 detail added as the recommendations are written during guideline
19 development.

Rehabilitation after traumatic injury overview



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2 **5 Further information**

This is the draft scope for consultation with registered stakeholders. The consultation dates are 15 August to 12 September 2018.

The guideline is expected to be published in November 2020.

You can follow progress of the [guideline](#).

Our website has information about how [NICE guidelines](#) are developed.

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Appendix 1 - Other NICE guidance also related to this topic

- 1 • [People's experience in adult social care services: improving the experience](#)
2 [of care and support for people using adult social care services](#) (2018) NICE
3 guideline NG86
- 4 • [Child abuse and neglect](#) (2017) NICE guideline NG76
- 5 • [Transition between inpatient mental health settings and community or care](#)
6 [home settings](#) (2017) NICE quality standard 159
- 7 • [Intramuscular diaphragm stimulation for ventilator-dependent chronic](#)
8 [respiratory failure caused by high spinal cord injuries](#) (2017) NICE
9 interventional procedures guidance 594
- 10 • [Healthcare-associated infections: prevention and control in primary and](#)
11 [community care](#) (2012 updated 2017) NICE guideline CG139
- 12 • [Osteoporosis: assessing the risk of fragility fracture](#) (2012 updated 2017)
13 NICE guideline CG146
- 14 • [Intrapartum care for health women and babies](#) (2014, updated 2017) NICE
15 guideline CG190
- 16 • [Child maltreatment: when to suspect maltreatment in under 18s](#) (2009,
17 updated 2017) NICE guideline CG89
- 18 • [Preventing unintentional injury in under 15s](#) (2016) NICE quality standard
19 107
- 20 • [Transition between inpatient mental health settings and community or care](#)
21 [home settings](#) (2016) NICE guidelines NG53
- 22 • [Acute kidney injury](#) (2014) NICE quality standard 76
- 23 • [Head injury](#) (2014) NICE quality standard 74
- 24 • [Head injury: assessment and early management](#) (2014) NICE guideline
25 CG176
- 26 • [Domestic violence and abuse: multi-agency working](#) (2014) NICE guideline
27 PH50
- 28 • [Transient loss of consciousness \('blackouts'\) in over 16s](#) (2014) NICE
29 quality standard 71
- 30 • [Safe staffing for nursing in adult inpatient wards in acute hospitals](#) (2014)
31 NICE guideline SG

- 1 • [EXOGEN ultrasound bone healing system for long bone fractures with non-](#)
2 [union or delayed healing](#) (2013) NICE medical technologies guidance 12
- 3 • [Phrenic nerve transfer in brachial plexus injury](#) (2013) NICE interventional
4 procedures guidance 468
- 5 • [Headaches in over 12s](#) (2013) NICE quality standard 42
- 6 • [Headaches in over 12s: diagnosis and management](#) (2012) NICE guideline
7 CG150
- 8 • [Distal iliotibial band lengthening for refractory greater trochanteric pain](#)
9 [syndrome](#) (2011) NICE interventional procedures guidance 375
- 10 • [Extracorporeal shockwave therapy for refractory greater trochanteric pain](#)
11 [syndrome](#) (2011) Interventional procedures guidance 376
- 12 • [Deep brain stimulation for refractory chronic pain syndromes \(excluding](#)
13 [headache\)](#) (2011) NICE interventional procedures guidance 382
- 14 • [Prosthetic intervertebral disc replacement in the cervical spine](#) (2010) NICE
15 interventional procedure guideline 341
- 16 • [Insertion of metal rib reinforcements to stabilise a flail chest wall](#) (2010)
17 NICE interventional procedures guidance 361
- 18 • [Unintentional injuries: prevention strategies for under 15s](#) (2010) NICE
19 guideline PH29
- 20 • [Unintentional injuries in the home: interventions for under 15s](#) (2010) NICE
21 guideline PH30
- 22 • [Unintentional injuries on the road: interventions for under 15s](#) (2010) NICE
23 guideline PH31
- 24 • [Prosthetic intervertebral disc replacement in the lumbar spine](#) (2009) NICE
25 interventional procedure guideline 306
- 26 • [Total prosthetic replacement of the temporomandibular joint](#) (2009) NICE
27 interventional procedure guidance 500
- 28 • [Pre-hospital initiation of fluid replacement therapy in trauma](#) (2004) NICE
29 technology appraisal guidance 74
- 30 • [Spinal cord stimulation for chronic pain of neuropathic or ischaemic origin](#)
31 (2008) NICE technology appraisal guidance 159
- 32 • [Chronic pain: assessment and management.](#) NICE guideline. Publication
33 expected January 2020

- 1 • [Low-intensity pulsed ultrasound to promote healing of fresh fractures at low](#)
- 2 [risk of non-healing](#). NICE interventional procedure. Publication date to be
- 3 confirmed
- 4 • [Low intensity pulsed ultrasound to promote healing of delayed-union and](#)
- 5 [non-union fractures](#). NICE interventional procedure. Publication date to be
- 6 confirmed