

Draft

## Low back pain and sciatica

Low back pain and sciatica: management of non-specific low back pain and sciatica

*NICE guideline <number>*

*Appendices A – G*

*February 2016*

*Draft for consultation*

*Commissioned by the National Institute for  
Health and Care Excellence*



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Healthcare professionals are expected to take NICE clinical guidelines fully into account when exercising their clinical judgement. However, the guidance does not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of each patient, in consultation with the patient and, where appropriate, their guardian or carer.

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**Funding**

National Institute for Health and Care Excellence

# Contents

|   |          |
|---|----------|
| <b>Appendices.....</b>                              | <b>5</b> |
| Appendix A: Scope.....                              | 5        |
| Appendix B: Declarations of interest .....          | 17       |
| Appendix C: Clinical review protocols.....          | 40       |
| Appendix D: Health economic review protocol .....   | 73       |
| Appendix E: Clinical article selection .....        | 75       |
| Appendix F: Health economic article selection ..... | 94       |
| Appendix G: Literature search strategies .....      | 95       |

## **Appendices**

### **Appendix A: Scope**

# NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

## SCOPE

### 1 Guideline title

Low back pain and sciatica: management of non-specific low back pain and sciatica

#### 1.1 *Short title*

Low back pain and sciatica

### 2 The remit

This is an update of [Low back pain: early management of persistent non-specific low back pain](#) (NICE clinical guideline 88).

- 2.1 The time cut-off point of 12 months and the restriction to pain that has persisted for 6 weeks specified in NICE clinical guideline 88 has been removed for the update of the guideline. There will be no restriction on duration of low back pain.
- 2.2 The population has been expanded to include people with sciatica.
- 2.3 The age of people covered by the guideline update has been expanded to include people aged 16 and older. This is an additional population not included in NICE clinical guideline 88.

### 3 Need for the guideline

#### 3.1 *Epidemiology*

- a) Low back pain can present with different levels of severity – for example, some people may be able to continue to work and lead active lives, while others may be severely disabled or unable to

work. Low back pain is common in working-age adults (particularly between the ages of 40 and 60 years). A UK survey reported that in 1998, 40% of adults had had low back pain lasting longer than 1 day in the previous 12 months. According to the [Health survey for England 2011](#), back pain was responsible for 37% of all chronic pain in men and 44% in women. Treating all types of back pain costs the NHS more than £1000 million per year. In 1998 the direct healthcare costs of all back pain in the UK were estimated at £1623 million – approximately 35% of costs were related to services provided by the private sector. The costs of care for low back pain exceed £500 million per year. The total cost of low back pain to the economy is estimated at £12.3 billion per year.

- b) Low back pain can cause many problems, including:
- impaired quality of life
  - poor mobility
  - higher risk of social exclusion through inability to work (and reduced income)
  - depression and anxiety
  - social isolation because of disability.
- c) Interventions and therapies are used to help people to manage and improve their back condition and to lessen the intensity, recurrence and/or duration of back pain. They aim to help people to remain more physically and socially active in their daily lives and to reduce absence from work. There are many therapeutic and rehabilitation strategies that can be used for low back pain. These include:
- manual therapies (for example, massage and joint manipulation)
  - pharmacological treatments (for example, analgesics)
  - psychological treatments (for example, cognitive behavioural pain management)
  - complementary or alternative therapies

- orthotics and appliances (for example, supports and traction)
  - exercise (general and specific)
  - patient education and 'back schools'
  - invasive procedures (for example, facet joint or epidural injections)
  - electrotherapy (for example, TENS)
  - self-management strategies (including relaxation techniques)
  - occupational health and ergonomics
  - surgery.
- d) Sciatica is a relatively common condition with a lifetime incidence ranging from 13 to 40%. The corresponding annual incidence of an episode of sciatica ranges from 1 to 5%.
- e) The incidence of sciatica is related to age. Rarely seen before the age of 20, incidence peaks in the fifth decade and then declines.

### 3.2 ***Current practice***

- a) People with low back pain may go to their GP or other primary healthcare practitioners for initial treatment so, in most cases, their care will be managed in primary care.
- b) Managing persistent low back pain follows a stepped approach:
- initial assessment – identify specific aetiologies and any sinister pathology for example, cauda equina syndrome and other red flag symptoms
  - management – (once specific pathologies have been excluded) a combination of lifestyle advice and conventional treatment such as pharmacological treatment, physical therapies or exercise programmes
  - if pain persists – psychological therapies and invasive procedures such as acupuncture and surgical intervention may be offered.

- c) Access to the care and uptake of the interventions recommended in NICE clinical guideline 88 has been poor. According to a Pulse survey of 127 primary care organisations in 2010, only half provided funding for acupuncture and 15% offered acupuncture in their practices. A recent study of people with low back pain attending a spinal outpatient clinic before and after the publication of the NICE guideline suggests that the guidance has not yet influenced management in primary care.
- d) People who have sciatica often present with similar symptoms to simple non-specific low back pain with referred leg pain. It is most commonly caused by herniated intervertebral disc, but there are other causes of impingement of nerve roots in the lower back.
- e) Treatment of sciatica depends on the cause of the nerve impingement as well as the severity of symptoms. In the majority of cases, symptoms caused by a herniated disc resolve with conventional management. If symptoms persist, injection treatments (for example, epidural or nerve root injections) or surgical treatment (for example, microdiscectomy) can be offered. In cases where progressive neurological deficit is diagnosed, urgent surgical treatment is needed. The potential for faster recovery with invasive interventions for sciatic pain is a consideration as well as the cost-effectiveness and increased complication rates of these procedures.
- f) This guideline update aims to improve targeting of treatment and as a result, improve the quality of life of people with low back and sciatica.

#### **4 The guideline**

The guideline development process is described in detail on the NICE website (see section 6, 'Further information').

This scope defines what the guideline will (and will not) examine, and what the guideline developers will consider. The scope is based on the referral from the Department of Health.

The areas that will be addressed by the guideline are described in the following sections.

#### **4.1 Population**

##### **4.1.1 Groups that will be covered**

- a) People aged 16 or older presenting with symptoms of 'non-specific' low back pain. The pain may (or may not) radiate to the limbs and is not associated with progressive neurological deficit.
- b) People aged 16 or older with suspected sciatica.
- c) No subgroups have been identified as needing specific consideration.

##### **4.1.2 Groups that will not be covered**

- a) People who have low back pain or sciatica related to specific spinal pathologies, including:
  - conditions of a non-mechanical nature, including;
    - inflammatory causes of back pain (for example, ankylosing spondylitis or diseases of the viscera)
    - serious spinal pathology (for example, neoplasms, infections or osteoporotic collapse)
  - neurological disorders (including cauda equina syndrome or mononeuritis)
  - adolescent scoliosis.
- b) People aged under 16 years.

**4.2 Setting**

- a) All settings in which NHS-funded care is received.

**4.3 Management**

**4.3.1 Key issues that will be covered**

- a) Assessment to identify 'non-specific' low back pain and sciatica and any prognostic factors that could guide management. This would include relevant clinical examination and assessment (for example, imaging, physiological testing and psychosocial assessment methods).

- b) Lifestyle interventions. For example:

- self-management strategies, including education and advice
- workplace interventions and return-to-work interventions (for example, occupational and ergonomic interventions).

- c) Use of pharmacological treatments for low back pain:

- analgesics
- muscle relaxants
- antidepressants
- anticonvulsants
- long-term antibiotics.

Note that guideline recommendations will normally fall within licensed indications; exceptionally, and only if clearly supported by evidence, use outside a licensed indication ('off-label use') may be recommended. The guideline will assume that prescribers will use a drug's summary of product characteristics to inform decisions made with individual patients.

- d) Non-pharmacological interventions. These will include but are not limited to:

- exercise and postural therapies (for example, general exercise to manage low back pain; specific exercises for the lower back; yoga, group-based and individualised exercise programmes and Alexander technique)
  - manual therapies including massage
  - electrotherapy
  - orthotics and appliances
  - acupuncture.
- e) Combined therapies.
- f) The use of invasive procedures. For example:
- injection therapies
  - radiofrequency ablation procedures.
- g) Psychological interventions (for example, cognitive behavioural pain management).
- h) Surgery:
- indications for referral for surgery.
  - surgical interventions (for example, fusion and disc replacement for low back pain and discectomy or laminectomy and decompression surgery for sciatica).

#### **4.3.2 Key issues that will not be covered**

- a) Management of :
- conditions with a select and uniform pathology of a mechanical nature (for example, spondylolisthesis, scoliosis, vertebral fracture or congenital diseases)
  - conditions of a non-mechanical nature (for example, ankylosing spondylitis or diseases of the viscera)

- neurological disorders (including cauda equina syndrome), serious spinal pathology (for example, neoplasms, infections or osteoporotic collapse).

- b) Post-surgery care.
- c) Spinal cord stimulation.
- d) Pharmacological treatments for sciatica.

#### 4.4 **Main outcomes**

- a) Pain severity (for example, visual analogue scale [VAS] or numeric rating scale [NRS]).
- b) Function measured by disability scores (for example, the Roland-Morris disability questionnaire or the Oswestry disability index).
- c) Health-related quality of life (for example, SF-12 or EQ-5D).
- d) Return to work.
- e) Adverse events.
- f) Healthcare utilisation.

#### 4.5 **Economic aspects**

Developers will take into account both clinical and cost effectiveness when making recommendations involving a choice between alternative interventions. A review of the economic evidence will be conducted and analyses will be carried out as appropriate. The preferred unit of effectiveness is the quality-adjusted life year (QALY), and the costs considered will usually be only from an NHS and personal social services (PSS) perspective. Further detail on the methods can be found in [The guidelines manual](#).

## 4.6 **Status**

### 4.6.1 **Scope**

This is the final scope.

### 4.6.2 **Timing**

The development of the guideline recommendations will begin in January 2014.

## 5 **Related NICE guidance**

### 5.1 **Published guidance**

#### 5.1.1 **NICE guidance to be updated**

This guideline will update and replace the following NICE guidance:

- [Low back pain](#). NICE clinical guideline 88 (2009).

#### 5.1.2 **Other related NICE guidance**

- [Neuropathic pain – pharmacological management](#). NICE clinical guideline 173 (2013).
- [Percutaneous vertebroplasty and percutaneous balloon kyphoplasty for treating osteoporotic vertebral compression fractures](#). NICE technology appraisal guidance 279 (2013).
- [Peripheral nerve-field stimulation for chronic low back pain](#). NICE interventional procedures guidance 451 (2013).
- [Patient experience in adult NHS services](#). NICE clinical guideline 138 (2012).
- [EOS 2D/3D imaging system](#). NICE diagnostics guidance 1 (2011).
- [Transaxial interbody lumbosacral fusion](#). NICE interventional procedures guidance 387 (2011).
- [Non rigid stabilisation techniques for the treatment of low back pain](#). NICE interventional procedures guidance 366 (2010).

- [Interspinous distraction procedures for lumbar spinal stenosis causing neurogenic claudication](#). NICE interventional procedures guidance 365 (2010).
- [Percutaneous intradiscal laser ablation in the lumbar spine](#). NICE interventional procedures guidance 357 (2010).
- [Therapeutic endoscopic division of epidural adhesions](#). NICE interventional procedures guidance 333 (2010).
- [Depression with a chronic physical health problem](#). NICE clinical guideline 91 (2009).
- [Depression in adults](#). NICE clinical guideline 90 (2009).
- [Lateral \(including extreme, extra and direct lateral\) interbody fusion in the lumbar spine](#). NICE interventional procedures guidance 321 (2009).
- [Percutaneous intradiscal electrothermal therapy for low back pain](#). NICE interventional procedures guidance 319 (2009).
- [Prosthetic intervertebral disc replacement in the lumbar spine](#). NICE interventional procedures guidance 306 (2009).
- [Percutaneous endoscopic laser lumbar discectomy](#). NICE interventional procedures guidance 300 (2009).
- [Long-term sickness and incapacity for work](#). NICE public health guidance 19 (2009).
- [Metastatic spinal cord compression](#). NICE clinical guidance 75 (2008).
- [Spinal cord stimulation for chronic pain of neuropathic or ischaemic origin](#). NICE technology appraisal guidance 159 (2008).
- [Osteoarthritis](#). NICE clinical guideline 59 (2008).
- [Percutaneous disc decompression using coblation for lower back pain](#). NICE interventional procedures guidance 173 (2006).
- [Referral for suspected cancer](#). NICE clinical guidance 27 (2005).
- [Automated percutaneous mechanical lumbar discectomy](#). NICE interventional procedures guidance 141 (2005).
- [Percutaneous intradiscal radiofrequency thermocoagulation for lower back pain](#). NICE interventional procedures guidance 83 (2004).

- [Endoscopic laser foraminoplasty](#). NICE interventional procedures guidance 31 (2003).

## 5.2 **Guidance under development**

NICE is currently developing the following related guidance (details available from the NICE website):

- Osteoarthritis. NICE clinical guideline. Publication expected February 2014.
- Ankylosing spondylitis and axial spondyloarthritis (non-radiographic) - adalimumab, etanercept infliximab and. NICE technology appraisal guidance. Publication expected January 2015.
- Insertion of an annular disc implant lumbar discectomy. NICE interventional procedure guidance. Publication date to be confirmed.
- Referral for suspected cancer. NICE clinical guideline. Publication date to be confirmed.
- Seronegative arthropathies. NICE clinical guideline. Publication date to be confirmed.

## 6 **Further information**

Information on the guideline development process is provided in the following documents, available from the NICE website:

- [How NICE clinical guidelines are developed: an overview for stakeholders the public and the NHS: 5th edition](#)
- [The guidelines manual](#).

Information on the progress of the guideline will also be available from the [NICE website](#).

## Appendix B: Declarations of interest

The May 2007 version (as updated October 2008) of the NICE code of practice for declaring and dealing with conflicts of interest policy was applied to this guideline.

### Stephen Ward

| Date                            | Declaration of interest  | Classification                               | Action taken            |
|---------------------------------|--|--|-------------------------|
| Initial declaration<br>22/07/13 | Director of Back@Work Ltd which provides a community pain management service for the residents of Mid Sussex   | Personal pecuniary Interest                  | Declare and participate |
|                                 | Board member of the Faculty of Pain Medicine and was a council member of the British Pain Society until 2011. Both groups publicly criticised CG88 (NICE Low Back Pain Guideline 2009)   | Personal non-pecuniary interest              | Declare and participate |
|                                 | Paid to treat low back pain as a consultant in pain medicine in a NHS and private setting  | Nil  | Nil                     |
| 21/02/14                        | GDG1: No new interest declared   | Nil  | Nil                     |
| 01/04/14                        | GDG2: No new interest declared   | Nil  | Nil                     |
| 09/05/14                        | GDG3: Presented a lecture at the American Society Of Interventional Pain Physicians annual meeting (New Orleans). Travel, subsistence and accommodation were provided.   | Personal non-pecuniary interest              | Declare and participate |
| 09/06/14                        | GDG4: No new interest declared   | Nil  | Nil                     |
| 16/07/14                        | GDG5: No new interest declared   | Nil  | Nil                     |
| 11/09/14                        | GDG6: No new interest declared   | Nil  | Nil                     |
| 12/09/14                        | GDG7: No new interest declared   | Nil  | Nil                     |
| 16/10/14                        | GDG8: No new interest declared   | Nil  | Nil                     |
| 25/11/14                        | GDG9: No new interest declared   | Nil  | Nil                     |
| 14/01/15                        | GDG10: No new interest declared  | Nil  | Nil                     |
| 15/01/15                        | GDG11: No new interest declared  | Nil  | Nil                     |
| 24/02/15                        | GDG12: No new interest declared  | Nil  | Nil                     |
| 07/04/15                        | GDG13: No new interest declared  | Nil  | Nil                     |
| 12/05/15                        | GDG14: Was a member of the faculty for the Birmingham Pain Course for the week beginning 20th April 2015 – teaching injection procedures using cadavers. Accommodation was provided. There was no financial input from pharma or device companies other than the provision of equipment. | Personal non-pecuniary interest              | Declare and participate |
| 18/06/15                        | GDG15: No new interest declared  | Nil  | Nil                     |
| 30/07/15                        | GDG16: Presented a talk on mechanisms of facet pain at St Thomas' Hospital in July 2015.   | Personal non-pecuniary interest              | Declare and participate |
| 01/09/15                        | GDG17: Will be attending the Congress of the European Pain Federation on 4th September to moderate a discussion on epidurals.  | Personal non-pecuniary non-specific interest | Declare and participate |
| 02/09/15                        | GDG18: No new interest declared  | Nil  | Nil                     |
| 05/10/15                        | GDG19: No new interest declared  | Nil  | Nil                     |

| Date     | Declaration of interest         | Classification | Action taken |
|----------|---------------------------------|----------------|--------------|
| 06/11/15 | GDG20: No new interest declared | Nil            | Nil          |
| 02/12/15 | GDG21: No new interest declared | Nil            | Nil          |
| 03/12/15 | GDG22: No new interest declared | Nil            | Nil          |
| 12/01/16 | GDG23: No new interest declared | Nil            | Nil          |

### Babak Arvin

| Date                | Item declared   | Classification                  | Action taken            |
|---------------------|---|---------------------------------|-------------------------|
| Initial declaration | No interest declared  | Nil                             | Nil                     |
| 16/12/13            | Paid for the treatment of low back pain as a neurosurgeon in a NHS and private setting  | Nil                             | Nil                     |
| 21/02/14            | GDG1: No new interest declared  | Nil                             | Nil                     |
| 01/04/14            | GDG2: No new interest declared  | Nil                             | Nil                     |
| 09/05/14            | GDG3: No new interest declared  | Nil                             | Nil                     |
| 09/06/14            | GDG4: No new interest declared  | Nil                             | Nil                     |
| 16/07/14            | GDG5: No new interest declared  | Nil                             | Nil                     |
| 11/09/14            | GDG6: No new interest declared  | Nil                             | Nil                     |
| 12/09/14            | GDG7: No new interest declared  | Nil                             | Nil                     |
| 16/10/14            | GDG8: Apologies sent  | Nil                             | Nil                     |
| 25/11/14            | GDG9: Received a Mont Blanc pen from a private patient.   | Personal pecuniary interest     | Declare and participate |
| 14/01/15            | GDG10: No new interest declared   | Nil                             | Nil                     |
| 15/01/15            | GDG11: No new interest declared   | Nil                             | Nil                     |
| 24/02/15            | GDG12: No new interest declared   | Nil                             | Nil                     |
| 07/04/15            | GDG13: No new interest declared   | Nil                             | Nil                     |
| 12/05/15            | GDG14: No new interest declared   | Nil                             | Nil                     |
| 18/06/15            | GDG15: No new interest declared   | Nil                             | Nil                     |
| 30/07/15            | GDG16: Sponsored by Silony Medical company to attend European Spine Meeting on 2–4 September in Copenhagen. They are paying for flights, accommodation and registration fee only. | Personal non-pecuniary interest | Declare and participate |
| 01/09/15            | GDG17: No new interest declared   | Nil                             | Nil                     |
| 02/09/15            | GDG18: Apologies sent   | Nil                             | Nil                     |
| 05/10/15            | GDG19: 26th September 2015: Was a Coventry review neurosurgery course faculty member. Hotel overnight stay only paid by Coventry University.                                      | Personal pecuniary interest     | Declare and participate |
|                     | GDG19: 18th September 2015: Attended meeting in Monte Carlo on treatment of lumbar fractures, flight and hotel paid for by Vexim.   | Personal pecuniary interest     | Declare and participate |
| 06/11/15            | GDG20: No new interest declared   | Nil                             | Nil                     |
| 02/12/15            | GDG21: No new interest declared   | Nil                             | Nil                     |
| 03/12/15            | GDG22: No new interest declared   | Nil                             | Nil                     |
| 12/01/15            | GDG23: Apologies sent   | Nil                             | Nil                     |

### Ian Bernstein

| Date | Item declared | Classification | Action taken |
|------|---------------|----------------|--------------|
|------|---------------|----------------|--------------|

| Date                            | Item declared   | Classification                  | Action taken            |
|---------------------------------|---|---------------------------------|-------------------------|
| Initial declaration<br>06/01/13 | Course organiser and lecturer at a musculoskeletal education workshop on 3 October 2013. The meeting was organised by NHS Ealing CCG. Receiving a payment of £600 as course organiser from NHS Ealing CCG. Pfizer sponsored the meeting and are making their contribution to NHS Ealing CCG.  | Personal pecuniary interest     | Declare and participate |
|                                 | Lectured at the Association for Medical Osteopathy in October 2013. Presented the draft NICE osteoarthritis guideline. Subsistence was provided.  | Personal non-pecuniary interest | Declare and participate |
|                                 | Lectured and lead workshops at the Arthritis and Musculoskeletal Alliance seminar 'Delivering integrated care for people with musculoskeletal disorders' on 26 November 2013. Subsistence was provided. The meeting was sponsored by Roche.   | Personal non-pecuniary interest | Declare and participate |
|                                 | Lectured at the NHS Alliance Conference 'Breaking Boundaries' on 28th November 2013. The topic was "Redesigning local services. Enabling the shift from secondary to primary care. How can clinical commissioners and GP practices achieve this?" Refreshments were provided.   | Personal non-pecuniary interest | Declare and participate |
|                                 | Lectured at the British Institute of Musculoskeletal Medicine annual symposium in London on 7 December 2013. The title was "Closer to Home or Too Close for Comfort?" The drivers and barriers to moving musculoskeletal care 'closer to home'. Refreshments were provided. The meeting was sponsored by TRB Chemedica (UK) Ltd. No payment received. | Personal non-pecuniary interest | Declare and participate |
| 21/02/14                        | GDG1: No new declarations   | Nil                             | Nil                     |
| 23/03/14                        | Receives payment as an NHS healthcare professional to assess and treat back pain. Receives locum expenses for work as an NHS clinical commissioning advisor regarding musculoskeletal service design and delivery. Receives payment as an NHS healthcare professional for teaching about musculoskeletal disorders.                                   | Personal pecuniary interest     | Declare and participate |
|                                 | Attending the British Society for Rheumatology conference as a speaker at the Arthritis and Musculoskeletal Alliance session on 30 April 2014: "MSk Clinical Networks." Transport and accommodation were provided by the organiser.   | Personal non-pecuniary interest | Declare and participate |
| 01/04/14                        | GDG2: Commissioned by Pulse magazine to write an article on osteoarthritis. Payment of £150 was received.   | Personal pecuniary interest     | Declare and participate |
| 09/05/14                        | GDG3: Lectured at the British Society of Rheumatology. Travel and accommodation was provided.   | Personal non-pecuniary interest | Declare and participate |
| 09/06/14                        | GDG4: Worked as venue medical officer at Eton Dorney (rowing venue) on 31 May 2014 and 1 June 2014 as honorary medical officer at a domestic  | Personal pecuniary interest     | Declare and participate |

| Date     | Item declared   | Classification                  | Action taken            |
|----------|---|---------------------------------|-------------------------|
|          | regatta. Received light refreshments and replenishment of medical supplies.   |                                 |                         |
|          | GDG4: Appointed to the NICE Quality Standards Advisory Committee for osteoarthritis quality standard as a specialist member.  | Personal non-pecuniary interest | Declare and participate |
| 16/07/14 | GDG5: No new interests were declared  | Nil                             | Nil                     |
| 11/09/14 | GDG6: Appointed at the Clinical Lead for musculoskeletal services for NHS Ealing CCG. This is employed work.  | Personal pecuniary interest     | Declare and participate |
|          | GDG6: Seconded to the London Borough of Ealing Public Health department to write the chapter on musculoskeletal health for the Joint Strategic Needs Assessment. This work is paid by NHS Ealing CCG.   | Personal pecuniary interest     | Declare and participate |
| 12/09/14 | GDG7: No new interests were declared  | Nil                             | Nil                     |
| 16/10/14 | GDG8: No new interests were declared  | Nil                             | Nil                     |
| 25/11/14 | GDG9: Presented on "Hot Topics in Musculoskeletal Medicine", and "Transforming Musculoskeletal Services" at the Best Practice Conference, Birmingham on 22 October 2014. Travel, accommodation and locum costs were provided by the organiser Closerstill Media Healthcare Ltd.                                   | Personal non-pecuniary interest | Declare and participate |
|          | GDG9: Presented on "Transforming Musculoskeletal Services" at the Association for Medical Osteopathy on 25 October 2014. Subsistence was provided.  | Personal non-pecuniary interest | Declare and participate |
|          | GDG9: Chairing a session on "Skilling up the GP Workforce" at the British Institute of Musculoskeletal Medicine annual symposium on 6 December 2014. Refreshments will be provided.   | Personal non-pecuniary interest | Declare and participate |
|          | GDG9: Appointed to two national working groups convened by the Arthritis and Musculoskeletal Alliance, and the NHS Confederation. The workstreams are "Integrated Musculoskeletal Care" and "Workforce Training and Education".   | Personal non-pecuniary interest | Declare and participate |
| 14/01/15 | GDG10: No new interests were declared   | Nil                             | Nil                     |
| 15/01/15 | GDG11: No new interests were declared   | Nil                             | Nil                     |
| 24/02/15 | GDG12: No new interests were declared   | Nil                             | Nil                     |
| 07/04/15 | GDG13: Accepted an invitation to lecture at a Royal College of General Practitioners conference in London "City Health, safeguarding the future" on 2 May 2015. Refreshments and travel will be provided. The lecture is entitled "Hot topics in musculoskeletal medicine" and will cover recent NICE guidelines. | Personal non-pecuniary interest | Declare and participate |
| 12/05/15 | GDG14: No new interests were declared   | Nil                             | Nil                     |
| 18/06/15 | GDG15: Took part in a teleconference between Imperial College London and NHS North East region to develop a local back care pathway for the NHS North East region. A £50 gift voucher was received for  | Personal pecuniary interest     | Declare and participate |

| Date     | Item declared   | Classification                  | Action taken            |
|----------|---|---------------------------------|-------------------------|
|          | attendance.   |                                 |                         |
|          | GDG15: Co-author of a paper on service redesign, published in <i>Guidelines in Practice</i> . An honorarium of £250 was received.   | Personal pecuniary interest     | Declare and participate |
| 30/07/15 | GDG16: Delivered a lecture and interactive teaching session on the management of chronic pain in primary care to the Ealing GP Vocational Training Scheme on 25 June 2015. An honorarium from Ealing GP Vocational Training Scheme for £100 was received. | Personal pecuniary interest     | Declare and participate |
|          | GDG16: Appointed as a Clinical Advisor (MSk) to the Royal College of General Practitioners. This work includes research advice and responding to queries from the media department.   | Personal non-pecuniary interest | Declare and participate |
|          | GDG16: Appointed as a Clinical Advisor (MSk) to Arthritis Research UK. This work includes responding to queries from the media department, liaison with the press office, liaison directly with journalists.  | Personal non-pecuniary interest | Declare and participate |
|          | GDG16: Has had an article accepted for the online Royal College of General Practitioners newsletter reviewing the primary care management of osteoarthritis and meniscal degeneration of the knee.  | Personal non-pecuniary interest | Declare and participate |
| 03/08/15 | Position as Clinical Advisor (MSk) to Arthritis Research UK ended.  | Nil                             | Nil                     |
| 01/09/15 | GDG17: No new interests declared  | Nil                             | Nil                     |
| 02/09/15 | GDG18: No new interests declared  | Nil                             | Nil                     |
| 05/10/15 | GDG19: No new interests declared  | Nil                             | Nil                     |
| 06/11/15 | GDG20: No new interests declared  | Nil                             | Nil                     |
| 02/12/15 | GDG21: Appointed to the NICE Technology Appraisal Committee as a clinical advisory member, with effect from February 2016, for 3 years.   | Personal non-pecuniary interest | Declare and participate |
|          | GDG21: Appointed as the clinical commissioning advisor to the NW London Collaborative of CCGs regarding musculoskeletal and orthopaedic service transformation.   | Personal non-pecuniary interest | Declare and participate |
|          | GDG21: Appointed as a clinical commissioning advisor to an NHS England steering group on workforce development for MSk conditions, within the Long Term Conditions Directorate.   | Personal non-pecuniary interest | Declare and participate |
|          | GDG21: Attended the 6th annual Arthritis and Musculoskeletal Alliance lecture on 24 November 2015. The organisers received an education grant from Roche.   | Personal non-pecuniary interest | Declare and participate |
|          | GDG21: Course organiser for musculoskeletal training sessions for GPs in Ealing on 12 November 2015. An honorarium of £500 will be received from NHS Ealing CCG.  | Personal pecuniary interest     | Declare and participate |

| Date     | Item declared                    | Classification | Action taken |
|----------|----------------------------------|----------------|--------------|
| 03/12/15 | GDG22: No new interests declared | Nil            | Nil          |
| 12/01/16 | GDG23: No new interests declared | Nil            | Nil          |

### Suzanne Blowey

| Date                            | Item declared                         | Classification | Action taken |
|---------------------------------|---------------------------------------|----------------|--------------|
| Initial declaration<br>11/11/14 | None                                  | Nil            | Nil          |
|                                 | No private practice                   | Nil            | Nil          |
| 25/11/14                        | GDG9: No new interests were declared  | Nil            | Nil          |
| 14/01/15                        | GDG10: No new interests were declared | Nil            | Nil          |
| 15/01/15                        | GDG11: No new interests were declared | Nil            | Nil          |
| 24/02/15                        | GDG12: Apologies sent                 | Nil            | Nil          |
| 07/04/15                        | GDG13: Apologies sent                 | Nil            | Nil          |
| 12/05/15                        | GDG14: Apologies sent                 | Nil            | Nil          |
| 18/06/15                        | GDG15: No new interests were declared | Nil            | Nil          |
| 30/07/15                        | GDG16: Apologies sent                 | Nil            | Nil          |
| 01/09/15                        | GDG17: No new interests were declared | Nil            | Nil          |
| 02/09/15                        | GDG18: No new interests were declared | Nil            | Nil          |
| 05/10/15                        | GDG19: No new interests were declared | Nil            | Nil          |
| 06/11/15                        | GDG20: No new interests were declared | Nil            | Nil          |
| 02/12/15                        | GDG21: No new interests were declared | Nil            | Nil          |
| 03/12/15                        | GDG22: No new interests were declared | Nil            | Nil          |
| 12/01/16                        | GDG23: No new interests were declared | Nil            | Nil          |

### Jens Foell (co-opted expert)

| Date                           | Declaration of interest              | Classification | Action taken |
|--------------------------------|--------------------------------------|----------------|--------------|
| Initial declaration<br>28/4/14 | None                                 | Nil            | Nil          |
| 09/06/14                       | GDG4: No new interests were declared | Nil            | Nil          |

### Nadine Foster (co-opted expert)

| Date                           | Declaration of interest  | Classification                  | Action taken                               |
|--------------------------------|--|---------------------------------|--|
| Initial declaration<br>17/2/15 | A member of the research team that developed and tested a model of stratified care (subgrouping low back pain patients for targeted treatment), known as STarTBack.  | Personal non-pecuniary interest | Declare and participate as co-opted expert |
|                                | Leading an NIHR HTA randomised trial testing a model of stratified care for patients with sciatica and suspected sciatica in primary care, as well as an NIHR programme grant developing and testing stratified primary care for patients with the five most common pain presentations consulting general practitioners. | Personal pecuniary interest     | Declare and participate as co-opted expert |
| 30/07/15                       | GDG16: No new interests were declared  | Nil                             | Nil  |

**Patrick Hill**

| Date                            | Item declared  | Classification                  | Action taken  |
|---------------------------------|--|---------------------------------|---|
| Initial declaration<br>03/01/14 | Has a consultancy agreement with Spring Active Ltd.  | Personal pecuniary interest     | Declare and participate.<br>(Consultancy agreement terminated on 23/01/2014. Final payment of fees received on 10/01/2014.) |
|                                 | Appointed as Chair of the Psychology in Physical Health Task force, by the Professional Practice Board of the British Psychological Society for 2 years, as from 1 May 2013.   | Personal non-pecuniary interest | Declare and participate   |
| 21/02/14                        | GDG1: No new interests were declared   | Nil                             | Nil   |
| 01/04/14                        | GDG2: No new interests were declared   | Nil                             | Nil   |
| 09/05/14                        | GDG3: No new interests were declared   | Nil                             | Nil   |
| 09/06/14                        | GDG4: No new interests were declared   | Nil                             | Nil   |
| 16/07/14                        | GDG5: Was paid £300 for article published in <i>Pain Europe</i> on Psycho-social aspects of Pain management.   | Personal pecuniary interest     | Declare and participate   |
| 11/09/14                        | GDG6: No new interests were declared   | Nil                             | Nil   |
| 12/09/14                        | GDG7: No new interests were declared   | Nil                             | Nil   |
| 16/10/14                        | GDG8: No new interests were declared   | Nil                             | Nil   |
| 25/11/14                        | GDG9: No new interests were declared   | Nil                             | Nil   |
| 14/01/15                        | GDG10: No new interests were declared  | Nil                             | Nil   |
| 15/01/15                        | GDG11: No new interests were declared  | Nil                             | Nil   |
| 16/02/15                        | Spoke at a lunchtime seminar on 'The challenge of engaging people in self-management' at the Noble Hospital on the Isle of Man on 6 February 2015. Received travel expenses and a speaker's fee of £350. The seminar was not sponsored by any external organisation. | Personal pecuniary interest     | Declare and participate   |
| 24/02/15                        | GDG12: Apologies sent  | Nil                             | Nil   |
| 07/04/15                        | GDG13: Apologies sent  | Nil                             | Nil   |
| 12/05/15                        | GDG14: No new interests were declared  | Nil                             | Nil   |
| 18/06/15                        | GDG15: No new interests were declared  | Nil                             | Nil   |
| 30/07/15                        | GDG16: No new interests were declared  | Nil                             | Nil   |
| 01/09/15                        | GDG17: No new interests were declared  | Nil                             | Nil   |
| 02/09/15                        | GDG18: No new interests were declared  | Nil                             | Nil   |
| 05/10/15                        | GDG19: No new interests were declared  | Nil                             | Nil   |
| 06/11/15                        | GDG20: No new interests were declared  | Nil                             | Nil   |
| 02/12/15                        | GDG21: Apologies sent  | Nil                             | Nil   |
| 03/12/15                        | GDG22: No new interests were declared  | Nil                             | Nil   |
| 12/01/16                        | GDG23: No new interests were declared  | Nil                             | Nil   |

### Mark Mason

| Date                            | Item declared                         | Classification | Action taken |
|---------------------------------|---------------------------------------|----------------|--------------|
| Initial declaration<br>16/12/13 | None                                  | Nil            | Nil          |
| 21/02/14                        | GDG1: No new interests were declared  | Nil            | Nil          |
| 01/04/14                        | GDG2: No new interests were declared  | Nil            | Nil          |
| 09/05/14                        | GDG3: No new interests were declared  | Nil            | Nil          |
| 09/06/14                        | GDG4: Apologies sent                  | Nil            | Nil          |
| 16/07/14                        | GDG5: No new interests were declared  | Nil            | Nil          |
| 11/09/14                        | GDG6: No new interests were declared  | Nil            | Nil          |
| 12/09/14                        | GDG7: No new interests were declared  | Nil            | Nil          |
| 16/10/14                        | GDG8: No new interests were declared  | Nil            | Nil          |
| 25/11/14                        | GDG9: No new interests were declared  | Nil            | Nil          |
| 14/01/15                        | GDG10: No new interests were declared | Nil            | Nil          |
| 15/01/15                        | GDG11: No new interests were declared | Nil            | Nil          |
| 24/02/15                        | GDG12: No new interests were declared | Nil            | Nil          |
| 07/04/15                        | GDG13: No new interests were declared | Nil            | Nil          |
| 12/05/15                        | GDG14: Apologies sent                 | Nil            | Nil          |
| 18/06/15                        | GDG15: Apologies sent                 | Nil            | Nil          |
| 30/07/15                        | GDG16: No new interests were declared | Nil            | Nil          |
| 01/09/15                        | GDG17: No new interests were declared | Nil            | Nil          |
| 02/09/15                        | GDG18: No new interests were declared | Nil            | Nil          |
| 05/10/15                        | GDG19: No new interests were declared | Nil            | Nil          |
| 06/11/15                        | GDG20: Apologies sent                 | Nil            | Nil          |
| 02/12/15                        | GDG21: Apologies sent                 | Nil            | Nil          |
| 03/12/15                        | GDG22: Apologies sent                 | Nil            | Nil          |
| 12/01/16                        | GDG23: Apologies sent                 | Nil            | Nil          |

### Wendy Menon

| Date                            | Item declared   | Classification                  | Action taken            |
|---------------------------------|---|---------------------------------|-------------------------|
| Initial declaration<br>04/02/14 | Husband is Professor and Head of Division of Anaesthesia, University of Cambridge Consultant, Neurosciences Critical Care Unit BOC Professor, Royal College of Anaesthetists Professorial Fellow, Queens' College, Cambridge Senior Investigator, National Institute for Health Research and a paid consultant for Ornim Medical. | Personal family interest        | Declare and participate |
|                                 | A trustee of Experts in Severe and Complex Obesity (ESCO)   | Personal non-pecuniary interest | Declare and participate |
| 21/02/14                        | GDG1: No new interests were declared  | Nil                             | Nil                     |
| 01/04/14                        | GDG2: No new interests were declared  | Nil                             | Nil                     |
| 09/05/14                        | GDG3: No new interests were declared  | Nil                             | Nil                     |
| 09/06/14                        | GDG4: No new interests were declared  | Nil                             | Nil                     |
| 16/07/14                        | GDG5: Apologies sent  | Nil                             | Nil                     |
| 11/09/14                        | GDG6: Apologies sent  | Nil                             | Nil                     |

| Date     | Item declared         | Classification | Action taken |
|----------|-----------------------|----------------|--------------|
| 12/09/14 | GDG7: Apologies sent  | Nil            | Nil          |
| 16/10/14 | GDG8: Apologies sent  | Nil            | Nil          |
| 25/11/14 | GDG9: Apologies sent  | Nil            | Nil          |
| 14/01/15 | GDG10: Apologies sent | Nil            | Nil          |
| 15/01/15 | GDG11: Apologies sent | Nil            | Nil          |
| 21/1/15  | Resigned from GDG     |                |              |

### Gary MacFarlane

| Date                            | Item declared  | Classification                  | Action taken   |
|---------------------------------|--|---------------------------------|--|
| Initial declaration<br>09/06/14 | Serves on the independent expert panel of the Inflammation Competitive Research Programme of Pfizer. This is a competitive grant programme organised and funded by Pfizer Ltd and review of the proposals is undertaken by the panel on which he sits. | Personal pecuniary interest     | Declare and withdraw from discussion and recommendation making for pharmacological treatments. |
|                                 | Chief Investigator on an Investigator Initiated Proposal 'The Scotland and Ireland Registry for Ankylosing Spondylitis' which was funded by AbbVie and Pfizer (formerly Wyeth) 2008-13.  | Non-personal pecuniary interest | Declare and withdraw from discussion and recommendation making for pharmacological treatments. |
|                                 | Chief Investigator on the British Society for Rheumatology (BSR) Biologics Register for Ankylosing Spondylitis. This grant is awarded and administered by the BSR but the BSR obtains funds from Abbvie and Pfizer towards the costs of the register.  | Non-personal pecuniary interest | Declare and withdraw from discussion and recommendation making for pharmacological treatments. |
| 21/02/14                        | GDG1: No new interests were declared   | Nil                             | Nil  |
| 01/04/14                        | GDG2: No new interests were declared   | Nil                             | Nil  |
| 09/05/14                        | GDG3: Apologies sent   | Nil                             | Nil  |
| 09/06/14                        | GDG4: No new interests were declared   | Nil                             | Nil  |
| 16/07/14                        | GDG5: No new interests were declared   | Nil                             | Nil  |
| 11/09/14                        | GDG6: No new interests were declared   | Nil                             | Nil  |
| 12/09/14                        | GDG7: Apologies sent   | Nil                             | Nil  |
| 16/10/14                        | GDG8: No new interests were declared   | Nil                             | Nil  |
| 25/11/14                        | GDG9: No new interests were declared   | Nil                             | Nil  |
| 14/01/15                        | GDG10: No new interests were declared  | Nil                             | Nil  |
| 15/01/15                        | GDG11: No new interests were declared  | Nil                             | Nil  |
| 24/02/15                        | GDG12: No new interests were declared  | Nil                             | Nil  |
| 07/04/15                        | GDG13: No new interests were declared  | Nil                             | Nil  |
| 12/05/15                        | GDG14: No new interests were declared  | Nil                             | Nil  |
| 18/06/15                        | GDG15: Apologies sent  | Nil                             | Nil  |

| Date     | Item declared   | Classification                  | Action taken            |
|----------|---|---------------------------------|-------------------------|
| 30/07/15 | GDG16: No new interests were declared   | Nil                             | Nil                     |
| 01/09/15 | GDG17: Will be attending the Congress of the European Pain Federation (EFIC) on 3rd September. Travel and accommodation paid for by EFIC. | Personal non-pecuniary interest | Declare and participate |
| 02/09/15 | GDG18: Apologies sent   | Nil                             | Nil                     |
| 05/10/15 | GDG19: No new interests were declared   | Nil                             | Nil                     |
| 06/11/15 | GDG20: No new interests were declared   | Nil                             | Nil                     |
| 02/12/15 | GDG21: No new interests were declared   | Nil                             | Nil                     |
| 03/12/15 | GDG22: No new interests were declared   | Nil                             | Nil                     |
| 12/01/16 | GDG23: Apologies sent   | Nil                             | Nil                     |

### Serena McCluskey (co-opted expert)

| Date                            | Declaration of interest   | Classification                  | Action taken            |
|---------------------------------|---|---------------------------------|-------------------------|
| Initial declaration<br>17/11/13 | None.   | Nil                             | Nil                     |
| 14/01/15                        | GDG10: Was asked to provide peer-review for a final report of a NIHR Public Health Research funded project on work and wellbeing in December 2014 | Personal non-pecuniary interest | Declare and participate |

### Neil O'Connell

| Date                            | Declaration of interest   | Classification                  | Action taken            |
|---------------------------------|---|---------------------------------|-------------------------|
| Initial declaration<br>23/10/13 | Has published a number of manuscripts on this topic of chronic back pain. These include a debate paper that critiqued the assertion that poor performance of therapies in clinical trials may be due to inadequate subgrouping of back pain patients. He has also published narrative reviews and original research papers relating to the evidence of altered central nervous system function in chronic non-specific low back pain. He has frequently argued against the recommendation of acupuncture for treating low back pain, and other painful disorders, but has always argued from an evidence-based position. He has made regular contributions relating to back pain to the science blog <a href="http://www.bodyinmind.org">www.bodyinmind.org</a> where he presented critical summaries of contemporary back pain research for a clinical and lay audience. | Personal non-pecuniary interest | Declare and participate |
|                                 | No private practice.  | Nil                             | Nil                     |
| 21/02/14                        | GDG1: No new interests were declared  | Nil                             | Nil                     |
| 24/02/14                        | Published a blog on 11 February 2014 that discussed a recent published meta-analysis of spinal manual therapy, which critically examines what the results might mean for the effectiveness of these treatments.   | Personal non-pecuniary interest | Declare and participate |
|                                 | Currently trains physiotherapists on pre-registration courses.  | Personal pecuniary interest     | Declare and participate |

| Date     | Declaration of interest  | Classification                  | Action taken            |
|----------|--|---------------------------------|-------------------------|
| 01/04/14 | GDG2: Apologies sent   | Nil                             | Nil                     |
| 07/05/14 | Receives payment as a healthcare educator to train physiotherapists to assess and treat back pain.   | Personal pecuniary interest     | Declare and participate |
|          | Has accepted an invitation to the Editorial board of the Cochrane Collaboration Pain, Palliative and Supportive Care review group. This is an unpaid position which will involve editorial work on pain-related systematic reviews.  | Personal non-pecuniary interest | Declare and participate |
| 09/05/14 | GDG3: No new interests were declared   | Nil                             | Nil                     |
| 23/05/14 | A member of the editorial board of the Cochrane Collaboration Pain, Palliative and Supportive Care review group and has just begun planning a Cochrane review that he will co-author, examining the effectiveness of TENS for neuropathic pain.  | Personal non-pecuniary interest | Declare and participate |
| 09/06/14 | GDG4: Presenting a workshop at World Congress in Pain in October in Buenos Aires. The International Association for the Study of Pain will fund flights, conference registration and pay a US\$650 honorarium.   | Personal pecuniary interest     | Declare and participate |
|          | GDG4: Presenting at a conference on Pain and Physiotherapy in Seville, organised by the Sociedad Espanola de Fisioterapia y Dotor, a physio special interest group in pain management and Colfisio - Ilustre Colegio Profesional de Fisioterapeutas de Andalucia. Flights, accommodation and registration were provided by the organisers. In thanks for giving the talk (on evidence interpretation in chronic pain management) he was given the gift of a watch worth around £150. | Personal pecuniary interest     | Declare and participate |
| 16/07/14 | GDG5: No new interests were declared   | Nil                             | Nil                     |
| 11/09/14 | GDG6: No new interests were declared   | Nil                             | Nil                     |
| 12/09/14 | GDG7: No new interests were declared   | Nil                             | Nil                     |
| 16/10/14 | GDG8: No new interests were declared   | Nil                             | Nil                     |
| 25/11/14 | GDG9: Giving an invited talk for the Council for Allied Health Professions Research (on evidence interpretation in chronic pain management) on 26 November 2014. There is a speaker's fee of £300 plus transport costs covered.  | Personal pecuniary interest     | Declare and participate |
| 14/01/15 | GDG10: Has been invited to give a talk on evidence in chronic pain and a workshop on interpreting meta-analysis at the Belgian Manual Therapy Congress in September 2015. The congress is organized by the Manual Therapy Association of Belgium who will cover travel and accommodation and pay a €500 speakers fee.  | Personal pecuniary interest     | Declare and participate |
| 15/01/15 | GDG11: No new interests were declared  | Nil                             | Nil                     |
| 24/02/15 | GDG12: No new interests were declared  | Nil                             | Nil                     |
| 07/04/15 | GDG13: No new interests were declared  | Nil                             | Nil                     |

| Date     | Declaration of interest  | Classification                  | Action taken            |
|----------|--|---------------------------------|-------------------------|
| 12/05/15 | GDG14: Has accepted an invitation to speak at the conference of Le Comité Scientifique de la Société Française d'Evaluation et de Traitement de la Douleur (SFETD) in Nates, France in November on the management of complex regional pain syndrome. Flights, accommodation and conference registration costs will be covered by the organising committee. | Personal pecuniary interest     | Declare and participate |
|          | GDG14: Has accepted an invitation to sit on the editorial board for the Journal of Pain (Journal of the American Pain Society). This is an unpaid position.  | Non-personal pecuniary interest | Declare and participate |
| 18/06/15 | GDG15: No new interests were declared  | Nil                             | Nil                     |
| 30/07/15 | GDG16: Delivered a course on critical appraisal to therapists funded by a private physical therapy clinic in Chicago. Flights, accommodation and a teaching fee of US\$3,300 were provided.  | Personal pecuniary interest     | Declare and participate |
| 01/09/15 | GDG17: No new interests were declared  | Nil                             | Nil                     |
| 02/09/15 | GDG18: No new interests were declared  | Nil                             | Nil                     |
| 5/10/15  | GDG19: As previously declared he was a keynote speaker European Manual Therapy Congress in Belgium in September 2015. The congress is organised by the Manual Therapy Association of Belgium who covered travel and accommodation costs and paid a €500 speakers fee. In addition the congress organisers paid for two speakers' dinners.                  | Personal pecuniary interest     | Declare and participate |
| 06/11/15 | GDG20: No new interests were declared  | Nil                             | Nil                     |
| 02/12/15 | GDG21: No new interests were declared  | Nil                             | Nil                     |
| 03/12/15 | GDG22: No new interests were declared  | Nil                             | Nil                     |
| 12/01/16 | GDG23: No new interests were declared  | Nil                             | Nil                     |

#### Diana Robinson

| Date                            | Item declared  | Classification              | Action taken   |
|---------------------------------|--|-----------------------------|--|
| Initial declaration<br>06/02/15 | Has a small shareholding in Reckitt Benckiser and Indivior (yields <£1,000 per year) | Personal pecuniary interest | Declare and withdraw from discussion and recommendation making for pharmacological treatments. |

| Date     | Item declared  | Classification              | Action taken            |
|----------|--|-----------------------------|-------------------------|
|          | Is currently or has previously taken part in patient involvement work for:<br>National Institute for Health Research; PGfAR funding panel; National Cancer Research Institute; National Cancer Intelligence Network, NICE UK DUETs Steering Group. Health Research Authority; University of Leeds (IMPACCT study); Leeds Clinical Research Facility Executive; CQC; NHS England; Healthcare Quality Improvement Partnership - Service User Network; NICOR at UCL; SCIE (OPLTC Guidance Development Group) Cancer Research UK (including Research Involvement Coach); Royal College of Radiologists Academic Committee and Lay Network; Royal College of Physicians (CODA Guidance Development Group); British Heart Foundation.<br><br>These may pay expenses and/or honoraria for meetings, workshops or conference attendance; and for reviewing research proposals. | Personal pecuniary interest | Declare and participate |
| 24/02/15 | GDG12: Apologies sent  | Nil                         | Nil                     |
| 07/04/15 | GDG13: No new interests were declared  | Nil                         | Nil                     |
| 12/05/15 | GDG14: No new interests were declared  | Nil                         | Nil                     |
| 18/06/15 | GDG15: Joined the NHS England New Care Models Team: Public Participation   | Personal pecuniary interest | Declare and participate |
| 30/07/15 | GDG16: No new interests were declared  | Nil                         | Nil                     |
| 01/09/15 | GDG17: No new interests were declared  | Nil                         | Nil                     |
| 02/09/15 | GDG18: No new interests were declared  | Nil                         | Nil                     |
| 05/10/15 | GDG19: No new interests were declared  | Nil                         | Nil                     |
| 06/11/15 | GDG20: Attended a Quality Standards Advisory Committee for Referral for suspected cancer.  | Personal pecuniary interest | Declare and participate |
|          | GDG20: Attended a meeting on the potential harm of non-pharmacological treatment (unrelated to back pain), paid £30 by Queen Mary University.  | Personal pecuniary interest | Declare and participate |
| 02/12/15 | GDG21: No new interests were declared  | Nil                         | Nil                     |
| 03/12/15 | GDG22: No new interests were declared  | Nil                         | Nil                     |
| 12/01/16 | GDG23: No new interests were declared  | Nil                         | Nil                     |

#### Martin Sambrook (co-opted expert)

| Date                            | Declaration of interest   | Classification              | Action taken                                 |
|---------------------------------|---|-----------------------------|--|
| Initial declaration<br>17/11/13 | Does consultancy work for BMI (Esperance Hospital, Eastbourne) and Medica (UK reporting service) and Inhealth (Eastbourne DGH). | Personal pecuniary interest | Declare and participate as a co-opted expert |
| 02/09/15                        | GDG18: No new interests were declared   | Nil                         | Nil  |

#### Philip Sell

| Date                | Item declared   | Classification                  | Action taken            |
|---------------------|---|---------------------------------|-------------------------|
| Initial declaration | President of EUROSPINE the Spine society of Europe. Previously held an executive role in the British Spine Societies, Society for Back Pain Research, British | Personal non-pecuniary interest | Declare and participate |

| Date     | Item declared  | Classification                  | Action taken            |
|----------|--|---------------------------------|-------------------------|
| 19/01/14 | Scoliosis Society and the British Association of Spine Surgeons.   |                                 |                         |
| 20/02/14 | Paid NHS specialist, Spine specialist and Surgeon. Paid private spine specialist (now surgical).   | Nil                             | Nil                     |
| 21/02/14 | GDG1: No new interests were declared   | Nil                             | Nil                     |
| 01/04/14 | GDG2: No new interests were declared   | Nil                             | Nil                     |
| 09/05/14 | GDG3: Apologies sent   | Nil                             | Nil                     |
| 09/05/14 | GDG4: No new interests were declared   | Nil                             | Nil                     |
| 16/07/14 | GDG5: No new interests were declared   | Nil                             | Nil                     |
| 11/09/14 | GDG6: Invited to write an article for <i>Orthopedics</i> on antibiotics in back pain   | Personal non-pecuniary interest | Declare and participate |
| 12/09/14 | GDG7: No new interests were declared   | Nil                             | Nil                     |
| 16/10/14 | GDG8: As an executive for the Spine Society of Europe has been involved in stakeholder council negotiation with the medical technology industry on funding society activities. This is aimed at ensuring any funding from industry for education and meetings is fully transparent and compliant. Has no involvement in the sign-off of finances or expenditure. | Non-personal pecuniary interest | Declare and participate |
| 25/11/14 | GDG9: Past President of EUROSPINE. Liases with the Medtech industry on stakeholder issues.   | Personal non-pecuniary interest | Declare and participate |
| 14/01/15 | GDG10: No new interests were declared  | Nil                             | Nil                     |
| 15/01/15 | GDG11: Apologies sent  | Nil                             | Nil                     |
| 25/02/15 | GDG12: No new interests were declared  | Nil                             | Nil                     |
| 07/04/15 | GDG13: Invited to the Pan Arab spine conference talking on TB and safety on 11 and 12 April 2015, for which travel and accommodation will be paid for by the organisers.   | Personal non-pecuniary interest | Declare and participate |
|          | GDG13: Invited to the Turkish spine society 29 April-3 May 2015, talking on cervical fractures and evidence-based treatment surgical treatment of back pain. Travel and accommodation will be paid for by the organisers.  | Personal non-pecuniary interest | Declare and participate |
|          | GDG13: Authored a cohort paper on spine MICD in the JBJS British in March 2015.  | Personal non-pecuniary interest | Declare and participate |
| 12/05/15 | GDG14: No new interests were declared  | Nil                             | Nil                     |
| 18/06/15 | GDG15: No new interests were declared  | Nil                             | Nil                     |
| 30/07/15 | GDG16: Attendance at EUROSPINE Copenhagen 1-4 September 2015. Holds an Executive role for the Spine Society. Chaired a session titled: 'Rise and fall of new technologies'. Travel and accommodation will be provided by the society.  | Personal non-pecuniary interest | Declare and participate |
| 01/09/15 | GDG17: Apologies sent  | Nil                             | Nil                     |
| 02/09/15 | GDG18: Apologies sent  | Nil                             | Nil                     |
| 04/10/15 | GDG19: Guest Speaker at Portuguese Spine Society meeting 1-3 October 2015. Accommodation provided by the organisers.   | Personal non-pecuniary interest | Declare and participate |
| 06/11/15 | GDG20: No new interests were declared  | Nil                             | Nil                     |
| 02/12/15 | GDG21: No new interests were declared  | Nil                             | Nil                     |

| Date     | Item declared                         | Classification | Action taken |
|----------|---------------------------------------|----------------|--------------|
| 03/12/15 | GDG22: No new interests were declared | Nil            | Nil          |
| 12/01/16 | GDG23: Apologies sent                 | Nil            | Nil          |

### Simon Somerville

| Date                            | Item declared  | Classification                  | Action taken   |
|---------------------------------|--|---------------------------------|--|
| Initial declaration<br>07/11/13 | As part of role at the Arthritis Research UK Primary Care Centre, Keele University, he is part of a team that conducts research into low back pain. In particular, was involved in the STarT Back and IMPACT Back studies, which focus on a stratified approach to back pain management. | Personal non-pecuniary interest | Declare and withdraw from discussion and recommendation making for risk assessment tools and risk stratification |
| 21/02/14                        | GDG1: No new interests were declared   | Nil                             | Nil  |
| 01/04/14                        | GDG2: No new interests were declared   | Nil                             | Nil  |
| 01/05/14                        | Receives payment as a healthcare professional to assess and treat back pain.   | Personal pecuniary interest     | Nil  |
| 09/05/14                        | GDG3: Apologies sent   | Nil                             | Nil  |
| 09/06/14                        | GDG4: No new interests were declared   | Nil                             | Nil  |
| 16/07/14                        | GDG5: Apologies sent   | Nil                             | Nil  |
| 11/09/14                        | GDG6: No new interests were declared   | Nil                             | Nil  |
| 12/09/14                        | GDG7: No new interests were declared   | Nil                             | Nil  |
| 16/10/14                        | GDG8: A film that he had made in previous years giving general advice to patients with back pain was published in a joint venture between Keele University and AXA/PPP. Not paid for his role in editing and presenting in the film.   | Personal non-pecuniary interest | Declare and participate  |
| 25/11/14                        | GDG9: No new interests were declared   | Nil                             | Nil  |
| 14/01/15                        | GDG10: No new interests were declared  | Nil                             | Nil  |
| 15/01/15                        | GDG11: No new interests were declared  | Nil                             | Nil  |
| 24/02/15                        | GDG12: Apologies sent  | Nil                             | Nil  |
| 07/04/15                        | GDG13: Will co-host a BMJ master class webinar on back pain on 9 April 2015. £350 will be shared between self and the other co-host.   | Personal pecuniary interest     | Declare and participate  |
| 12/05/15                        | GDG14: No new interests were declared  | Nil                             | Nil  |
| 18/06/15                        | GDG15: No new interests were declared  | Nil                             | Nil  |
| 30/07/15                        | GDG16: No new interests were declared  | Nil                             | Nil  |
| 01/09/15                        | GDG17: No new interests were declared  | Nil                             | Nil  |
| 02/09/15                        | GDG18: No new interests were declared  | Nil                             | Nil  |
| 04/10/15                        | GDG19: No new interests were declared  | Nil                             | Nil  |
| 06/11/15                        | GDG20: Edited content about back pain for a patient self-help App. Will be paid £80 for this work.   | Personal pecuniary interest     | Declare and participate  |
| 02/12/15                        | GDG21: Will be presenting at the Royal College of General Practitioners' One Day Essentials Conference on 9 February 2016. The topic is primary care assessment/management of low back pain, including the use of STarT Back. Will be paid £150 for                                      | Personal pecuniary interest     | Declare and participate  |

| Date     | Item declared                         | Classification | Action taken |
|----------|---------------------------------------|----------------|--------------|
|          | this.                                 |                |              |
| 03/12/15 | GDG22: No new interests were declared | Nil            | Nil          |
| 12/01/16 | GDG23: No new interests were declared | Nil            | Nil          |

### Helen Taylor

| Date                            | Item declared  | Classification                  | Action taken            |
|---------------------------------|--|---------------------------------|-------------------------|
| Initial declaration<br>03/01/14 | Employed by Pain Management Solutions who are an independent provider of community chronic pain services to the NHS. The provider has 20 contracts with Clinical Commissioning Groups and is registered on national Choose and Book. Patients with low back pain form a large part of the case load. | Non-personal pecuniary interest | Declare and participate |
| 21/02/14                        | GDG1: No new interests were declared   | Nil                             | Nil                     |
| 01/04/14                        | GDG2: Apologies sent   | Nil                             | Nil                     |
| 09/05/14                        | GDG3: No new interests were declared   | Nil                             | Nil                     |
| 09/06/14                        | GDG4: No new interests were declared   | Nil                             | Nil                     |
| 16/07/14                        | GDG5: Gave a presentation of self-management strategies to the Royal College of Nursing congress on 16 June - MSK group, patient groups and GP groups in June. No honoraria received.  | Personal non-pecuniary interest | Declare and participate |
| 11/09/14                        | GDG6: Apologies sent   | Nil                             | Nil                     |
| 12/09/14                        | GDG7: Apologies sent   | Nil                             | Nil                     |
| 30/9/14                         | Resigned from GDG  |                                 |                         |

### Steven Vogel

| Date                            | Item declared   | Classification                  | Action taken            |
|---------------------------------|---|---------------------------------|-------------------------|
| Initial declaration<br>18/11/13 | Was a GDG member on NICE CG88 Low back pain in adults: early management (published 2009). Was chosen to be one of the members of the GDG to do public dissemination of the guideline. This included performing some interviews for media organisations and advocating the content of the guideline. | Personal non-pecuniary interest | Declare and participate |
|                                 | A member of the British Osteopathic Association and registered with the General Osteopathic Council. Sit on NHS England's pathfinder project 'Low back pain and sciatica' as a nominee of the British Osteopathic Association.  | Personal non-pecuniary interest | Declare and participate |
|                                 | Has led research into the safety (adverse events) of osteopathy/manual therapy in the UK and presented this work nationally and internationally. Publications in preparation.   | Personal non-pecuniary interest | Declare and participate |
|                                 | Treats people with low back pain in an NHS primary care setting. No private practice.   | Nil                             | Nil                     |
| 21/02/14                        | GDG1: No new interests were declared  | Nil                             | Nil                     |
| 01/04/14                        | GDG2: No new interests were declared  | Nil                             | Nil                     |
| 09/05/14                        | GDG3: No new interests were declared  | Nil                             | Nil                     |
| 09/06/14                        | GDG4: No new interests were declared  | Nil                             | Nil                     |
| 16/07/14                        | GDG5: Presented at a conference arranged by Health Education Seminar on Reassurance in back pain. A fee of £250 was received.   | Personal pecuniary interest     | Declare and participate |
| 11/09/14                        | GDG6: No new interests were declared  | Nil                             | Nil                     |

| Date     | Item declared                         | Classification | Action taken |
|----------|---------------------------------------|----------------|--------------|
| 12/09/14 | GDG7: No new interests were declared  | Nil            | Nil          |
| 16/10/14 | GDG8: No new interests were declared  | Nil            | Nil          |
| 25/11/14 | GDG9: No new interests were declared  | Nil            | Nil          |
| 14/01/15 | GDG10: No new interests were declared | Nil            | Nil          |
| 15/01/15 | GDG11: No new interests were declared | Nil            | Nil          |
| 24/02/15 | GDG12: No new interests were declared | Nil            | Nil          |
| 07/04/15 | GDG13: No new interests were declared | Nil            | Nil          |
| 12/05/15 | GDG14: No new interests were declared | Nil            | Nil          |
| 01/06/15 | Occasionally sees private patients    | Nil            | Nil          |
| 18/06/15 | GDG15: No new interests were declared | Nil            | Nil          |
| 30/07/15 | GDG16: No new interests were declared | Nil            | Nil          |
| 01/09/15 | GDG17: No new interests were declared | Nil            | Nil          |
| 02/09/15 | GDG18: No new interests were declared | Nil            | Nil          |
| 05/10/15 | GDG19: Apologies sent                 | Nil            | Nil          |
| 06/11/15 | GDG20: No new interests were declared | Nil            | Nil          |
| 02/12/15 | GDG21: No new interests were declared | Nil            | Nil          |
| 03/12/15 | GDG22: No new interests were declared | Nil            | Nil          |
| 12/01/16 | GDG23: No new interests were declared | Nil            | Nil          |

#### David Walsh

| Date                         | Item declared  | Classification                  | Action taken   |
|------------------------------|--|---------------------------------|--|
| Initial declaration 11/11/13 | Has a current consultancy agreement with Pfizer Ltd., but has not received any personal payment within the last 12 months.   | Personal pecuniary Interest     | Declare and withdraw from discussion and recommendation making for pharmacological treatments. |
|                              | Director of the Arthritis Research UK Pain Centre at Nottingham University, where his research receives specific research funding from Arthritis Research UK and the National Institute for Health Research. In addition, through the University of Nottingham, he holds a grant from Pfizer Ltd under their Inflammation Competitive Research Programme which supports research on pain in rheumatoid arthritis. He is Principle Investigator at Sherwood Forest Hospitals NHS Foundation Trust on industry-funded clinical trials in rheumatoid arthritis. | Non-personal pecuniary interest | Declare and withdraw from discussion and recommendation making for pharmacological treatments. |
|                              | Has previously expressed opinions on the treatment of low back pain in research publications and reviews. Was a GDG member on NICE CG88 Low back pain in adults: early management (published 2009). In addition, I was co-author of a letter to the <i>BMJ</i> following the publication of the guideline, published correspondence in <i>Pain News</i> , the journal of the British Pain Society, and made presentations on the content of the guideline to national  | Personal non-pecuniary interest | Declare and participate  |

| Date     | Item declared   | Classification                  | Action taken   |
|----------|---|---------------------------------|--|
|          | professional meetings.  |                                 |  |
|          | Member of the British Society for Rheumatology, British Pain Society, British Medical Association, International Association for the Study of Pain and American College of Rheumatology, each of which has an interest in Low Back Pain and its treatment, and in the professionals who deliver those treatments.   | Personal non-pecuniary interest | Declare and participate  |
|          | NHS clinical practice for which he is paid involves the assessment and treatment of people with low back pain and sciatica, and may be affected by the outcome of these guidelines. Does not undertake private clinical practice. My academic practice for which he is paid by the University of Nottingham has a key aim to better understand arthritis pain, and research questions that arise from the guideline update may contribute to the direction taken by my developing research programme. | Personal non-pecuniary interest | Declare and participate  |
| 24/02/14 | GDG1: No new interests were declared  | Nil                             | Nil  |
| 01/04/14 | GDG2: No new interests were declared  | Nil                             | Nil  |
| 09/05/14 | GDG3: No new interests were declared  | Nil                             | Nil  |
| 09/06/14 | GDG4: Apologies sent  | Nil                             | Nil  |
| 16/07/14 | GDG5: ICRP research grant for £79,255.00 over 18 months from Pfizer Ltd supporting research into pain in rheumatoid arthritis. Pfizer Ltd has no input into the design, execution or publication of the study.  | Non-personal pecuniary interest | Declare and withdraw from discussion and recommendation making for pharmacological treatments. |
| 11/09/14 | GDG6: Co-applicant in an NIHR grant for studying non-epidural treatments in sciatica. It is a prospective piece of research, using adalimumab. There is no financial, non-financial or academic involvement from the manufacturer.  | Personal pecuniary interest     | Declare and withdraw from discussion and recommendation making for pharmacological treatments. |
| 12/09/14 | GDG7: Is a principle investigator on an upcoming study with Pfizer Ltd, but the contract has not yet been signed.   | Non-personal pecuniary interest | Declare and withdraw from discussion and recommendation making for pharmacological treatments. |

| Date     | Item declared  | Classification                  | Action taken   |
|----------|--|---------------------------------|--|
| 15/09/14 | Invited to attend an ICRP investigator meeting at the Grosvenor Hotel, London, 23 and 24 September 2014. Pfizer Ltd will provide travel and accommodation.   | Personal non-pecuniary interest | Declare and withdraw from discussion and recommendation making for pharmacological treatments. |
| 16/10/14 | GDG8: No new interests were declared   | Nil                             | Nil  |
| 25/11/14 | GDG9: No new interests were declared   | Nil                             | Nil  |
| 14/01/15 | GDG10: No new interests were declared  | Nil                             | Nil  |
| 15/01/15 | GDG11: No new interests were declared  | Nil                             | Nil  |
| 24/02/15 | GDG12: No new interests were declared  | Nil                             | Nil  |
| 07/04/15 | GDG13: Chaired a workshop session at the British Pain Society Annual Scientific Meeting, Glasgow, 23 April 2015. Workshop entitled: Researching the effectiveness of facet joint injections. As a member of the Scientific Organising Committee he received complementary registration.  | Personal non-pecuniary interest | Declare and participate  |
| 12/05/15 | GDG14: Apologies sent  | Nil                             | Nil  |
| 18/06/15 | GDG15: No new interests were declared  | Nil                             | Nil  |
| 30/07/15 | GDG16: No new interests were declared  | Nil                             | Nil  |
| 01/09/15 | GDG17: No new interests were declared  | Nil                             | Nil  |
| 02/09/15 | GDG18: No new interests were declared  | Nil                             | Nil  |
| 04/10/15 | GDG19: No new interests were declared  | Nil                             | Nil  |
| 06/11/15 | GDG20: Consultancy for Novartis Consumer Health S.A. – a GlaxoSmithKline Consumer Healthcare Company, by participation in Advisory Board on over-the-counter topical products currently in development for the treatment of pain, Montreal, Canada 14 and 15 October 2015. Has been offered travel expenses plus a consultancy fee in return for this consultancy. | Personal pecuniary interest     | Declare and withdraw from discussion and recommendation making for pharmacological treatments. |
| 02/12/15 | GDG21: No new interests were declared  | Nil                             | Nil  |
| 03/12/15 | GDG22: No new interests were declared  | Nil                             | Nil  |
| 12/01/16 | GDG23: No new interests were declared  | Nil                             | Nil  |

### Chris Wells

| Date                         | Item declared   | Classification                           | Action taken   |
|------------------------------|---|--|--|
| Initial declaration 13/12/13 | Paid as a healthcare professional to assess and treat back pain suffering. Speaks at industry-funded meetings and acts as a paid consultant on regular basis. | Personal non-specific pecuniary interest | Declare and participate. Declare each consultancy through development. |

| Date     | Item declared  | Classification                  | Action taken   |
|----------|--|---------------------------------|--|
|          | President elect of the European Pain Federation (EFIC), which occasionally makes recommendations on back pain (last document September 2012). The organisation receives up to €500,000 sponsorship per year from the medical technology industry to allow its work and organise conferences. Finances are handled by Kenes (a professional conference organiser). Has no involvement in the sign-off of finances or expenditure. | Non-personal pecuniary interest | Declare and participate  |
| 21/02/14 | GDG1: No new interests were declared   | Nil                             | Nil  |
| 01/04/14 | GDG2: No new interests were declared   | Nil                             | Nil  |
| 09/05/14 | GDG3: No new interests were declared   | Nil                             | Nil  |
| 09/06/14 | GDG4: President of the EFIC from June 2014 to September 2017   | Personal non-pecuniary interest | Declare and participate  |
|          | GDG4: Acted as a consultant advisor to and speaker for Grunenthal.   | Personal pecuniary interest     | Declare and withdraw from discussion and recommendation making for pharmacological treatments. |
| 16/07/14 | GDG5: No new interests were declared   | Nil                             | Nil  |
| 11/09/14 | GDG6: Acted as a consultant advisor to and speaker for Grunenthal.   | Personal pecuniary interest     | Declare and withdraw from discussion and recommendation making for pharmacological treatments. |
| 12/09/14 | GDG7: Apologies sent   | Nil                             | Nil  |
| 16/10/14 | GDG8: Attended an IASP meeting in Buenos Aires on 7–11 October. Hospitality was provided by Pfizer, Grunenthal and Mundipharma. Fee and hospitality was provided by Mallinckrodt.  | Personal pecuniary interest     | Declare and withdraw from discussion and recommendation making for pharmacological treatments. |
| 25/11/14 | GDG9: Apologies sent   | Nil                             | Nil  |
| 14/01/15 | GDG10: No new interests were declared  | Nil                             | Nil  |
| 15/01/15 | GDG11: Apologies sent  | Nil                             | Nil  |
| 24/02/15 | GDG12: No new interests were declared  | Nil                             | Nil  |
| 07/04/15 | GDG13: Gave talks for Grunenthal: three to GPs and one to pain management healthcare professionals for which he received a fee.  | Personal pecuniary interest     | Declare and withdraw from discussion and recommendation  |

| Date     | Item declared  | Classification                  | Action taken  |
|----------|--|---------------------------------|---|
|          |  |                                 | ion making for pharmacological treatments   |
| 12/05/15 | GDG14: Fees received for two talks: Grunenthal and Indivior.   | Personal pecuniary interest     | Declare and withdraw from discussion and recommendation making for pharmacological treatments |
|          | GDG14: Went on an EFIC-funded trip to Barcelona to committee on Pain Training and Certification 1–3 May 2015.  | Personal non-pecuniary interest | Declare and participate   |
| 18/06/15 | GDG15: Apologies sent  | Nil                             | Nil   |
| 30/07/15 | GDG16: No new interests were declared  | Nil                             | Nil   |
| 01/09/15 | GDG17: Apologies sent  | Nil                             | Nil   |
| 02/09/15 | GDG18: Apologies sent  | Nil                             | Nil   |
| 04/10/15 | GDG19: Attended an EFIC meeting, Pain in Europe 1–5 September 2015, expenses provided by EFIC/Kenes.   | Personal non-pecuniary interest | Declare and participate   |
|          | GDG19: Attended Pain School, Klagenfurt, Austria, 6–9 September 2015, expenses provided by EFIC.   | Personal non-pecuniary interest | Declare and participate   |
|          | GDG19: Attended Pain meeting, Chisinau, Moldova, 9–12 September 2015, expenses provided by EFIC.   | Personal non-pecuniary interest | Declare and participate   |
|          | GDG19: Gave talks for Grunenthal to GPs and hospital doctors, 15 September 2015, honoraria and meals were provided.  | Personal pecuniary interest     | Declare and withdraw from discussion and recommendation making for pharmacological treatments |
| 06/11/15 | GDG20: Speaker at EFIC Pain School, Bergamo 6–7 October 2015. Travel, subsistence and accommodation provided by EFIC.  | Personal non-pecuniary interest | Declare and participate   |
|          | GDG20: Speaker at Slovakian/Czech Pain Meeting, Bratislava, 7–8 October 2015. Travel, subsistence and accommodation provided by EFIC.  | Personal non-pecuniary interest | Declare and participate   |
|          | GDG20: Attended, as a delegate, EULAR meeting on EU cross-border treatment, Brussels, 12 October 2015 and meeting of Brain Mind and Pain action group in Brussels Parliament on 13 October 2015. Travel, subsistence and accommodation provided by the organisers. | Personal non-pecuniary interest | Declare and participate   |
|          | GDG20: Chaired meeting of EFIC Patient Liaison Committee, Brussels, 12 October 2015, followed by meal with delegates.  | Personal non-pecuniary interest | Declare and participate   |
|          | GDG20: Will attend EFIC Executive Board Meeting in Brussels, 3–5 November 2015. Travel, subsistence and accommodation will be provided by EFIC.  | Personal non-pecuniary interest | Declare and participate   |
| 02/12/15 | GDG21: Expert panel meeting on 19 and 20   | Personal pecuniary              | Declare and   |

| Date     | Item declared   | Classification                  | Action taken  |
|----------|---|---------------------------------|---|
|          | November 2015 on opioid analgesic dependence. It was organised by Reckitt Benckiser and Indivior. Travel, subsistence, accommodation and fee were provided.   | interest                        | withdraw from discussion and recommendation making for pharmacological treatments             |
|          | GDG21: Received a visit from a Hypogel representative regarding a machine for treating facet joints on 12 November. The machine is not yet licensed.  | Personal non-pecuniary interest | Declare and participate   |
| 03/12/15 | GDG22: 19–20 November, attended an open summit meeting on opioid analgesics dependence at Heathrow airport. Hospitality and honorarium provided by Invidior.  | Personal pecuniary interest     | Declare and withdraw from discussion and recommendation making for pharmacological treatments |
|          | GDG22: 24–26 November 2015, gave two talks (one to GPs and one to hospital doctors). Honorarium and accommodation funded by Grunenthal.   | Personal pecuniary interest     | Declare and withdraw from discussion and recommendation making for pharmacological treatments |
| 12/01/16 | GDG23: 4 and 5 December 2015, gave four lectures at the University of Sao Joao, Porto on low back pain for the Portuguese Pain Society and University Diploma of Pain. Hospitality, travel paid and honorarium were provided.     | Personal pecuniary interest     | Declare and participate   |
|          | GDG23: 11 and 12 December 2015, gave a lecture on neuropathic pain at the European Headache Federation meeting in Athens. Chaired a session on energy therapies in migraine. Travel and accommodation provided by the organisers. | Personal non-pecuniary interest | Declare and participate   |

#### NCGC team

| Date                         | Item declared                        | Classification | Action taken |
|------------------------------|--------------------------------------|----------------|--------------|
| Initial declaration 18/11/13 | In receipt of NICE commissions       | N/A            | N/A          |
| 21/02/14                     | GDG1: No new interests were declared | Nil            | Nil          |
| 01/04/14                     | GDG2: No new interests were declared | Nil            | Nil          |
| 09/05/14                     | GDG3: No new interests were declared | Nil            | Nil          |
| 09/06/14                     | GDG4: No new interests were declared | Nil            | Nil          |
| 16/07/14                     | GDG5: No new interests were declared | Nil            | Nil          |
| 11/09/14                     | GDG6: No new interests were declared | Nil            | Nil          |
| 12/09/14                     | GDG7: No new interests were declared | Nil            | Nil          |
| 16/10/14                     | GDG8: No new interests were declared | Nil            | Nil          |

| Date     | Item declared                         | Classification | Action taken |
|----------|---------------------------------------|----------------|--------------|
| 25/11/14 | GDG9: No new interests were declared  | Nil            | Nil          |
| 14/01/15 | GDG10: No new interests were declared | Nil            | Nil          |
| 15/01/15 | GDG11: No new interests were declared | Nil            | Nil          |
| 24/02/15 | GDG12: No new interests were declared | Nil            | Nil          |
| 07/04/15 | GDG13: No new interests were declared | Nil            | Nil          |
| 12/05/15 | GDG14: No new interests were declared | Nil            | Nil          |
| 18/06/15 | GDG15: No new interests were declared | Nil            | Nil          |
| 30/07/15 | GDG16: No new interests were declared | Nil            | Nil          |
| 01/09/15 | GDG17: No new interests were declared | Nil            | Nil          |
| 02/09/15 | GDG18: No new interests were declared | Nil            | Nil          |
| 05/10/15 | GDG19: No new interests were declared | Nil            | Nil          |
| 06/11/15 | GDG20: No new interests were declared | Nil            | Nil          |
| 02/12/15 | GDG21: No new interests were declared | Nil            | Nil          |
| 03/12/15 | GDG22: No new interests were declared | Nil            | Nil          |
| 12/01/16 | GDG23: No new interests were declared | Nil            | Nil          |

#### NIHR team

| Date                            | Item declared                         | Classification | Action taken |
|---------------------------------|---------------------------------------|----------------|--------------|
| Initial declaration<br>18/11/13 | In receipt of NICE commissions        | N/A            | N/A          |
| 21/02/14                        | GDG1: No new interests were declared  | Nil            | Nil          |
| 01/04/14                        | GDG2: No new interests were declared  | Nil            | Nil          |
| 09/05/14                        | GDG3: No new interests were declared  | Nil            | Nil          |
| 09/06/14                        | GDG4: No new interests were declared  | Nil            | Nil          |
| 16/07/14                        | GDG5: No new interests were declared  | Nil            | Nil          |
| 11/09/14                        | GDG6: No new interests were declared  | Nil            | Nil          |
| 12/09/14                        | GDG7: No new interests were declared  | Nil            | Nil          |
| 16/10/14                        | GDG8: No new interests were declared  | Nil            | Nil          |
| 25/11/14                        | GDG9: No new interests were declared  | Nil            | Nil          |
| 14/01/15                        | GDG10: No new interests were declared | Nil            | Nil          |
| 15/01/15                        | GDG11: No new interests were declared | Nil            | Nil          |
| 24/02/15                        | GDG12: No new interests were declared | Nil            | Nil          |
| 07/04/15                        | GDG13: No new interests were declared | Nil            | Nil          |
| 12/05/15                        | GDG14: No new interests were declared | Nil            | Nil          |
| 18/06/15                        | GDG15: No new interests were declared | Nil            | Nil          |
| 30/07/15                        | GDG16: No new interests were declared | Nil            | Nil          |
| 01/09/15                        | GDG17: No new interests were declared | Nil            | Nil          |
| 02/09/15                        | GDG18: No new interests were declared | Nil            | Nil          |
| 05/10/15                        | GDG19: No new interests were declared | Nil            | Nil          |
| 06/11/15                        | GDG20: No new interests were declared | Nil            | Nil          |
| 02/12/15                        | GDG21: No new interests were declared | Nil            | Nil          |
| 03/12/15                        | GDG22: No new interests were declared | Nil            | Nil          |
| 12/01/16                        | GDG23: No new interests were declared | Nil            | Nil          |

## Appendix C: Clinical review protocols

### C.1 Clinical examination

**Table 1: Review protocol: Clinical examination for sciatica**

| Review question  | In people with suspected (or under investigation for) sciatica, what is the clinical and cost effectiveness of clinical examination compared to history alone or history with imaging, when each is followed by treatment for sciatica, in improving patient outcomes?   |
|--|--|
| Objectives   | To determine which means of clinical examination is best in terms of leading to improvements in patient outcomes in people with suspected (or under investigation for) sciatica  |
| Review population  | People with suspected (or under investigation for) sciatica<br>People aged $\geq 16$ years   |
| Interventions and comparators:<br>generic/class;<br>specific/drug<br><br>(All interventions will be compared with each other, unless otherwise stated) | Clinical tests (+ treatment); Straight leg raise (also called sciatic nerve stretch test)<br>Clinical tests (+ treatment); Femoral nerve stretch test<br>Clinical tests (+ treatment); Crossed straight leg raise<br>Clinical tests (+ treatment); Motor muscle strength<br>Clinical tests (+ treatment); Dermatome sensory loss<br>Clinical tests (+ treatment); Reflex impairment<br>Clinical tests (+ treatment); Slump test<br>Clinical tests (+ treatment); Combination of 2 or more clinical tests<br>History (+ treatment); History alone<br>History (+ treatment); History with imaging<br><br>*Note: treatment for sciatica can be anything reported in the study that is considered clinically relevant. The treatment given as the consequence of a positive test should be the same as for the index test. |
| Outcomes   | <ul style="list-style-type: none"> <li>• Quality of life at end of study (Continuous) CRITICAL</li> <li>• Pain severity at end of study (Continuous) CRITICAL</li> <li>• Function measured by disability score at end of study (Continuous) CRITICAL</li> <li>• Psychological distress at end of study (Continuous) CRITICAL</li> <li>• Responder criteria (&gt;30% improvement in pain or function) at end of study (Dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at end of study (Dichotomous) IMPORTANT</li> <li>• Healthcare utilisation at end of study (Dichotomous) IMPORTANT</li> </ul>  |
| Study design   | RCT (test and treat studies)   |
| Unit of randomisation  | Patient  |
| Crossover study  | Not permitted  |
| Minimum duration of study  | No minimum duration  |
| Other exclusions   | <ul style="list-style-type: none"> <li>• Non sciatica population</li> <li>• Non-English language studies</li> <li>• Conference abstracts will not automatically be excluded from the review but will be initially assessed against the inclusion criteria and then further processed only if no other full publication is available for that review question, in which case the authors of the selected abstracts will be contacted for further information.</li> <li>• Unclear examination /no detail of examination given</li> </ul>   |

|   |   |
|---|---|
| <b>Review question</b>                      | <b>In people with suspected (or under investigation for) sciatica, what is the clinical and cost effectiveness of clinical examination compared to history alone or history with imaging, when each is followed by treatment for sciatica, in improving patient outcomes?</b> |
| Other stratifications                       | None  |
| Subgroup analyses if there is heterogeneity | Duration of symptoms (Acute ; Chronic); Duration of symptoms may affect performance   |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library<br>Language: English   |

## C.2 Risk assessment tools and stratification

### C.2.1 Risk assessment tools

**Table 2: Review protocol: Risk assessment tools**

|   |  |
|---|--|
| <b>Review question</b>                            | <b>Which validated risk assessment tools are the most accurate for identifying people with low back pain or sciatica at risk of poor outcome/delayed improvement?</b>  |
| Objectives  | To determine the accuracy of risk tools in predicting chronicity of pain in people with non-specific low back pain and sciatica  |
| Population  | Two strata:<br>People aged 16 or above with non-specific low back pain<br>People aged 16 or above with sciatica  |
| Risk assessment tool(s)                           | Validated risk assessment/clinical prediction tools including:<br>STarT Back<br>DRAM<br>ÖREBRO   |
| Target condition                                  | Risk of poor outcome/delayed improvement (as reported by study)  |
| Outcomes (in terms of discrimination/calibration) | Area under the ROC curve (c-index, c-statistic).<br>Sensitivity, specificity, predictive values, likelihood ratio.<br>Predicted risk versus observed risk (calibration).<br>Other outcomes: e.g. D statistic, R <sup>2</sup> statistic and Brier score, Reclassification |
| Study design                                      | RCTs<br>Cohort studies<br>Systematic reviews   |
| Exclusions  | Case-control studies<br>Cross-sectional studies<br>Mixed chronic pain (not just low back pain)<br>Abstracts<br>Non-English language.   |
| How the information will be searched              | Databases: Medline, Embase, Cochrane Library<br>Language: English  |
| Search terms                                      | To be completed by information scientist   |
| The review strategy                               | Data will be meta-analysed if possible   |

## C.2.2 Risk stratification

**Table 3: Review protocol: Risk stratification**

| Review question  | What is the clinical and cost effectiveness of stratifying management of non-specific low back pain or sciatica according to outcome of a risk assessment tool/questionnaire?  |
|--|--|
| Objectives   | Long-term relief of symptoms and interventions for living with low back pain and/or sciatica   |
| Review population  | People aged 16 or above with non-specific low back pain<br>People aged 16 or above with sciatica   |
| Interventions and comparators:<br>generic/class;<br>specific/drug<br><br>(All interventions will be compared with each other, unless otherwise stated) | Risk assessment tools + treatment; STarT Back<br>Risk assessment tools + treatment; DRAM<br>Risk assessment tools + treatment; ÖREBRO<br>Risk assessment tools + treatment; Gatchel<br>Risk assessment tools + treatment; Hicks/Delitto<br>Risk assessment tools + treatment; Childs/Flynn<br>Risk assessment tools + treatment; Hancock<br>Risk assessment tools + treatment; O'Sullivan<br>Unstratified treatment; treatment without risk tool   |
| Outcomes   | Quality of life at ≤ 4 months (Continuous) CRITICAL<br>Quality of life at >4 months (Dichotomous) CRITICAL<br>Pain severity at ≤ 4 months (Continuous) CRITICAL<br>Pain severity at >4 months (Continuous) CRITICAL<br>Psychological distress (HADS/GHQ/BDI/STAI) at ≤ 4 months (Continuous) CRITICAL<br>Psychological distress (HADS/GHQ/BDI/STAI) at >4 months (Dichotomous) CRITICAL<br>Function (disability scores) at ≤ 4 months (Continuous) CRITICAL<br>Function (disability scores) at >4 months (Dichotomous) CRITICAL<br>Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤ 4 months (Dichotomous) IMPORTANT<br>Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at >4 months (Dichotomous) IMPORTANT<br>Responder criteria (>30% improvement in pain or function) at ≤ 4 months (Dichotomous) IMPORTANT<br>Responder criteria (>30% improvement in pain or function) at >4 months (Dichotomous) IMPORTANT<br>Adverse events (morbidity) at ≤ 4 months (Dichotomous) IMPORTANT<br>Adverse events (morbidity) at >4 months (Dichotomous) IMPORTANT |
| Study design   | RCT<br>Systematic Review<br>Prospective cohort study<br>Retrospective cohort study   |
| Unit of randomisation  | Patient  |
| Crossover study  | Not permitted  |
| Minimum duration of study  | Not defined  |
| Other exclusions   | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language.</li> </ul>  |

| Review question                             | What is the clinical and cost effectiveness of stratifying management of non-specific low back pain or sciatica according to outcome of a risk assessment tool/questionnaire? |
|---|---|
| Population stratification                   | Overall (acute, chronic) with sciatica<br>Overall (acute, chronic) without sciatica   |
| Reasons for stratification                  | People with low back pain alone may respond differently to treatment than people with low back pain and sciatica  |
| Subgroup analyses if there is heterogeneity | Validated and non-validated risk tools (New onset; Recurrent episode);<br>Validated risk tools may stratify with more accuracy  |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library<br>Language: restrict to English only  |

### C.3 Imaging

**Table 4: Review protocol: Imaging**

| Review question  | What is the clinical and cost effectiveness of performing imaging (X-ray or MRI) compared with no investigation to improve functional disability, pain or psychological distress in people with low back pain and/or sciatica?  |
|--|---|
| Objectives   | To determine the clinical and cost effectiveness of imaging techniques in the management of non-specific low back pain and sciatica   |
| Review population  | <ul style="list-style-type: none"> <li>• People aged 16 or above with non-specific low back pain with or without sciatica</li> <li>• People aged 16 or above with sciatica</li> </ul>   |
| Interventions and comparators: generic/class; specific/drug<br><br>(All interventions will be compared with each other, unless otherwise stated) | <ul style="list-style-type: none"> <li>• Imaging for low back pain; MRI, CT or X-ray</li> <li>• Imaging for sciatica; MRI</li> <li>• No imaging</li> <li>• Deferred imaging</li> </ul>  |
| Outcomes   | <ul style="list-style-type: none"> <li>• Quality of life at ≤4 months (Continuous) CRITICAL</li> <li>• Quality of life at &gt;4 months (Continuous) CRITICAL</li> <li>• Pain severity at ≤4 months (Continuous) CRITICAL</li> <li>• Pain severity at &gt;4 months (Continuous) CRITICAL</li> <li>• Function at ≤4 months (Continuous) CRITICAL</li> <li>• Function at &gt;4 months (Continuous) CRITICAL</li> <li>• Psychological distress at ≤4 months (Continuous) CRITICAL</li> <li>• Psychological distress at &gt;4 months (Continuous) CRITICAL</li> <li>• Responder criteria (&gt; 30% improvement in pain) at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain) at &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in function) at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in function) at &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at ≤4 months (Dichotomous) IMPORTANT</li> </ul> |

| Review question                             | What is the clinical and cost effectiveness of performing imaging (X-ray or MRI) compared with no investigation to improve functional disability, pain or psychological distress in people with low back pain and/or sciatica?   |
|---|--|
|   | <ul style="list-style-type: none"> <li>• Adverse events (morbidity) at &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Healthcare utilisation at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Healthcare utilisation at &gt;4 months (Dichotomous) IMPORTANT</li> </ul>  |
| Study design                                | RCT<br>Prospective cohort study<br>Retrospective cohort study  |
| Unit of randomisation                       |  |
| Crossover study                             | Not permitted  |
| Minimum duration of study                   | Not defined  |
| Other exclusions                            | <ul style="list-style-type: none"> <li>• People referred for image guided injections</li> <li>• People referred for surgery (already planned)</li> <li>• Post-operative imaging</li> <li>• Emergency referrals to surgeons</li> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language.</li> </ul> |
| Population stratification                   | Low back pain with/without sciatica<br>Sciatica  |
| Reasons for stratification                  | People with sciatica may respond differently to those with non-specific low back pain only.  |
| Subgroup analyses if there is heterogeneity | <ul style="list-style-type: none"> <li>• Chronicity (Acute pain; Chronic pain); People with acute pain may respond differently to those with chronic pain</li> </ul>   |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library<br>Language: English  |

## C.4 Self-management

**Table 5: Review protocol: Self-management**

| Review question  | What is the clinical and cost effectiveness of self-management in the management of non-specific low back pain and sciatica?   |
|--|--|
| Objectives   | To assess the clinical and cost effectiveness of self-management in the management of people with non-specific low back pain and sciatica  |
| Review population  | <ul style="list-style-type: none"> <li>• People aged 16 or above with non-specific low back pain</li> <li>• People aged 16 or above with sciatica</li> </ul>   |
| Interventions and comparators: generic/class; specific/drug<br><br>(All interventions will be compared with each other, unless otherwise stated) | <ul style="list-style-type: none"> <li>• Self-management <ul style="list-style-type: none"> <li>○ Self-management programmes (including education, advice and reassurance)</li> <li>○ Advice to stay active</li> <li>○ Advice to bed rest</li> <li>○ Unsupervised exercise (including exercise prescription, advice to exercise at home)</li> </ul> </li> <li>• Any other non-invasive intervention included in the guideline</li> </ul> |

|   |  |
|---|--|
|   | <ul style="list-style-type: none"> <li>• Combination of interventions: any combination of the non-invasive interventions</li> <li>• Placebo/Sham/Attention control</li> <li>• Usual care/waiting list</li> </ul>   |
| Outcomes                                    | <ul style="list-style-type: none"> <li>• Quality of life at <math>\leq 4</math> months (continuous) CRITICAL</li> <li>• Quality of life at <math>&gt; 4</math> months (continuous) CRITICAL</li> <li>• Pain severity at <math>\leq 4</math> months (continuous) CRITICAL</li> <li>• Pain severity at <math>&gt;4</math> months (continuous) CRITICAL</li> <li>• Function (disability scores) at <math>\leq 4</math> months (continuous) CRITICAL</li> <li>• Function (disability scores) at <math>\leq 4</math> months (continuous) CRITICAL</li> <li>• Psychological distress at <math>\leq 4</math> months (continuous) CRITICAL</li> <li>• Psychological distress at <math>&gt;4</math> months (continuous) CRITICAL</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at <math>\leq 4</math> months (dichotomous) IMPORTANT</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at <math>&gt; 4</math> months (dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at <math>\leq 4</math> months (dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at <math>&gt; 4</math> months (dichotomous) IMPORTANT</li> <li>• Responder criteria (<math>&gt; 30\%</math> improvement in pain or function) at <math>\leq 4</math> months (dichotomous) IMPORTANT</li> <li>• Responder criteria (<math>&gt; 30\%</math> improvement in pain or function) at <math>\leq 4</math> months (dichotomous) IMPORTANT</li> </ul> |
| Study design                                | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included.  |
| Unit of randomisation                       | Patient  |
| Crossover study                             | Not permitted  |
| Minimum duration of study                   | Not defined  |
| Other exclusions                            | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language.</li> <li>• Within-class comparisons</li> <li>• 'Back school' has been considered a specific intervention that is excluded from the protocol on the basis that it is outdated and no longer used</li> <li>• Peripheral nerve-field stimulation for chronic low back pain ( covered by NICE IPG 451)</li> <li>• Pharmacological therapies for management of sciatica</li> <li>• Intervention or comparison group containing an invasive intervention (e.g. surgery, epidurals, facet-joint blocks/injections).</li> </ul>   |
| Population stratification                   | Overall (acute, chronic) with sciatica<br>Overall (acute, chronic) without sciatica  |
| Reasons for stratification                  | Individuals with sciatica may respond differently to those with lower back pain  |
| Sensitivity/other analysis                  | See subgroup analysis  |
| Subgroup analyses if there is heterogeneity | <ul style="list-style-type: none"> <li>• Chronicity (Acute pain; Chronic pain); People with acute pain may respond differently to those with chronic pain</li> <li>• Individual therapies within a 'class' of therapies (e.g. type of acupuncture, type of manipulation (e.g. high velocity thrust))</li> </ul>  |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library, CINAHL   |

Language: English

## C.5 Exercise therapies

**Table 6: Review protocol: Exercise therapies**

| Review question  | What is the clinical and cost-effectiveness of exercise therapies in the management of non-specific low back pain and sciatica?   |
|--|---|
| Objectives   | To assess the clinical and cost effectiveness of exercise therapies in the management of people with non-specific low back pain and sciatica  |
| Review population  | <ul style="list-style-type: none"> <li>• People aged 16 or above with non-specific low back pain</li> <li>• People aged 16 or above with sciatica</li> </ul>  |
| Interventions and comparators: generic/class; specific/drug<br><br>(All interventions will be compared with each other, unless otherwise stated) | <ul style="list-style-type: none"> <li>• Exercise <ul style="list-style-type: none"> <li>○ Individual Biomechanical exercise</li> <li>○ Individual Aerobic exercise</li> <li>○ Individual Mind-body exercise</li> <li>○ Individual Mixed modality exercise</li> <li>○ Group biomechanical exercise</li> <li>○ Group aerobic exercise</li> <li>○ Group mind-body exercise</li> <li>○ Group mixed modality exercise</li> </ul> </li> <li>• Any other non-invasive intervention included in the guideline</li> <li>• Combination of interventions: any combination of the non-invasive interventions</li> <li>• Placebo/Sham/Attention control</li> <li>• Usual care/waiting-list</li> </ul>   |
| Outcomes   | <ul style="list-style-type: none"> <li>• Quality of life at ≤ 4 months (continuous) CRITICAL</li> <li>• Quality of life at &gt; 4 months (continuous) CRITICAL</li> <li>• Pain severity at ≤ 4 months (continuous) CRITICAL</li> <li>• Pain severity at &gt;4 months (continuous) CRITICAL</li> <li>• Function (disability scores) at ≤ 4 months (continuous) CRITICAL</li> <li>• Function (disability scores) at &gt; 4 months (continuous) CRITICAL</li> <li>• Psychological distress at ≤ 4 months (continuous) CRITICAL</li> <li>• Psychological distress at &gt;4 months (continuous) CRITICAL</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at &gt; 4 months (dichotomous) IMPORTANT</li> </ul> |
| Study design   | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included.   |
| Unit of randomisation  | Patient   |
| Crossover study  | Not permitted   |
| Minimum duration of study  | Not defined   |

| Review question                             | What is the clinical and cost-effectiveness of exercise therapies in the management of non-specific low back pain and sciatica?   |
|---|---|
| Other exclusions                            | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language</li> <li>• Within-class comparison</li> <li>• 'Back school' has been considered a specific intervention that is excluded from the protocol on the basis that it is outdated and no longer used</li> <li>• Peripheral nerve-field stimulation for chronic low back pain (covered by NICE IPG 451)</li> <li>• Pharmacological therapies for management of sciatica</li> <li>• Intervention or comparison group containing an invasive intervention (e.g. surgery, epidurals, facet-joint blocks/injections).</li> </ul> |
| Population stratification                   | Overall (acute, chronic) with sciatica<br>Overall (acute, chronic) without sciatica   |
| Reasons for stratification                  | Individuals with sciatica may respond differently to those with lower back pain   |
| Sensitivity/other analysis                  | See subgroup analysis   |
| Subgroup analyses if there is heterogeneity | <ul style="list-style-type: none"> <li>• Chronicity (Acute pain; Chronic pain); People with acute pain may respond differently to those with chronic pain</li> <li>• Individual therapies within a 'class' of therapies (e.g. type of acupuncture, type of manipulation (e.g. high velocity thrust))</li> </ul>   |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library, AMED, CINAHL<br>Language: English   |

## C.6 Postural therapies

**Table 7: Review protocol: Postural therapies**

| Review question  | What is the clinical and cost effectiveness of postural therapies in the management of non-specific low back pain and sciatica?  |
|--|--|
| Objectives   | To assess the clinical and cost effectiveness of postural therapies in the management of people with non-specific low back pain and sciatica   |
| Review population  | <ul style="list-style-type: none"> <li>• People aged 16 or above with non-specific low back pain</li> <li>• People aged 16 or above with sciatica</li> </ul>   |
| Interventions and comparators:<br>generic/class;<br>specific/drug<br><br>(All interventions will be compared with each other, unless otherwise stated) | <ul style="list-style-type: none"> <li>• Postural therapy <ul style="list-style-type: none"> <li>○ postural education/exercise</li> <li>○ Alexander technique</li> </ul> </li> <li>• Any other non-invasive intervention included in the guideline</li> <li>• Combination of interventions: any combination of the non-invasive interventions</li> <li>• Placebo/Sham/Attention control</li> <li>• Usual care/ waiting-list</li> </ul>   |
| Outcomes   | <ul style="list-style-type: none"> <li>• Quality of life at ≤ 4 months (continuous) CRITICAL</li> <li>• Quality of life at &gt; 4 months (continuous) CRITICAL</li> <li>• Pain severity at ≤ 4 months (continuous) CRITICAL</li> <li>• Pain severity at &gt;4 months (continuous) CRITICAL</li> <li>• Function (disability scores) at ≤ 4 months (continuous) CRITICAL</li> <li>• Function (disability scores) at &gt; 4 months (continuous) CRITICAL</li> <li>• Psychological distress at ≤ 4 months (continuous) CRITICAL</li> </ul> |

|   |  |
|---|--|
|   | <ul style="list-style-type: none"> <li>• Psychological distress at &gt;4 months (continuous) CRITICAL</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at ≤ 4 months (dichotomous) IMPORTANT</li> </ul> |
| Study design                                | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included.  |
| Unit of randomisation                       | Patient  |
| Crossover study                             | Not permitted  |
| Minimum duration of study                   | Not defined  |
| Other exclusions                            | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language</li> <li>• Within-class comparison</li> <li>• 'Back school' has been considered a specific intervention that is excluded from the protocol on the basis that it is outdated and no longer used</li> <li>• Peripheral nerve-field stimulation for chronic low back pain ( covered by NICE IPG 451)</li> <li>• Pharmacological therapies for management of sciatica</li> <li>• Intervention or comparison group containing an invasive intervention (e.g. surgery, epidurals, facet-joint blocks/injections).</li> </ul>   |
| Population stratification                   | Overall (acute, chronic) with sciatica<br>Overall (acute, chronic) without sciatica  |
| Reasons for stratification                  | Individuals with sciatica may respond differently to those with lower back pain  |
| Sensitivity/other analysis                  | See subgroup analysis  |
| Subgroup analyses if there is heterogeneity | <ul style="list-style-type: none"> <li>• Chronicity (Acute pain; Chronic pain); People with acute pain may respond differently to those with chronic pain</li> <li>• Individual therapies within a 'class' of therapies (e.g. type of acupuncture, type of manipulation (e.g. high velocity thrust))</li> </ul>  |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library, AMED, CINAHL<br>Language: English  |

## C.7 Orthotics

**Table 8: Review protocol: Orthotics and appliances**

|                        |  |
|------------------------|--|
| <b>Review question</b> | <b>What is the clinical and cost effectiveness of orthotics and appliances in the management of non-specific low back pain and sciatica?</b>                 |
| Objectives             | To assess the clinical and cost effectiveness of orthotics in the management of people with non-specific low back pain and sciatica                          |
| Review population      | <ul style="list-style-type: none"> <li>• People aged 16 or above with non-specific low back pain</li> <li>• People aged 16 or above with sciatica</li> </ul> |
| Interventions and      | <ul style="list-style-type: none"> <li>• Orthotics</li> </ul>  |

|  |   |
|--|---|
| comparators:<br>generic/class;<br>specific/drug<br><br>(All interventions will be compared with each other, unless otherwise stated) | <ul style="list-style-type: none"> <li>○ Orthopaedic shoes</li> <li>○ Belts/corsets</li> <li>● Any other non-invasive intervention included in the guideline</li> <li>● Combination of interventions: any combination of the non-invasive interventions</li> <li>● Placebo/Sham/Attention control</li> <li>● Usual care/waiting-list</li> </ul>   |
| Outcomes   | <ul style="list-style-type: none"> <li>● Quality of life at ≤ 4 months (continuous) CRITICAL</li> <li>● Quality of life at &gt; 4 months (continuous) CRITICAL</li> <li>● Pain severity at ≤ 4 months (continuous) CRITICAL</li> <li>● Pain severity at &gt;4 months (continuous) CRITICAL</li> <li>● Function (disability scores) at ≤ 4 months (continuous) CRITICAL</li> <li>● Function (disability scores) at &gt; 4 months (continuous) CRITICAL</li> <li>● Psychological distress at ≤ 4 months (continuous) CRITICAL</li> <li>● Psychological distress at &gt;4 months (continuous) CRITICAL</li> <li>● Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>● Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>● Adverse events (morbidity) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>● Adverse events (morbidity) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>● Responder criteria (&gt; 30% improvement in pain or function) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>● Responder criteria (&gt; 30% improvement in pain or function) at &gt; 4 months (dichotomous) IMPORTANT</li> </ul> |
| Study design   | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included.   |
| Unit of randomisation  | Patient   |
| Crossover study  | Not permitted   |
| Minimum duration of study  | Not defined   |
| Other exclusions   | <ul style="list-style-type: none"> <li>● Mixed chronic pain (not just low back pain)</li> <li>● Abstracts</li> <li>● Non-English language.</li> <li>● Within-class comparison</li> <li>● 'Back school' has been considered a specific intervention that is excluded from the protocol on the basis that it is outdated and no longer used</li> <li>● Peripheral nerve-field stimulation for chronic low back pain ( covered by NICE IPG 451)</li> <li>● Pharmacological therapies for management of sciatica</li> <li>● Intervention or comparison group containing an invasive intervention (e.g. surgery, epidurals, facet-joint blocks/injections).</li> </ul>   |
| Population stratification  | Overall (acute, chronic) with sciatica<br>Overall (acute, chronic) without sciatica   |
| Reasons for stratification   | Individuals with sciatica may respond differently to those with lower back pain   |
| Sensitivity/other analysis   | See subgroup analysis   |
| Subgroup analyses if there is heterogeneity  | <ul style="list-style-type: none"> <li>● Chronicity (Acute pain; Chronic pain); People with acute pain may respond differently to those with chronic pain</li> <li>● Individual therapies within a 'class' of therapies (e.g. type of acupuncture, type of manipulation (e.g. high velocity thrust))</li> </ul>   |

|                 |   |
|-----------------|---|
| Search criteria | Databases: Medline, Embase, Cochrane Library, AMED, CINAHL<br>Language: English |
|-----------------|---|

## C.8 Manual therapies

**Table 9: Review protocol: Manual therapies**

| Review question  | What is the clinical and cost effectiveness of manual therapies in the management of non-specific low back pain and sciatica?  |
|--|--|
| Objectives   | To assess the clinical and cost effectiveness of manual therapies in the management of people with non-specific low back pain and sciatica   |
| Review population  | <ul style="list-style-type: none"> <li>• People aged 16 or above with non-specific low back pain</li> <li>• People aged 16 or above with sciatica</li> </ul>   |
| Interventions and comparators:<br>generic/class;<br>specific/drug<br><br>(All interventions will be compared with each other, unless otherwise stated) | <ul style="list-style-type: none"> <li>• Manual therapy <ul style="list-style-type: none"> <li>○ soft tissue techniques (including massage, muscle energy technique and myofascial release)</li> <li>○ traction</li> <li>○ manipulation/mobilisation (including spinal manipulation therapy (SMT) and Maitland technique)</li> <li>○ mixed modality manual therapy</li> </ul> </li> <li>• Any other non-invasive intervention included in the guideline</li> <li>• Combination of interventions: any combination of non-invasive interventions</li> <li>• Placebo/Sham/Attention control</li> <li>• Usual care/waiting-list</li> </ul>   |
| Outcomes   | <ul style="list-style-type: none"> <li>• Quality of life at ≤ 4 months (continuous) CRITICAL</li> <li>• Quality of life at &gt; 4 months (continuous) CRITICAL</li> <li>• Pain severity at ≤ 4 months (continuous) CRITICAL</li> <li>• Pain severity at &gt;4 months (continuous) CRITICAL</li> <li>• Function (disability scores) at ≤ 4 months (continuous) CRITICAL</li> <li>• Function (disability scores) at &gt; 4 months (continuous) CRITICAL</li> <li>• Psychological distress at ≤ 4 months (continuous) CRITICAL</li> <li>• Psychological distress at &gt;4 months (continuous) CRITICAL</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>• Adverse events (mortality) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>• Adverse events (mortality) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at &gt; 4 months (dichotomous) IMPORTANT</li> </ul> |
| Study design   | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included   |
| Unit of randomisation  | Patient  |
| Crossover study  | Not permitted  |
| Minimum duration of study  | Not defined  |

| Review question                             | What is the clinical and cost effectiveness of manual therapies in the management of non-specific low back pain and sciatica?  |
|---|--|
| Other exclusions                            | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language</li> <li>• Within-class comparison</li> <li>• 'Back school' has been considered a specific intervention that is excluded from the protocol on the basis that it is outdated and no longer used</li> <li>• Peripheral nerve-field stimulation for chronic low back pain ( covered by NICE IPG 451)</li> <li>• Pharmacological therapies for management of sciatica</li> <li>• Intervention or comparison group containing an invasive intervention (e.g. surgery, epidurals, facet-joint blocks/injections).</li> </ul> |
| Population stratification                   | Overall (acute, chronic) with sciatica<br>Overall (acute, chronic) without sciatica  |
| Reasons for stratification                  | Individuals with sciatica may respond differently to those with low back pain  |
| Sensitivity/other analysis                  | See subgroup analysis  |
| Subgroup analyses if there is heterogeneity | <ul style="list-style-type: none"> <li>• Chronicity (Acute pain; Chronic pain); People with acute pain may respond differently to those with chronic pain</li> <li>• Individual therapies within a 'class' of therapies (e.g. type of acupuncture, type of manipulation (e.g. high velocity thrust))</li> </ul>  |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library, AMED, CINAHL<br>Language: English  |

## C.9 Acupuncture

**Table 10: Review protocol: Acupuncture**

| Review question  | What is the clinical and cost-effectiveness of acupuncture in the management of non-specific low back pain and sciatica?   |
|--|--|
| Objectives   | To assess the clinical and cost effectiveness of acupuncture in the management of people with non-specific low back pain and sciatica  |
| Review population  | <ul style="list-style-type: none"> <li>• People aged 16 years or above with non-specific low back pain</li> <li>• People aged 16 years or above with sciatica</li> </ul>   |
| Interventions and comparators:<br>generic/class;<br>specific/drug<br><br>(All interventions will be compared with each other, unless otherwise stated) | <ul style="list-style-type: none"> <li>• Acupuncture</li> <li>• Any other non-invasive intervention included in the guideline</li> <li>• Combination of interventions: any combination of the non-invasive interventions</li> <li>• Placebo/Sham/Attention control</li> <li>• Usual care/waiting list</li> </ul>   |
| Outcomes   | <ul style="list-style-type: none"> <li>• Quality of life at ≤ 4 months (continuous) CRITICAL</li> <li>• Quality of life at &gt; 4 months (continuous) CRITICAL</li> <li>• Pain severity at ≤ 4 months (continuous) CRITICAL</li> <li>• Pain severity at &gt;4 months (continuous) CRITICAL</li> <li>• Function (disability scores) at ≤ 4 months (continuous) CRITICAL</li> <li>• Function (disability scores) at &gt; 4 months (continuous) CRITICAL</li> <li>• Psychological distress at ≤ 4 months (continuous) CRITICAL</li> <li>• Psychological distress at &gt;4 months (continuous) CRITICAL</li> </ul> |

| Review question                             | What is the clinical and cost-effectiveness of acupuncture in the management of non-specific low back pain and sciatica?   |
|---|--|
|   | <ul style="list-style-type: none"> <li>Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>Adverse events (morbidity) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>Adverse events (morbidity) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>Adverse events (mortality) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>Adverse events (mortality) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>Responder criteria (&gt; 30% improvement in pain or function) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>Responder criteria (&gt; 30% improvement in pain or function) at &gt; 4 months (dichotomous) IMPORTANT</li> </ul> |
| Study design                                | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included   |
| Unit of randomisation                       | Patient  |
| Crossover study                             | Not permitted  |
| Minimum duration of study                   | Not defined  |
| Other exclusions                            | <ul style="list-style-type: none"> <li>Mixed chronic pain (not just low back pain)</li> <li>Abstracts</li> <li>Non-English language</li> <li>Within-class comparison</li> <li>'Back school' has been considered a specific intervention that is excluded from the protocol on the basis that it is outdated and no longer used</li> <li>Peripheral nerve-field stimulation for chronic low back pain (covered by NICE IPG 451)</li> <li>Pharmacological therapies for management of sciatica</li> <li>Intervention or comparison group containing an invasive intervention (e.g. surgery, epidurals, facet-joint blocks/injections).</li> </ul>  |
| Population stratification                   | Overall (acute, chronic) with sciatica<br>Overall (acute, chronic) without sciatica  |
| Reasons for stratification                  | Individuals with sciatica may respond differently to those with low back pain  |
| Sensitivity/other analysis                  | See subgroup analysis  |
| Subgroup analyses if there is heterogeneity | <ul style="list-style-type: none"> <li>Chronicity (Acute pain; Chronic pain); People with acute pain may respond differently to those with chronic pain</li> <li>Individual therapies within a 'class' of therapies (e.g. type of acupuncture, type of manipulation (e.g. high velocity thrust))</li> </ul>  |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library, AMED, CINAHL<br>Language: English  |

## C.10 Electrotherapies

**Table 11: Review protocol: electrotherapies**

| Component  | What is the clinical and cost effectiveness of electrotherapy (non-invasive interventions) in the management of non-specific low back pain and sciatica? |
|------------|--|
| Objectives | To assess the clinical and cost effectiveness of electrotherapies in the management of people with non-specific low back pain and sciatica               |

| Component   | What is the clinical and cost effectiveness of electrotherapy (non-invasive interventions) in the management of non-specific low back pain and sciatica?   |
|---|--|
| Review population   | <ul style="list-style-type: none"> <li>• People aged 16 years or above with non-specific low back pain</li> <li>• People aged 16 years or above with sciatica</li> </ul>   |
| <p>Interventions and comparators: generic/class; specific/drug</p> <p>(All interventions will be compared with each other, unless otherwise stated)</p> | <ul style="list-style-type: none"> <li>• Electrotherapy               <ul style="list-style-type: none"> <li>○ TENS (Transcutaneous Electrical Nerve Stimulation)</li> <li>○ PENS (Percutaneous Electric Nerve Stimulation)</li> <li>○ Interferential therapy</li> <li>○ Laser therapy</li> <li>○ Therapeutic ultrasound</li> </ul> </li> <li>• Any other non-invasive intervention included in the guideline</li> <li>• Combination of interventions: any combination of the non-invasive interventions</li> <li>• Placebo/Sham/Attention control</li> <li>• Usual care/waiting-list</li> </ul>   |
| Outcomes  | <ul style="list-style-type: none"> <li>• Quality of life at ≤ 4 months (continuous) CRITICAL</li> <li>• Quality of life at &gt; 4 months (continuous) CRITICAL</li> <li>• Pain severity at ≤ 4 months (continuous) CRITICAL</li> <li>• Pain severity at &gt;4 months (continuous) CRITICAL</li> <li>• Function (disability scores) at ≤ 4 months (continuous) CRITICAL</li> <li>• Function (disability scores) at &gt; 4 months (continuous) CRITICAL</li> <li>• Psychological distress at ≤ 4 months (continuous) CRITICAL</li> <li>• Psychological distress at &gt;4 months (continuous) CRITICAL</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>• Adverse events (mortality) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>• Adverse events (mortality) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at &gt; 4 months (dichotomous) IMPORTANT</li> </ul> |
| Study design  | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included.  |
| Unit of randomisation   | Patient  |
| Crossover study   | Not permitted  |
| Minimum duration of study   | Not defined  |
| Other exclusions  | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language</li> <li>• Within-class comparison</li> <li>• ‘Back school’ has been considered a specific intervention that is excluded from the protocol on the basis that it is outdated and no longer used</li> <li>• Peripheral nerve-field stimulation for chronic low back pain ( covered by NICE IPG 451)</li> </ul>   |

| Component                                   | What is the clinical and cost effectiveness of electrotherapy (non-invasive interventions) in the management of non-specific low back pain and sciatica?  |
|---|---|
|   | <ul style="list-style-type: none"> <li>Pharmacological therapies for management of sciatica</li> <li>Intervention or comparison group containing an invasive intervention (e.g. surgery, epidurals, facet-joint blocks/injections).</li> </ul>  |
| Population stratification                   | Overall (acute, chronic) with sciatica<br>Overall (acute, chronic) without sciatica   |
| Reasons for stratification                  | Individuals with sciatica may respond differently to those with lower back pain   |
| Sensitivity/other analysis                  | See subgroup analysis   |
| Subgroup analyses if there is heterogeneity | <ul style="list-style-type: none"> <li>Chronicity (Acute pain; Chronic pain); People with acute pain may respond differently to those with chronic pain</li> <li>Individual therapies within a 'class' of therapies (e.g. type of acupuncture, type of manipulation (e.g. high velocity thrust))</li> </ul> |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library, CINAHL<br>Language: English   |

## C.11 Psychological interventions

**Table 12: Review protocol: Psychological interventions**

| Review question  | What is the clinical and cost effectiveness of psychological interventions in the management of non-specific low back pain and sciatica?  |
|--|---|
| Objectives   | To assess the clinical and cost effectiveness of psychological interventions in the management of people with non-specific low back pain and sciatica   |
| Review population  | <ul style="list-style-type: none"> <li>People aged 16 years or above with non-specific low back pain</li> <li>People aged 16 years or above with sciatica</li> </ul>  |
| Interventions and comparators: generic/class; specific/drug<br><br>(All interventions will be compared with each other, unless otherwise stated) | <ul style="list-style-type: none"> <li>Psychological interventions <ul style="list-style-type: none"> <li>Cognitive therapy</li> <li>Behavioural therapy</li> <li>Cognitive behavioural approach (CBA)</li> <li>Acceptance and commitment therapy (ACT)</li> <li>Mindfulness</li> </ul> </li> <li>Any other non-invasive intervention included in the guideline</li> <li>Combination of interventions: any combination of the non-invasive interventions</li> <li>Placebo/Sham/Attention control</li> <li>Usual care/waiting-list</li> </ul>  |
| Outcomes   | <ul style="list-style-type: none"> <li>Quality of life at ≤ 4 months (continuous) CRITICAL</li> <li>Quality of life at &gt; 4 months (continuous) CRITICAL</li> <li>Pain severity at ≤ 4 months (continuous) CRITICAL</li> <li>Pain severity at &gt;4 months (continuous) CRITICAL</li> <li>Function (disability scores) at ≤ 4 months (continuous) CRITICAL</li> <li>Function (disability scores) at &gt; 4 months (continuous) CRITICAL</li> <li>Psychological distress at ≤ 4 months (continuous) CRITICAL</li> <li>Psychological distress at &gt;4 months (continuous) CRITICAL</li> <li>Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>Adverse events (morbidity) at ≤ 4 months (dichotomous) IMPORTANT</li> </ul> |

| Review question                             | What is the clinical and cost effectiveness of psychological interventions in the management of non-specific low back pain and sciatica?   |
|---|--|
|   | <ul style="list-style-type: none"> <li>• Adverse events (morbidity) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at ≤ 4 months (dichotomous) IMPORTANT</li> </ul>  |
| Study design                                | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included.  |
| Unit of randomisation                       | Patient  |
| Crossover study                             | Not permitted  |
| Minimum duration of study                   | Not defined  |
| Other exclusions                            | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Conference abstracts will not automatically be excluded from the review but will be initially assessed against the inclusion criteria and then further processed only if no other full publication is available for that review question, in which case the authors of the selected abstracts will be contacted for further information.</li> <li>• Non-English language</li> <li>• Within-class comparison</li> <li>• 'Back school' has been considered a specific intervention that is excluded from the protocol on the basis that it is outdated and no longer used</li> <li>• Peripheral nerve-field stimulation for chronic low back pain ( covered by NICE IPG 451)</li> <li>• Pharmacological therapies for management of sciatica</li> <li>• Intervention or comparison group containing an invasive intervention (e.g. surgery, epidurals, facet-joint blocks/injections).</li> </ul> |
| Population stratification                   | Overall (acute, chronic) with sciatica<br>Overall (acute, chronic) without sciatica  |
| Reasons for stratification                  | Individuals with sciatica may respond differently to those with lower back pain  |
| Sensitivity/other analysis                  | See subgroup analysis  |
| Subgroup analyses if there is heterogeneity | <ul style="list-style-type: none"> <li>• Chronicity (Acute pain; Chronic pain); People with acute pain may respond differently to those with chronic pain</li> <li>• Individual therapies within a 'class' of therapies (e.g. type of acupuncture, type of manipulation (e.g. high velocity thrust))</li> </ul>  |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library, PsycINFO,<br>Language: English   |

## C.12 Pharmacological interventions

**Table 13: Review protocol: pharmacological interventions**

| Review question   | What is the clinical and cost effectiveness of pharmacological treatment in the management of non-specific low back pain?                               |
|-------------------|---|
| Objectives        | To assess the clinical and cost effectiveness of pharmacological interventions in the management of people with non-specific low back pain and sciatica |
| Review population | <ul style="list-style-type: none"> <li>• People aged 16 or above with non-specific low back pain</li> </ul>   |

| Review question   | What is the clinical and cost effectiveness of pharmacological treatment in the management of non-specific low back pain?  |
|---|--|
| <p>Interventions and comparators:<br/>generic/class;<br/>specific/drug</p> <p>(All interventions will be compared with each other, unless otherwise stated)</p> | <ul style="list-style-type: none"> <li>• People aged 16 or above with sciatica</li> <li>• Pharmacological treatment (oral/sublingual, rectal, intra-muscular and transdermal but not intravenous) <ul style="list-style-type: none"> <li>○ Paracetamol</li> <li>○ Non-steroidal anti-inflammatory drugs</li> <li>○ Opioid analgesics</li> <li>○ Muscle relaxants</li> <li>○ Antidepressants <ul style="list-style-type: none"> <li>- SSRIs</li> <li>- SNRIs</li> <li>- Tri-cyclic antidepressants</li> </ul> </li> <li>○ Anticonvulsants <ul style="list-style-type: none"> <li>- Gabapentinoids</li> <li>- Other anticonvulsants</li> </ul> </li> <li>○ Antibiotics</li> <li>○ Vitamin D</li> </ul> </li> <li>• Any other non-invasive intervention included in the guideline</li> <li>• Combination of interventions: any combination of the non-invasive interventions</li> <li>• Placebo/Sham/Attention control</li> <li>• Usual care/waiting-list</li> </ul>  |
| Outcomes  | <ul style="list-style-type: none"> <li>• Quality of life at <math>\leq 4</math> months (continuous) CRITICAL</li> <li>• Quality of life at <math>&gt; 4</math> months (continuous) CRITICAL</li> <li>• Pain severity at <math>\leq 4</math> months (continuous) CRITICAL</li> <li>• Pain severity at <math>&gt;4</math> months (continuous) CRITICAL</li> <li>• Function (disability scores) at <math>\leq 4</math> months (continuous) CRITICAL</li> <li>• Function (disability scores) at <math>\leq 4</math> months (continuous) CRITICAL</li> <li>• Psychological distress at <math>\leq 4</math> months (continuous) CRITICAL</li> <li>• Psychological distress at <math>&gt;4</math> months (continuous) CRITICAL</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at <math>\leq 4</math> months (dichotomous) IMPORTANT</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at <math>&gt; 4</math> months (dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at <math>\leq 4</math> months (dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at <math>&gt; 4</math> months (dichotomous) IMPORTANT</li> <li>• Adverse events (mortality) at <math>\leq 4</math> months (dichotomous) IMPORTANT</li> <li>• Adverse events (mortality) at <math>&gt; 4</math> months (dichotomous) IMPORTANT</li> <li>• Responder criteria (<math>&gt; 30\%</math> improvement in pain or function) at <math>\leq 4</math> months (dichotomous) IMPORTANT</li> <li>• Responder criteria (<math>&gt; 30\%</math> improvement in pain or function) at <math>\leq 4</math> months (dichotomous) IMPORTANT</li> </ul> |
| Study design  | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included.  |
| Unit of randomisation   | Patient  |
| Crossover study   | Not permitted  |
| Minimum duration of study   | Not defined  |
| Other exclusions  | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> </ul>  |

| Review question                             | What is the clinical and cost effectiveness of pharmacological treatment in the management of non-specific low back pain?   |
|---|---|
|   | <ul style="list-style-type: none"> <li>• Abstracts</li> <li>• Non-English language</li> <li>• Within-class comparison</li> <li>• 'Back school' has been considered a specific intervention that is excluded from the protocol on the basis that it is outdated and no longer used</li> <li>• Peripheral nerve-field stimulation for chronic low back pain ( covered by NICE IPG 451)</li> <li>• Pharmacological therapies for management of sciatica</li> <li>• Intervention or comparison group containing an invasive intervention (e.g. surgery, epidurals, facet-joint blocks/injections).</li> </ul> |
| Population stratification                   | Overall (acute, chronic) with sciatica<br>Overall (acute, chronic) without sciatica   |
| Reasons for stratification                  | Individuals with sciatica may respond differently to those with lower back pain   |
| Sensitivity/other analysis                  | See subgroup analysis   |
| Subgroup analyses if there is heterogeneity | <ul style="list-style-type: none"> <li>• Chronicity (Acute pain; Chronic pain); People with acute pain may respond differently to those with chronic pain</li> <li>• Individual therapies within a 'class' of therapies (e.g. type of acupuncture, type of manipulation (e.g. high velocity thrust))</li> </ul>   |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library, AMED, CINAHL, PsycINFO<br>Language: English   |

## C.13 Multidisciplinary biopsychosocial rehabilitation (MBR) programmes

**Table 14: Review protocol: combined interventions: multidisciplinary biopsychosocial rehabilitation (MBR) programmes**

| Review question  | What is the clinical and cost effectiveness of multidisciplinary biopsychosocial rehabilitation (MBR) programmes in the management of non-specific low back pain and sciatica?  |
|--|---|
| Objectives   | To assess the clinical and cost effectiveness of multidisciplinary biopsychosocial rehabilitation (MBR) programmes in the management of people with non-specific low back pain and sciatica   |
| Review population  | <ul style="list-style-type: none"> <li>• People aged 16 years or above with non-specific low back pain</li> <li>• People aged 16 years or above with sciatica</li> </ul>  |
| Interventions and comparators: generic/class; specific/drug<br><br>(All interventions will be compared with each other, unless otherwise stated) | <ul style="list-style-type: none"> <li>• Combinations of interventions: Any combination of the non-invasive interventions (Exercise interventions, Postural therapies, Manual therapies, Electrotherapy, Orthotics and appliances, Acupuncture, Self-management strategies, Psychological interventions, Pharmacological treatment (oral/sublingual, rectal, intra-muscular and transdermal but not intravenous)). <ul style="list-style-type: none"> <li>○ All patients should receive the same specified combination of intervention for a study to be included.</li> </ul> </li> <li>• Uni-disciplinary programmes including combined concepts: where it is one profession (usually Physio) who may be using cognitive - behavioural principles or a cognitive - behavioural approach, alongside exercise / education.</li> <li>• Multidisciplinary biopsychosocial programmes. Multidisciplinary defined as: 'multidisciplinary biopsychosocial programmes that target factors from the different domains (physical, psychological and social), delivered by clinicians from at least two different professional backgrounds'.</li> </ul> |

| Review question           | What is the clinical and cost effectiveness of multidisciplinary biopsychosocial rehabilitation (MBR) programmes in the management of non-specific low back pain and sciatica?  |
|---------------------------|---|
|                           | <ul style="list-style-type: none"> <li>○ Irrespective of the number of people who deliver the programme (Uni- and multi-disciplinary pooled)</li> <li>○ Must have a physical component plus at least 1 other core elements (psychological/educational)               <ul style="list-style-type: none"> <li>- 3 core elements: Physical + psychological + educational</li> <li>- 2 core elements: Physical + psychological</li> <li>- 2 core elements: Physical + educational</li> </ul> </li> <li>○ Tailored components are acceptable as long as these components are described, and must be given in addition to a defined component (eg. acupuncture + tailored vs. tailored = acceptable; tailored vs. tailored = exclude)</li> <li>● Interventions/multidisciplinary programmes with a specified return to work focus (or including ergonomic interventions).               <ul style="list-style-type: none"> <li>○ Studies will only be included in this category if the intervention description suggests a specific return to work element. Having 'return to work' as an outcome will not be used as a way to determine which studies should be included in this category.</li> </ul> </li> <li>● Any other non-invasive intervention included in the guideline</li> <li>● Placebo/Sham/Attention control</li> <li>● Usual care/waiting list</li> </ul>  |
| Outcomes                  | <ul style="list-style-type: none"> <li>● Quality of life at ≤ 4 months (continuous) CRITICAL</li> <li>● Quality of life at &gt; 4 months (continuous) CRITICAL</li> <li>● Pain severity at ≤ 4 months (continuous) CRITICAL</li> <li>● Pain severity at &gt;4 months (continuous) CRITICAL</li> <li>● Function (disability scores) at ≤ 4 months (continuous) CRITICAL</li> <li>● Function (disability scores) at &gt; 4 months (continuous) CRITICAL</li> <li>● Psychological distress at ≤ 4 months (continuous) CRITICAL</li> <li>● Psychological distress at &gt;4 months (continuous) CRITICAL</li> <li>● Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>● Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>● Adverse events (morbidity) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>● Adverse events (morbidity) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>● Adverse events (mortality) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>● Adverse events (mortality) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>● Responder criteria (&gt; 30% improvement in pain or function) ≤ 4 months (dichotomous) IMPORTANT</li> <li>● Responder criteria (&gt; 30% improvement in pain or function) &gt; 4 months (dichotomous) IMPORTANT</li> <li>● Return to work at ≤ 4 months (dichotomous) IMPORTANT</li> <li>● Return to work at &gt; 4 months (dichotomous) IMPORTANT</li> </ul> |
| Study design              | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included.   |
| Unit of randomisation     | Patient   |
| Crossover study           | Not permitted   |
| Minimum duration of study | Not defined   |

| Review question                             | What is the clinical and cost effectiveness of multidisciplinary biopsychosocial rehabilitation (MBR) programmes in the management of non-specific low back pain and sciatica?   |
|---|--|
| Other exclusions                            | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language.</li> <li>• ‘Back school’ has been considered a specific intervention that is excluded from the protocol on the basis that it is outdated and no longer used.</li> <li>• Peripheral nerve-field stimulation for chronic low back pain (covered by NICE IPG 451)</li> <li>• Pharmacological therapies for management of sciatica</li> <li>• If a study includes additional interventions to the above any of the 3 core elements, it will be excluded (unless it is considered a standard background therapy – standard background therapy can include paracetamol, NSAIDs).</li> <li>• Study not clearly describing the interventions used (it must specify the modality as well as the class). If both arms receive these interventions they would not be excluded. Note that the specified combinations interventions Multidisciplinary pain programmes and interventions/multidisciplinary programmes with a specified return to work focus are an exception to this as it is considered a recommendation regarding such a programme could be appropriate.</li> <li>• Intervention or comparison group containing an invasive intervention (e.g. surgery, epidurals, facet-joint blocks/injections).</li> </ul> |
| Population stratification                   | Overall (acute, chronic) with sciatica<br>Overall (acute, chronic) without sciatica  |
| Reasons for stratification                  | Individuals with sciatica may respond differently to those with low back pain  |
| Sensitivity/other analysis                  | See subgroup analysis  |
| Subgroup analyses if there is heterogeneity | <ul style="list-style-type: none"> <li>• Chronicity (Acute pain; Chronic pain); People with acute pain may respond differently to those with chronic pain</li> <li>• Individual therapies within a ‘class’ of therapies (e.g. type of acupuncture, type of manipulation (e.g. high velocity thrust))</li> </ul>  |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library, AMED, CINAHL, PsycINFO<br>Language: English  |

## C.14 Return to work programmes

**Table 15: Review protocol: combination of intervention: return to work programmes**

| Review question   | What is the clinical and cost effectiveness of return to work programmes in the management of non-specific low back pain and sciatica?  |
|---|---|
| Objectives  | To assess the clinical and cost effectiveness of return to work programmes in the management of people with non-specific low back pain and sciatica   |
| Review population   | <ul style="list-style-type: none"> <li>• People aged 16 years or above with non-specific low back pain</li> <li>• People aged 16 years or above with sciatica</li> </ul>  |
| Interventions and comparators:<br>generic/class;<br>specific/drug<br><br>(All interventions will be | <ul style="list-style-type: none"> <li>• Combinations of interventions: Any combination of the non-invasive interventions (Exercise interventions, Postural therapies, Manual therapies, Electrotherapy, Orthotics and appliances, Acupuncture, Self-management strategies, Psychological interventions, Pharmacological treatment (oral/sublingual, rectal, intra-muscular and transdermal but not intravenous)).</li> </ul> |

| Review question                                    | What is the clinical and cost effectiveness of return to work programmes in the management of non-specific low back pain and sciatica?  |
|--|---|
| compared with each other, unless otherwise stated) | <ul style="list-style-type: none"> <li>○ All patients should receive the same specified combination of intervention for a study to be included.</li> <li>● Uni-disciplinary programmes including combined concepts: where it is one profession (usually Physio) who may be using cognitive - behavioural principles or a cognitive - behavioural approach, alongside exercise / education.</li> <li>● Multidisciplinary biopsychosocial programmes. Multidisciplinary defined as: 'multidisciplinary biopsychosocial programmes that target factors from the different domains (physical, psychological and social), delivered by clinicians from at least two different professional backgrounds'. <ul style="list-style-type: none"> <li>○ Irrespective of the number of people who deliver the programme (Uni- and multi-disciplinary pooled)</li> <li>○ Must have a physical component plus at least 1 other core elements (psychological/educational)</li> <li>○ Tailored components are acceptable as long as these components are described, and must be given in addition to a defined component (eg. acupuncture + tailored vs. tailored = acceptable; tailored vs. tailored = exclude)</li> </ul> </li> <li>● Interventions/multidisciplinary programmes with a specified return to work focus (or including ergonomic interventions). <ul style="list-style-type: none"> <li>○ Studies will only be included in this category if the intervention description suggests a specific return to work element. Having 'return to work' as an outcome will not be used as a way to determine which studies should be included in this category.</li> </ul> </li> <li>● Any other non-invasive intervention included in the guideline</li> <li>● Placebo/Sham/Attention control</li> <li>● Usual care/waiting list</li> </ul> |
| Outcomes   | <ul style="list-style-type: none"> <li>● Quality of life at ≤ 4 months (continuous) CRITICAL</li> <li>● Quality of life at &gt; 4 months (continuous) CRITICAL</li> <li>● Pain severity at ≤ 4 months (continuous) CRITICAL</li> <li>● Pain severity at &gt;4 months (continuous) CRITICAL</li> <li>● Function (disability scores) at ≤ 4 months (continuous) CRITICAL</li> <li>● Function (disability scores) at &gt; 4 months (continuous) CRITICAL</li> <li>● Psychological distress at ≤ 4 months (continuous) CRITICAL</li> <li>● Psychological distress at &gt;4 months (continuous) CRITICAL</li> <li>● Return to work at ≤ 4 months (dichotomous) CRITICAL</li> <li>● Return to work at &gt; 4 months (dichotomous) CRITICAL</li> <li>● Responder criteria (&gt; 30% improvement in pain or function) ≤ 4 months (dichotomous) IMPORTANT</li> <li>● Responder criteria (&gt; 30% improvement in pain or function) &gt; 4 months (dichotomous) IMPORTANT</li> <li>● Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>● Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at &gt; 4 months (dichotomous) IMPORTANT</li> <li>● Adverse events (morbidity) at ≤ 4 months (dichotomous) IMPORTANT</li> <li>● Adverse events (morbidity) at &gt; 4 months (dichotomous) IMPORTANT</li> </ul>  |
| Study design                                       | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included.   |
| Unit of randomisation                              | Patient   |

| Review question                             | What is the clinical and cost effectiveness of return to work programmes in the management of non-specific low back pain and sciatica?  |
|---|---|
| Crossover study                             | Not permitted   |
| Minimum duration of study                   | Not defined   |
| Other exclusions                            | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language.</li> <li>• ‘Back school’ has been considered a specific intervention that is excluded from the protocol on the basis that it is outdated and no longer used.</li> <li>• Peripheral nerve-field stimulation for chronic low back pain ( covered by NICE IPG 451)</li> <li>• Pharmacological therapies for management of sciatica</li> <li>• Intervention or comparison group containing an invasive intervention (e.g. surgery, epidurals, facet-joint blocks/injections).</li> <li>• If a study includes additional interventions to the above any of the 3 core elements, it will be excluded (unless it is considered a standard background therapy – standard background therapy can include paracetamol, NSAIDs).</li> <li>• Study not clearly describing the interventions used (it must specify the modality as well as the class). If both arms receive these interventions they would not be excluded. Note that the specified combinations interventions Multidisciplinary pain programmes and interventions/multidisciplinary programmes with a specified return to work focus are an exception to this as it is considered a recommendation regarding such a programme could be appropriate.</li> </ul> |
| Population stratification                   | Overall (acute, chronic) with sciatica<br>Overall (acute, chronic) without sciatica   |
| Reasons for stratification                  | Individuals with sciatica may respond differently to those with low back pain   |
| Sensitivity/other analysis                  | See subgroup analysis   |
| Subgroup analyses if there is heterogeneity | <ul style="list-style-type: none"> <li>• Chronicity (Acute pain; Chronic pain); People with acute pain may respond differently to those with chronic pain</li> <li>• Individual therapies within a ‘class’ of therapies (e.g. type of acupuncture, type of manipulation (e.g. high velocity thrust))</li> </ul>   |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library, AMED, CINAHL, PsycINFO<br>Language: English   |

## C.15 Spinal injections

**Table 16: Review protocol: Spinal Injections**

| Review question   | What is the clinical and cost effectiveness of spinal injections in the management of non-specific low back pain?   |
|---|---|
| Objectives  | To assess the clinical and cost effectiveness of spinal injections in the management of people with non-specific low back pain  |
| Review population   | People aged 16 years or above with non-specific low back pain. <ul style="list-style-type: none"> <li>• Populations with low back pain only and low back pain with/without sciatica will be pooled for analysis.</li> </ul> |
| Interventions and comparators: generic/class; specific/drug | Agents (alone and in combination): <ul style="list-style-type: none"> <li>• Steroid</li> <li>• Local anaesthetic</li> <li>• Sclerosants</li> </ul>  |

| Review question   | What is the clinical and cost effectiveness of spinal injections in the management of non-specific low back pain?  |
|---|--|
| (All interventions will be compared with each other, unless otherwise stated) | <ul style="list-style-type: none"> <li>• Botox</li> <li>• Hyaluronans</li> </ul> <p>Interventional agents to be compared versus each other (across class comparisons) and versus other treatments below:</p> <ul style="list-style-type: none"> <li>• Sham (needle alone)/placebo/saline</li> <li>• Usual care</li> <li>• Other treatment (non-invasive and invasive treatments being considered by the guideline)</li> </ul>  |
| Outcomes  | <ul style="list-style-type: none"> <li>• Quality of life at ≤4 months (Continuous) CRITICAL</li> <li>• Quality of life at &gt;4 months (Continuous) CRITICAL</li> <li>• Pain severity at ≤4 months (Continuous) CRITICAL</li> <li>• Pain severity at &gt;4 months (Continuous) CRITICAL</li> <li>• Function (disability scores) at ≤4 months (Continuous) CRITICAL</li> <li>• Function (disability scores) at &gt;4 months (Continuous) CRITICAL</li> <li>• Psychological distress at ≤4 months (Continuous) CRITICAL</li> <li>• Psychological distress at &gt;4 months (Continuous) CRITICAL</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Healthcare utilisation at &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at ≤4 months (Dichotomous) CRITICAL</li> <li>• Adverse events (morbidity) at &gt;4 months (Dichotomous) CRITICAL</li> <li>• Adverse events (mortality) at ≤4 months (Dichotomous) CRITICAL</li> <li>• Adverse events (mortality) at &gt;4 months (Dichotomous) CRITICAL</li> </ul> |
| Study design  | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found (for strata rather than agent), non-randomised studies will be included.   |
| Unit of randomisation   | Patient  |
| Crossover study   | Not permitted  |
| Minimum duration of study   | Not defined  |
| Other exclusions  | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language</li> <li>• Studies where the primary aim is treatment of sciatica (populations with low back pain with sciatica as inclusion criteria for the study)</li> <li>• Studies that focus on the sacroiliac joint</li> <li>• Therapeutic endoscopic division of epidural adhesions (this has already been covered by NICE interventional procedures guidance IPG333)</li> </ul>   |
| Population stratification   | <ul style="list-style-type: none"> <li>• Image-guided facet joint injections</li> <li>• Other image-guided injections</li> </ul>   |

| Review question                             | What is the clinical and cost effectiveness of spinal injections in the management of non-specific low back pain?   |
|---|---|
|   | <ul style="list-style-type: none"> <li>• Prolotherapy/Sclerosants</li> <li>• Other non-image guided injections (eg trigger point injection)</li> </ul>  |
| Reasons for stratification                  | Cannot pool the different types of injections together as they are inherently different   |
| Other stratifications                       | Type of treatment - image guided/non-image guided/sclerosant therapy  |
| Sensitivity/other analysis                  | <ul style="list-style-type: none"> <li>• Number of injections and number of injection sessions will be reported if available.</li> <li>• People also receiving anaesthetic injections will be reported if available.</li> </ul> |
| Subgroup analyses if there is heterogeneity | <ul style="list-style-type: none"> <li>• Choice of agent; different types of steroid (for example) may vary in efficacy</li> </ul>  |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library<br>Language: English   |

## C.16 Radiofrequency denervation

**Table 17: Review protocol: radiofrequency denervation**

| Review question | What is the clinical and cost effectiveness of radiofrequency denervation for facet joint pain in the management of non-specific low back pain?   |
|-----------------|---|
| Objectives      | To assess the clinical and cost effectiveness of radiofrequency denervation for facet joint pain in the management of non-specific low back pain.   |
| Population      | <p>People aged 16 or above with non-specific low back pain.</p> <ul style="list-style-type: none"> <li>• Populations with low back pain only and low back pain with/without sciatica will be pooled for analysis.</li> </ul>  |
| Interventions   | Radiofrequency denervation of facet joint medial branch   |
| Comparisons     | <ul style="list-style-type: none"> <li>• Placebo/Sham/Attention control</li> <li>• Usual care/waiting list</li> <li>• Other treatment within guideline scope</li> </ul>   |
| Outcomes        | <ul style="list-style-type: none"> <li>• Quality of life at ≤4 months (Continuous) CRITICAL</li> <li>• Quality of life at &gt;4 months (Continuous) CRITICAL</li> <li>• Pain severity at ≤4 months (Continuous) CRITICAL</li> <li>• Pain severity at &gt;4 months (Continuous) CRITICAL</li> <li>• Function (disability scores) at ≤4 months (Continuous) CRITICAL</li> <li>• Function (disability scores) at &gt;4 months (Continuous) CRITICAL</li> <li>• Psychological distress at ≤4 months (Continuous) CRITICAL</li> <li>• Psychological distress at &gt;4 months (Continuous) CRITICAL</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Healthcare utilisation at &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at ≤4 months (Dichotomous) CRITICAL</li> <li>• Adverse events (morbidity) at &gt;4 months (Dichotomous) CRITICAL</li> </ul> |
| Study design    | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included.   |

| Review question                             | What is the clinical and cost effectiveness of radiofrequency denervation for facet joint pain in the management of non-specific low back pain?  |
|---|--|
| Unit of randomisation                       | Patient  |
| Crossover study                             | Not permitted  |
| Minimum duration of study                   | Not defined  |
| Other exclusions                            | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language</li> <li>• Pulsed radiofrequency (not an denervation procedure)</li> <li>• Low back pain with sciatica</li> <li>• Studies where the primary aim is treatment of sciatica (populations with low back pain with sciatica as inclusion criteria for the study)</li> </ul> |
| Population stratification                   | n/a  |
| Subgroup analyses if there is heterogeneity | <ul style="list-style-type: none"> <li>• People with nerve block prior to procedure</li> <li>• People without prior nerve block</li> </ul>   |
| Sensitivity/other analysis                  | <ul style="list-style-type: none"> <li>• Number of nerve blocks administered will be recorded if available, data will be pooled for analysis</li> </ul>  |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library<br>Language: English  |

## C.17 Epidural injections for sciatica

**Table 18: Review protocol: epidural injections (sciatica)**

| Review question | What is the clinical and cost effectiveness of epidural injections in the management of people with sciatica?   |
|-----------------|---|
| Objectives      | To assess the clinical and cost effectiveness of epidural injections in the management of people with sciatica.   |
| Population      | <p>People aged 16 or above with sciatica and:</p> <ul style="list-style-type: none"> <li>○ Primarily (≥70%) disc prolapse (likely to be confirmed by imaging), other spinal pathologies may or may not also be present.</li> <li>○ Primarily (≥70%) not disc prolapse (confirmed by imaging).</li> <li>○ Mixed population / unclear spinal pathology (no clinical diagnosis); <ul style="list-style-type: none"> <li>- Trial participants required to have pathology confirmed by imaging but could have either disc prolapse or other spinal pathology for inclusion.</li> <li>- Pathology not confirmed (may or may not have had imaging).</li> </ul> </li> </ul> |
| Interventions   | <p>Epidural injections:</p> <ul style="list-style-type: none"> <li>• Steroid (including steroid plus saline)</li> <li>• Local anaesthetic</li> <li>• Anti-TNF</li> <li>• Combination: local anaesthetic+ steroid</li> </ul>   |
| Comparisons     | <ul style="list-style-type: none"> <li>• Sham (needle alone) / placebo / saline</li> <li>• Usual care</li> <li>• Each other (including head to head comparisons between strata)</li> <li>• Other treatment (non-invasive and invasive treatments being considered by the guideline for sciatica)</li> </ul>   |
| Outcomes        | <ul style="list-style-type: none"> <li>• Quality of life at ≤4 months (Continuous) CRITICAL</li> <li>• Quality of life at &gt;4 months (Continuous) CRITICAL</li> </ul>   |

| Review question                             | What is the clinical and cost effectiveness of epidural injections in the management of people with sciatica?   |
|---|---|
|   | <ul style="list-style-type: none"> <li>• Pain severity at ≤4 months (Continuous) CRITICAL</li> <li>• Pain severity at &gt;4 months (Continuous) CRITICAL</li> <li>• Function (disability scores) at ≤4 months (Continuous) CRITICAL</li> <li>• Function (disability scores) at &gt;4 months (Continuous) CRITICAL</li> <li>• Psychological distress at ≤4 months (Continuous) CRITICAL</li> <li>• Psychological distress at &gt;4 months (Continuous) CRITICAL</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Healthcare utilisation at &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at ≤4 months (Dichotomous) CRITICAL</li> <li>• Adverse events (morbidity) at &gt;4 months (Dichotomous) CRITICAL</li> <li>• Adverse events (mortality) at ≤4 months (Dichotomous) CRITICAL</li> <li>• Adverse events (mortality) at &gt;4 months (Dichotomous) CRITICAL</li> </ul> |
| Study design                                | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included.   |
| Unit of randomisation                       | Patient   |
| Crossover study                             | Not permitted   |
| Minimum duration of study                   | Not defined   |
| Other exclusions                            | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language</li> <li>• Studies which focus on the sacroiliac joint</li> <li>• Therapeutic endoscopic division of epidural adhesions [This has already been covered by NICE interventional procedures guidance 333 (2010)]</li> </ul>  |
| Population stratification                   | <ul style="list-style-type: none"> <li>• Image guided injections</li> <li>• Non-image guided injections</li> </ul>  |
| Sensitivity/other analysis                  | <ul style="list-style-type: none"> <li>• Number of injections and/or injection sessions will be recorded if available</li> </ul>  |
| Subgroup analyses if there is heterogeneity | <ul style="list-style-type: none"> <li>• Route of administration (caudal, interlaminar, transforaminal)</li> </ul>  |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library<br>Language: English   |

## C.18 Referral for surgery

**Table 19: Review protocol: Referral for surgery (low back pain)**

| Review question | Does history of previous fusion surgery, smoking status, BMI or psychological distress predict response to surgery in people with non-specific low back pain? |
|-----------------|---|
| Objectives      | To determine the optimal clinically and cost effective criteria for referral for surgical opinion of people with non-specific low back pain.                  |

| <b>Review question</b>                               | <b>Does history of previous fusion surgery, smoking status, BMI or psychological distress predict response to surgery in people with non-specific low back pain?</b>   |
|--|--|
| Population   | People aged 16 or above with non-specific low back pain (with or without sciatica) or low back pain without sciatica who have failed to respond to appropriate conservative therapy.   |
| Prognostic Factor (predictor of response to surgery) | <ul style="list-style-type: none"> <li>• History of previous fusion surgery</li> <li>• Smoking</li> <li>• BMI &gt;30</li> <li>• Psychological distress</li> </ul>  |
| Confounders  | Duration of symptoms   |
| Outcomes   | <ul style="list-style-type: none"> <li>• Quality of life (Continuous) CRITICAL</li> <li>• Pain severity (Continuous) CRITICAL</li> <li>• Function (disability scores) (Continuous) CRITICAL</li> <li>• Psychological distress (Continuous) CRITICAL</li> <li>• Adverse events (mortality) (dichotomous) CRITICAL</li> <li>• Adverse events (morbidity) (dichotomous) CRITICAL</li> <li>• Adverse events (re-operation rate) (dichotomous) CRITICAL</li> <li>• Surgery conversion rate (dichotomous) IMPORTANT</li> </ul>             |
| Study design (order of preference)                   | <ul style="list-style-type: none"> <li>• Prospective and retrospective cohorts (with multivariate analysis adjusted for key confounders) (if none are identified those with multivariate analysis adjusted for other confounders will be included)</li> <li>• Randomised trials (if appropriate) with multivariate analysis adjusted for key confounders (if none are identified those with multivariate analysis adjusted for other confounders will be included)</li> <li>• Systematic reviews of the above</li> </ul>             |
| Exclusions   | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language</li> <li>• Case-control studies</li> <li>• Cross-sectional studies</li> <li>• Univariate analysis studies</li> <li>• Any studies that have not adjusted for all of the minimum required confounders in the multivariable analysis (unless there are no such studies identified)</li> <li>• Studies where the person giving the opinion / decision for surgery is not a surgeon.</li> </ul> |
| Search criteria                                      | Databases: Medline, Embase, Cochrane Library<br>Language: English  |

**Table 20: Review protocol: Referral for surgery (sciatica)**

| <b>Review question</b> | <b>Does image concordant pathology or presence of radicular symptoms predict response to surgery in people with sciatica?</b> |
|------------------------|---|
| Objectives             | To determine the optimal clinically and cost effective criteria for referral for surgical opinion of people with sciatica.    |
| Population             | People aged 16 or above with sciatica who have failed to respond to appropriate conservative therapy                          |
| Prognostic Factor      | <ul style="list-style-type: none"> <li>• Image concordant pathology (diagnosis supported by imaging - i.e. MRI</li> </ul>     |

| Review question                    | Does image concordant pathology or presence of radicular symptoms predict response to surgery in people with sciatica?   |
|------------------------------------|--|
| (predictor of response to surgery) | <ul style="list-style-type: none"> <li>or CT- to see if compression is present or not)</li> <li>• Radicular symptoms (pain that extends to leg vs. pain in back/buttock only)</li> </ul>   |
| Confounders                        | Duration of symptoms   |
| Outcomes                           | <ul style="list-style-type: none"> <li>• Quality of life (Continuous) CRITICAL</li> <li>• Pain severity (Continuous) CRITICAL</li> <li>• Function (disability scores) (Continuous) CRITICAL</li> <li>• Psychological distress (Continuous) CRITICAL</li> <li>• Adverse events (mortality) (dichotomous) CRITICAL</li> <li>• Adverse events (morbidity) (dichotomous) CRITICAL</li> <li>• Adverse events (re-operation rate) (dichotomous) CRITICAL</li> <li>• Surgery conversion rate (dichotomous) IMPORTANT</li> </ul>             |
| Study design (order of preference) | <ul style="list-style-type: none"> <li>• Prospective and retrospective cohorts (with multivariate analysis adjusted for key confounders (if none are identified those with multivariate analysis adjusted for other confounders will be included)</li> <li>• Randomised trials (if appropriate) with multivariate analysis adjusted for key confounders (if none are identified those with multivariate analysis adjusted for other confounders will be included)</li> <li>• Systematic reviews of the above</li> </ul>              |
| Exclusions                         | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language</li> <li>• Case-control studies</li> <li>• Cross-sectional studies</li> <li>• Univariate analysis studies</li> <li>• Any studies that have not adjusted for all of the minimum required confounders in the multivariable analysis (unless there are no such studies identified)</li> <li>• Studies where the person giving the opinion / decision for surgery is not a surgeon.</li> </ul> |
| Search criteria                    | Databases: Medline, Embase, Cochrane Library<br>Language: English  |

## C.19 Disc replacement

**Table 21: Review protocol: Disc replacement**

| Review question                               | What is the clinical and cost-effectiveness of disc replacement surgery in people with non-specific low back pain?  |
|---|---|
| Objectives                                    | To assess the clinical and cost effectiveness of disc replacement in the management of people with non-specific low back pain   |
| Review population                             | <p>People aged 16 or above with suspected non-specific low back pain (low back pain without sciatica or mixed population with low back pain with or without sciatica)</p> <ul style="list-style-type: none"> <li>• Populations with low back pain only and low back pain with/without sciatica will be pooled for analysis</li> </ul> |
| Interventions and comparators: generic/class; | <ul style="list-style-type: none"> <li>• Disc replacement</li> <li>• Usual Care</li> </ul>  |

| Review question  | What is the clinical and cost-effectiveness of disc replacement surgery in people with non-specific low back pain?  |
|--|---|
| specific/drug<br><br>(All interventions will be compared with each other, unless otherwise stated) | Other invasive and non-invasive treatments included in this guideline   |
| Outcomes   | <ul style="list-style-type: none"> <li>• Quality of life at ≤4 months (Continuous) CRITICAL</li> <li>• Quality of life at &gt;4 months (Continuous) CRITICAL</li> <li>• Pain severity at ≤4 months (Continuous) CRITICAL</li> <li>• Pain severity at &gt;4 months (Continuous) CRITICAL</li> <li>• Function (disability scores) at ≤4 months (Continuous) CRITICAL</li> <li>• Function (disability scores) at &gt;4 months (Continuous) CRITICAL</li> <li>• Psychological distress at ≤4 months (Continuous) CRITICAL</li> <li>• Psychological distress at &gt;4 months (Continuous) CRITICAL</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Healthcare utilisation at &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Adverse events (morbidity) at &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Adverse events (mortality) at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Adverse events (mortality) at &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Failure rate at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Failure rate &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Revision rate ≤4 months (Dichotomous) IMPORTANT</li> <li>• Revision rate &gt;4 months (Dichotomous) IMPORTANT</li> </ul> <p>Outcomes to be recorded at:</p> <ul style="list-style-type: none"> <li>• Short term (≤ 4 months) (8 weeks to 4 months)</li> <li>• Long-term:               <ul style="list-style-type: none"> <li>○ &gt;4 months - 1 year (4 months to 1 year) for all outcomes</li> <li>○ 0-2 years for critical outcomes</li> <li>○ 0-10 years for failure rates and revision rates</li> </ul> </li> </ul> |
| Study design   | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included.   |
| Unit of randomisation  | Patient   |
| Crossover study  | Not permitted   |
| Minimum duration of study  | Not defined   |
| Other exclusions   | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language</li> <li>• Cross-over studies</li> <li>• Sciatica is main problem for patient</li> </ul>  |

| Review question                             | What is the clinical and cost-effectiveness of disc replacement surgery in people with non-specific low back pain? |
|---|--|
| Population stratification                   | n/a  |
| Reasons for stratification                  | People with non-specific low back pain without sciatica or mixed population LBP with/without sciatica              |
| Sensitivity/other analysis                  | n/a  |
| Subgroup analyses if there is heterogeneity | None specified   |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library<br>Language: English  |

## C.20 Spinal fusion

**Table 22: Review protocol: Spinal Fusion**

| Review question  | What is the clinical and cost effectiveness of spinal fusion/arthrodesis in people with non-specific low back pain?  |
|--|--|
| Objectives   | Long term relief of symptoms and interventions for living with chronic lower back pain and sciatica  |
| Review population  | <ul style="list-style-type: none"> <li>• People aged 16 or above with non-specific low back pain</li> <li>• Populations with low back pain only and low back pain with or without sciatica will be pooled for analysis</li> </ul>  |
| Interventions and comparators: generic/class; specific/drug<br><br>(All interventions will be compared with each other, unless otherwise stated) | <ul style="list-style-type: none"> <li>• Spinal fusion/arthrodesis</li> <li>• Placebo/Sham</li> <li>• Usual care; waiting list</li> <li>• No surgery</li> <li>• Different type of surgery (eg. anterior approach fusion versus disc replacement)</li> <li>• Other treatment (interventions listed in our guideline review protocols)</li> </ul>  |
| Outcomes   | <ul style="list-style-type: none"> <li>• Quality of life at ≤4 months (Continuous) CRITICAL</li> <li>• Quality of life at &gt;4 months (Continuous) CRITICAL</li> <li>• Pain severity at ≤4 months (Continuous) CRITICAL</li> <li>• Pain severity at &gt;4 months (Continuous) CRITICAL</li> <li>• Function (disability scores) at ≤4 months (Continuous) CRITICAL</li> <li>• Function (disability scores) at &gt;4 months (Continuous) CRITICAL</li> <li>• Psychological distress at ≤4 months (Continuous) CRITICAL</li> <li>• Psychological distress at &gt;4 months (Continuous) CRITICAL</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Responder criteria (&gt; 30% improvement in pain or function) at &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤4 months (Dichotomous) IMPORTANT</li> <li>• Healthcare utilisation at &gt;4 months (Dichotomous) IMPORTANT</li> <li>• Adverse events (post-op complications) at follow up (Dichotomous) IMPORTANT</li> <li>• Adverse events (increased risk of requiring surgery at adjacent segments) at follow up (Dichotomous) IMPORTANT</li> <li>• Adverse events (mortality) at &gt;follow up (Dichotomous) IMPORTANT</li> </ul> |

| Review question                             | What is the clinical and cost effectiveness of spinal fusion/arthrodesis in people with non-specific low back pain?  |
|---|--|
|   | <ul style="list-style-type: none"> <li>• Failure rate at follow up (Dichotomous) IMPORTANT</li> <li>• Revision rate at follow up (Dichotomous) IMPORTANT</li> <li>• Outcomes to be recorded at: <ul style="list-style-type: none"> <li>○ Short term (<math>\leq 4</math> months) (8 weeks to 4 months)</li> <li>○ <math>&gt;4</math> months (4 months to 1 year )</li> <li>○ 1-2 years for critical outcomes</li> <li>○ 5-10 years for failure rates and revision rates</li> </ul> </li> </ul>   |
| Study design                                | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included.  |
| Unit of randomisation                       | Patient  |
| Crossover study                             | Not permitted  |
| Minimum duration of study                   | Not defined  |
| Other exclusions                            | <ul style="list-style-type: none"> <li>• Mixed chronic pain (not just low back pain)</li> <li>• Abstracts</li> <li>• Non-English language</li> <li>• Studies which focus on the sacroiliac joint</li> <li>• Studies which include a study population with spondylolisthesis <math>&gt; 20\%</math></li> <li>• Lateral (including extreme, extra and direct lateral) interbody fusion in the lumbar spine, (this has already been covered by NICE interventional procedures guidance 321)</li> <li>• Transaxial interbody lumbosacral fusion (this has already been covered by NICE interventional procedures guidance IPG387)</li> </ul> |
| Population stratification                   | n/a  |
| Sensitivity/other analysis                  | n/a  |
| Subgroup analyses if there is heterogeneity | Number of levels fused (Single level; $>1$ level); Different levels may affect outcome   |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library<br>Language: English  |

## C.21 Spinal decompression

**Table 23: Review protocol: Spinal Decompression**

| Review question  | What is the clinical and cost effectiveness of spinal decompression in people with sciatica?   |
|--|--|
| Objectives   | To assess the clinical and cost effectiveness of spinal decompression in the management of people with sciatica  |
| Review population  | People aged 16 or above with sciatica <ul style="list-style-type: none"> <li>• Populations with neurogenic claudication causing leg pain will be included</li> </ul>   |
| Interventions and comparators: generic/class; specific/drug<br><br>(All interventions will be compared with each other, unless otherwise stated) | <ul style="list-style-type: none"> <li>• Spinal decompression <ul style="list-style-type: none"> <li>○ Laminectomy</li> <li>○ Discectomy</li> <li>○ Facetectomy</li> <li>○ Foraminotomy</li> <li>○ Fenestration</li> </ul> </li> </ul> |

| Review question           | What is the clinical and cost effectiveness of spinal decompression in people with sciatica?  |
|---------------------------|---|
|                           | <ul style="list-style-type: none"> <li>○ Spinal decompression</li> <li>○ Sequestration</li> <li>○ Laminotomy</li> <li>● Usual care</li> <li>● Other treatment (interventions listed in our guideline review protocols)</li> </ul>   |
| Outcomes                  | <ul style="list-style-type: none"> <li>● Quality of life at ≤4 months (Continuous) CRITICAL</li> <li>● Quality of life at &gt;4 months (Continuous) CRITICAL</li> <li>● Pain severity at ≤4 months (Continuous) CRITICAL</li> <li>● Pain severity at &gt;4 months (Continuous) CRITICAL</li> <li>● Function (disability scores) at ≤4 months (Continuous) CRITICAL</li> <li>● Function (disability scores) at &gt;4 months (Continuous) CRITICAL</li> <li>● Psychological distress at ≤4 months (Continuous) CRITICAL</li> <li>● Psychological distress at &gt;4 months (Continuous) CRITICAL</li> <li>● Responder criteria (&gt; 30% improvement in pain or function) at ≤4 months (Dichotomous) IMPORTANT</li> <li>● Responder criteria (&gt; 30% improvement in pain or function) at &gt;4 months (Dichotomous) IMPORTANT</li> <li>● Healthcare utilisation (prescribing, investigations, hospitalisation or health professional visit) at ≤4 months (Dichotomous) IMPORTANT</li> <li>● Healthcare utilisation at &gt;4 months (Dichotomous) IMPORTANT</li> <li>● Adverse events (morbidity) at follow up (Dichotomous) IMPORTANT</li> <li>● Adverse events (mortality) at follow up (Dichotomous) IMPORTANT</li> <li>● Failure rate at follow up (Dichotomous) IMPORTANT</li> <li>● Revision rate at follow up (Dichotomous) IMPORTANT</li> <li>● Outcomes to be recorded at: <ul style="list-style-type: none"> <li>○ Short term (≤4 months) (8 weeks to 4 months)</li> <li>○ Long-term: <ul style="list-style-type: none"> <li>- &gt; 4 months (4 months to 1 year ) for all outcomes</li> <li>- 1-2 years for critical outcomes</li> <li>- 0-10 years for failure rates and revision rates (recurrence / repeat surgery at adjacent segments or at the same segment, will be reported narratively only, for GDG</li> </ul> </li> </ul> </li> </ul> |
| Study design              | RCTs and SRs will be included in the first instance. If insufficient RCT evidence to form a recommendation is found, non-randomised studies will be included.   |
| Unit of randomisation     | Patient   |
| Crossover study           | Not permitted   |
| Minimum duration of study | Not defined   |
| Other exclusions          | <ul style="list-style-type: none"> <li>● Mixed chronic pain (not just low back pain)</li> <li>● Abstracts</li> <li>● Non-English language</li> <li>● Intra-class comparison</li> <li>● The following techniques, as they do not fully achieve decompression: <ul style="list-style-type: none"> <li>○ Nucleolysis</li> <li>○ Nucleoplasty</li> <li>○ IDET (intradiscal electrothermal therapy)</li> <li>○ distraction</li> </ul> </li> <li>● Insertion of an annular disc implant lumbar discectomy ((this has already</li> </ul>   |

| Review question                             | What is the clinical and cost effectiveness of spinal decompression in people with sciatica?   |
|---|--|
|   | <p>been covered by NICE interventional procedures guidance IPG509))</p> <ul style="list-style-type: none"> <li>• Endoscopic laser foraminoplasty [this has already been covered by NICE interventional procedures guidance 31 (2003)].</li> <li>• Automated percutaneous mechanical lumbar discectomy [this has already been covered by NICE interventional procedures guidance 141 (2005)].</li> <li>• Percutaneous intradiscal laser ablation [this has already been covered by NICE interventional procedures guidance 357 (2010)]</li> <li>• Interspinous distraction procedures for lumbar spinal stenosis causing neurogenic claudication [this has already been covered by NICE interventional procedures guidance 365 (2010)]</li> </ul> |
| Population stratification                   | Overall (acute, chronic) with sciatica   |
| Reasons for stratification                  | Not all of these procedures are done for LBP (for instance, people without sciatica)   |
| Subgroup analyses if there is heterogeneity | Laminectomy vs. discectomy); Different categories / types of decompression surgery compared  |
| Search criteria                             | Databases: Medline, Embase, Cochrane Library<br>Language: English  |

## Appendix D: Health economic review protocol

**Table 24: Health economic review protocol**

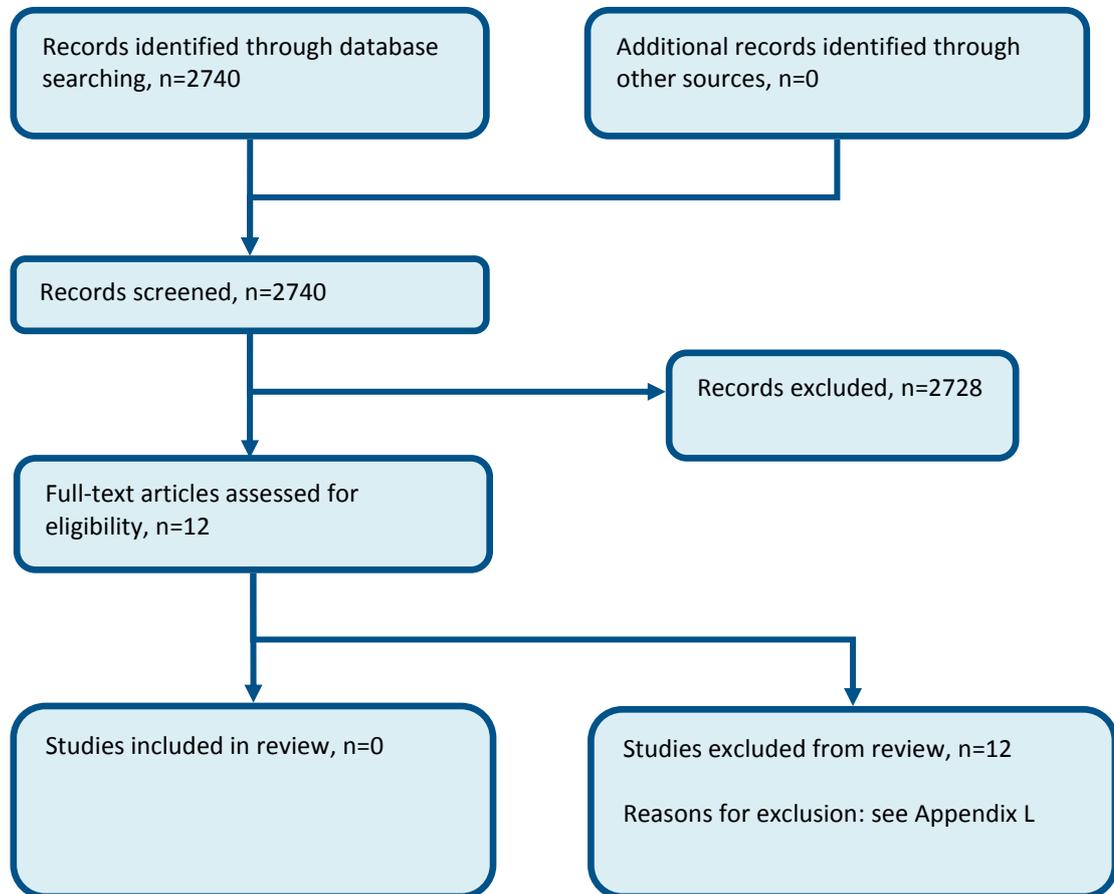
| Review question        | All questions – health economic evidence   |
|------------------------|--|
| <b>Objectives</b>      | To identify economic evaluations relevant to the review questions set out above.   |
| <b>Criteria</b>        | <ul style="list-style-type: none"> <li>• Populations, interventions and comparators must be as specified in the individual review protocols above. <ul style="list-style-type: none"> <li>○ In addition to the comparisons listed in the review protocols, economic evaluations will be included in they look at sequencing of those interventions</li> </ul> </li> <li>• Studies must be of a relevant economic study design (cost–utility analysis, cost–benefit analysis, cost-effectiveness analysis, cost–consequence analysis, comparative cost analysis).</li> <li>• Studies must not be an abstract only, a letter, editorial or commentary, or a review of economic evaluations.(a) Unpublished reports will not be considered unless submitted as part of a call for evidence.</li> <li>• Studies must be in English.</li> <li>• Studies must not be published before 1999.</li> </ul>   |
| <b>Search strategy</b> | An economic study search will be undertaken using population-specific terms and an economic study filter – see Appendix F [in Full Guideline].   |
| <b>Review strategy</b> | <p>Each study fulfilling the criteria above will be assessed for applicability and methodological limitations using the NICE economic evaluation checklist which can be found in Appendix G of the NICE guidelines manual (2012).{NICE2012}</p> <p><b>Inclusion and exclusion criteria</b></p> <ul style="list-style-type: none"> <li>• If a study is rated as both ‘Directly applicable’ and with ‘Minor limitations’ then it will be included in the guideline. An economic evidence table will be completed and it will be included in the economic evidence profile.</li> <li>• If a study is rated as either ‘Not applicable’ or with ‘Very serious limitations’ then it will usually be excluded from the guideline. If it is excluded then an economic evidence table will not be completed and it will not be included in the economic evidence profile.</li> <li>• If a study is rated as ‘Partially applicable’, with ‘Potentially serious limitations’ or both then there is discretion over whether it should be included.</li> </ul> <p><b>Where there is discretion</b></p> <p>The health economist will make a decision based on the relative applicability and quality of the available evidence for that question, in discussion with the GDG if required. The ultimate aim is to include studies that are helpful for decision-making in the context of the guideline and the current NHS setting. If several studies are considered of sufficiently high applicability and methodological quality that they could all be included, then the health economist, in discussion with the GDG if required, may decide to include only the most applicable studies and to selectively exclude the remaining studies. All studies excluded on the basis of applicability or methodological limitations will be listed with explanation as excluded economic studies in Appendix I.</p> <p>The health economist will be guided by the following hierarchies.</p> <p><i>Setting:</i></p> <ul style="list-style-type: none"> <li>• UK NHS</li> <li>• OECD countries with predominantly public health insurance systems (for example, France, Germany, Sweden)</li> <li>• OECD countries with predominantly private health insurance systems (for example, USA,</li> </ul> |

|  |   |
|--|---|
|  | <p>Switzerland)</p> <ul style="list-style-type: none"><li>• non-OECD settings (always ‘Not applicable’).</li></ul> <p><i>Economic study type:</i></p> <ul style="list-style-type: none"><li>• cost–utility analysis</li><li>• other type of full economic evaluation (cost–benefit analysis, cost-effectiveness analysis, cost–consequence analysis)</li><li>• comparative cost analysis</li><li>• non-comparative cost analyses including cost-of-illness studies (always ‘Not applicable’).</li></ul> <p><i>Year of analysis:</i></p> <ul style="list-style-type: none"><li>• The more recent the study, the more applicable it is.</li><li>• Studies that are based on resource use and unit costs from before 1999 will be downgraded in terms of applicability.</li></ul> <p><i>Quality and relevance of effectiveness data used in the economic analysis:</i></p> <ul style="list-style-type: none"><li>• The more closely the effectiveness data used in the economic analysis matches with the outcomes of the studies included in the clinical review the more useful the analysis will be for decision-making in the guideline.</li></ul> |
|--|---|

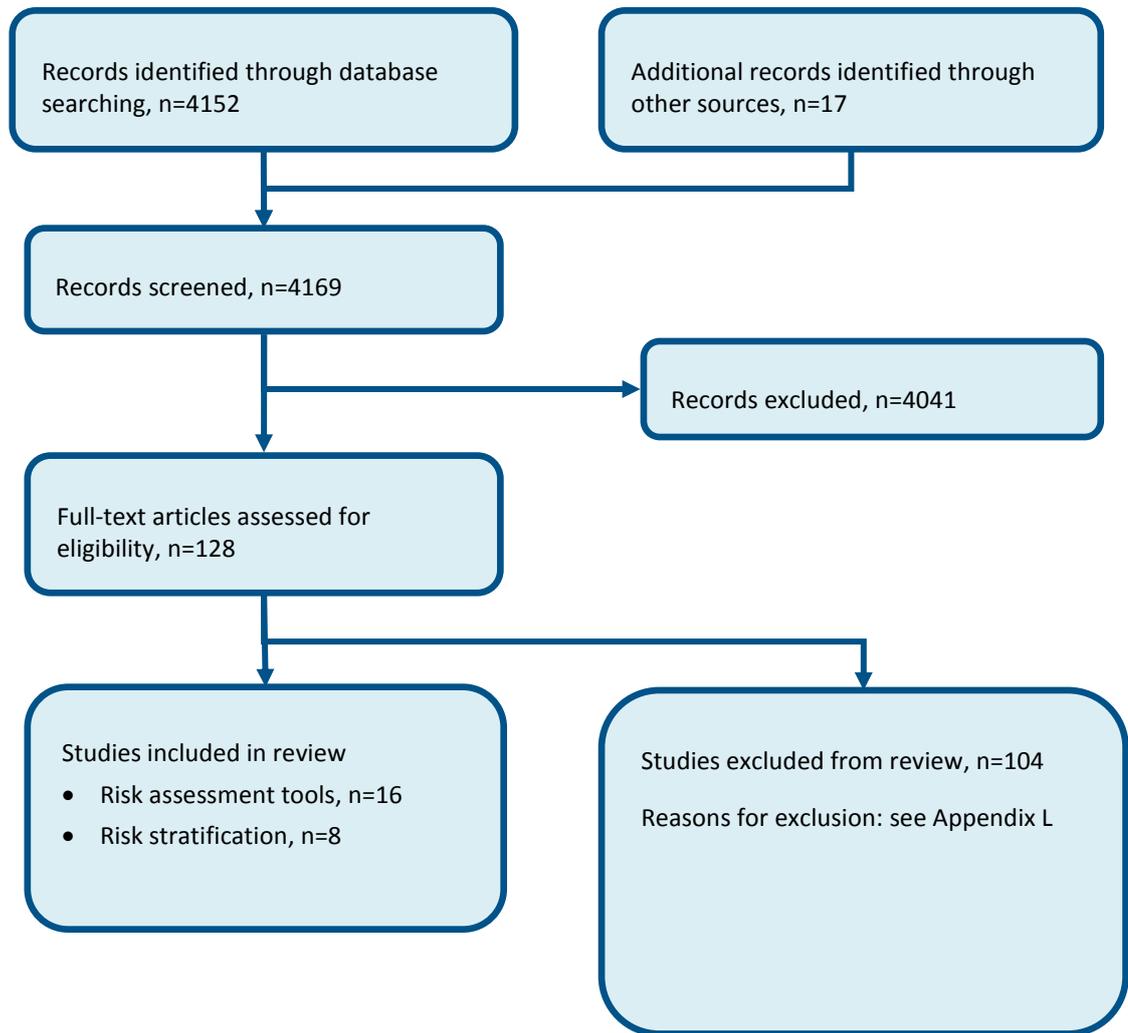
(a) Recent reviews will be ordered although not reviewed. The bibliographies will be checked for relevant studies, which will then be ordered.

## Appendix E: Clinical article selection

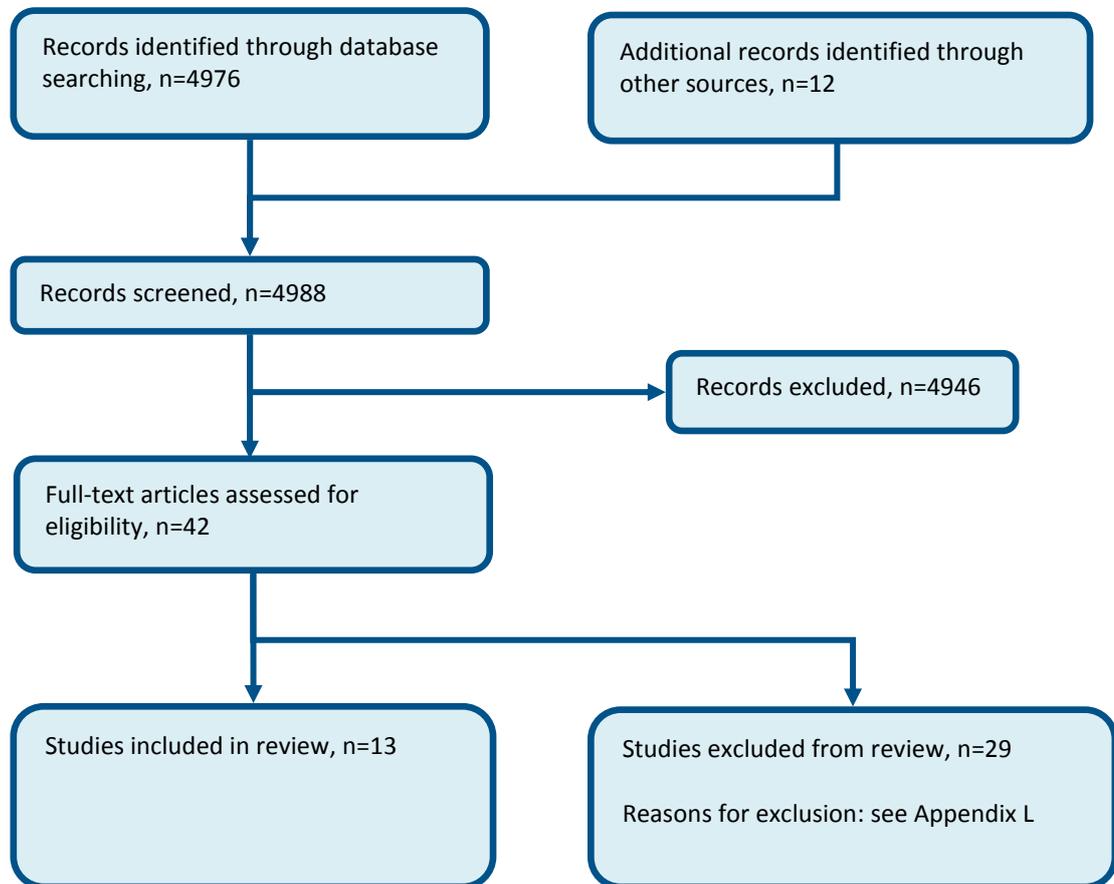
Figure 1: Flow chart of clinical article selection for the review of clinical examination



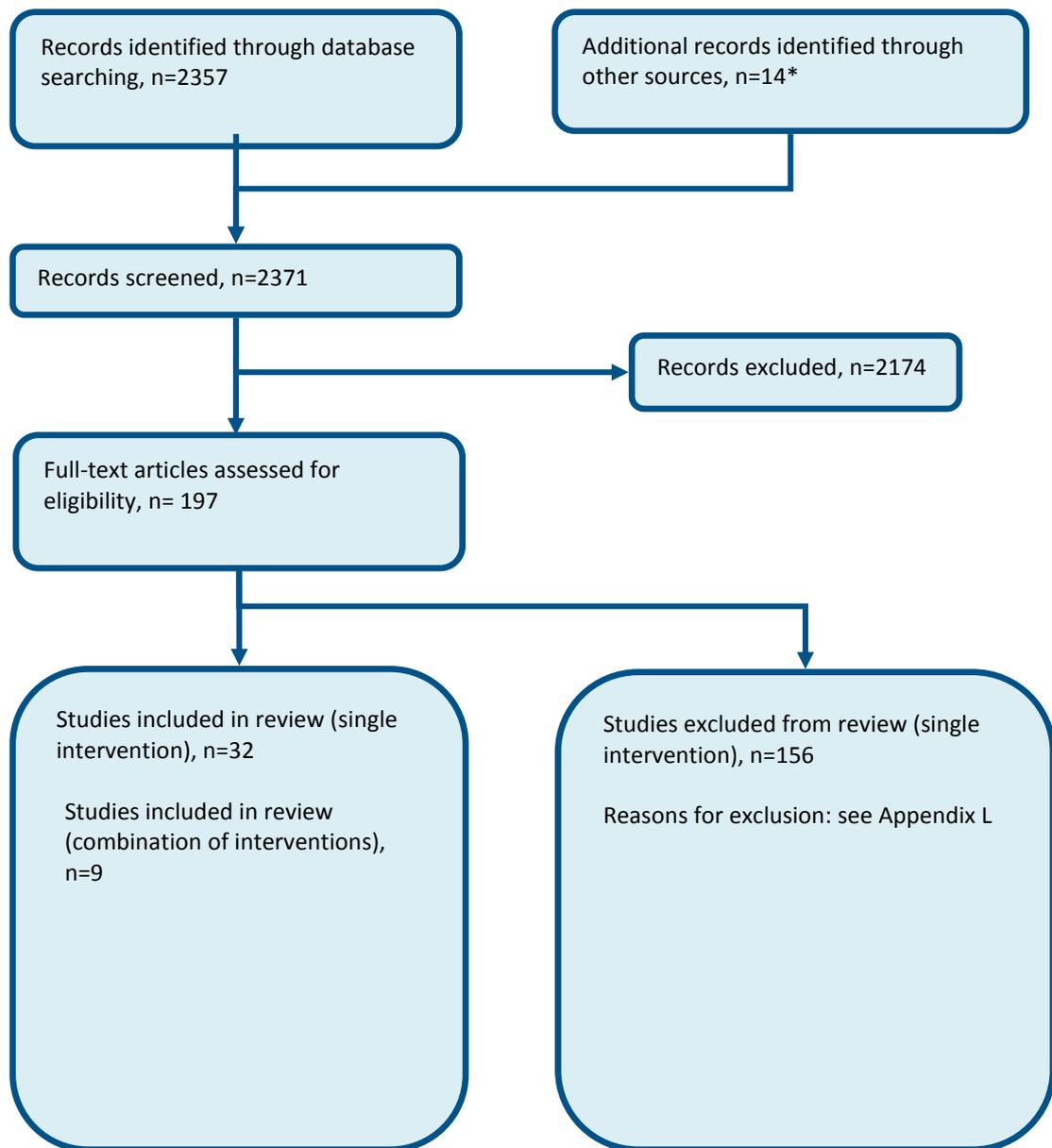
**Figure 2: Flow chart of clinical article selection for the review of risk assessment tools and risk stratification**



**Figure 3: Flow chart of clinical article selection for the review of imaging**

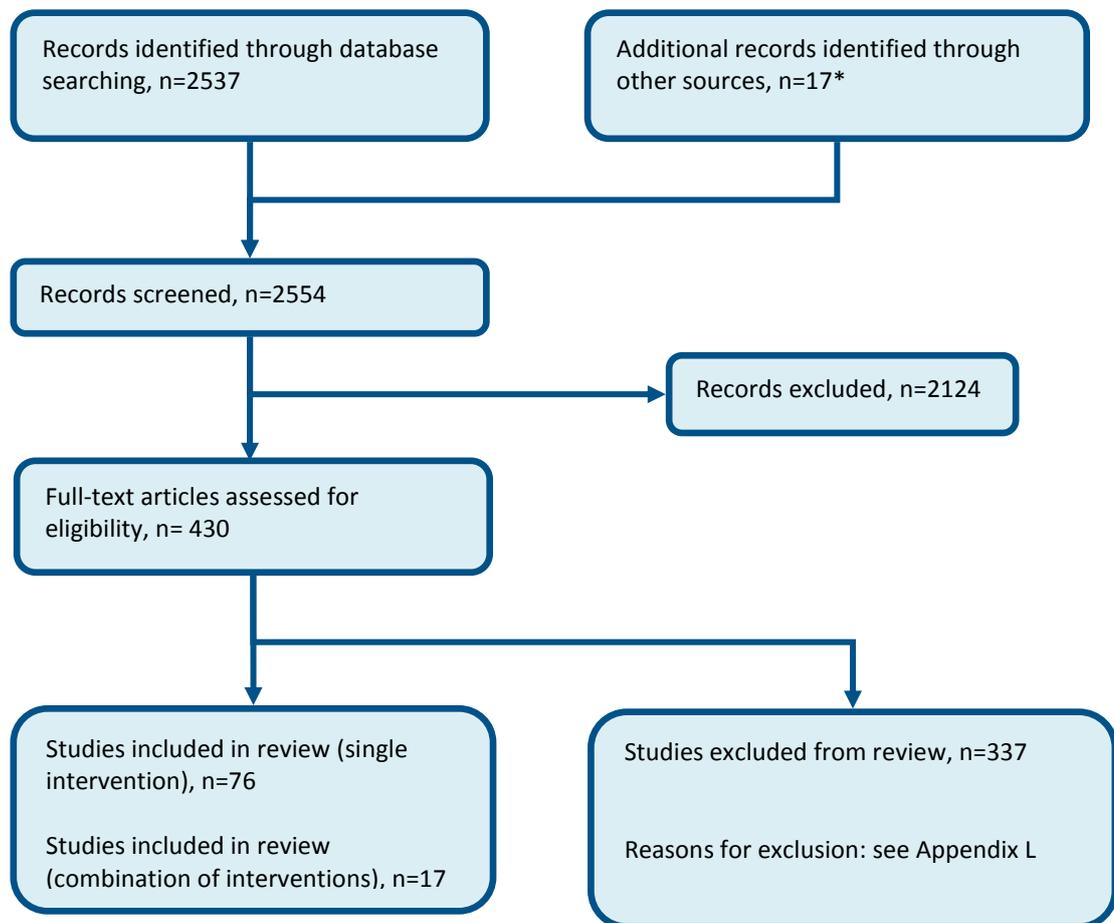


**Figure 4: Flow chart of clinical article selection for the review of self-management**



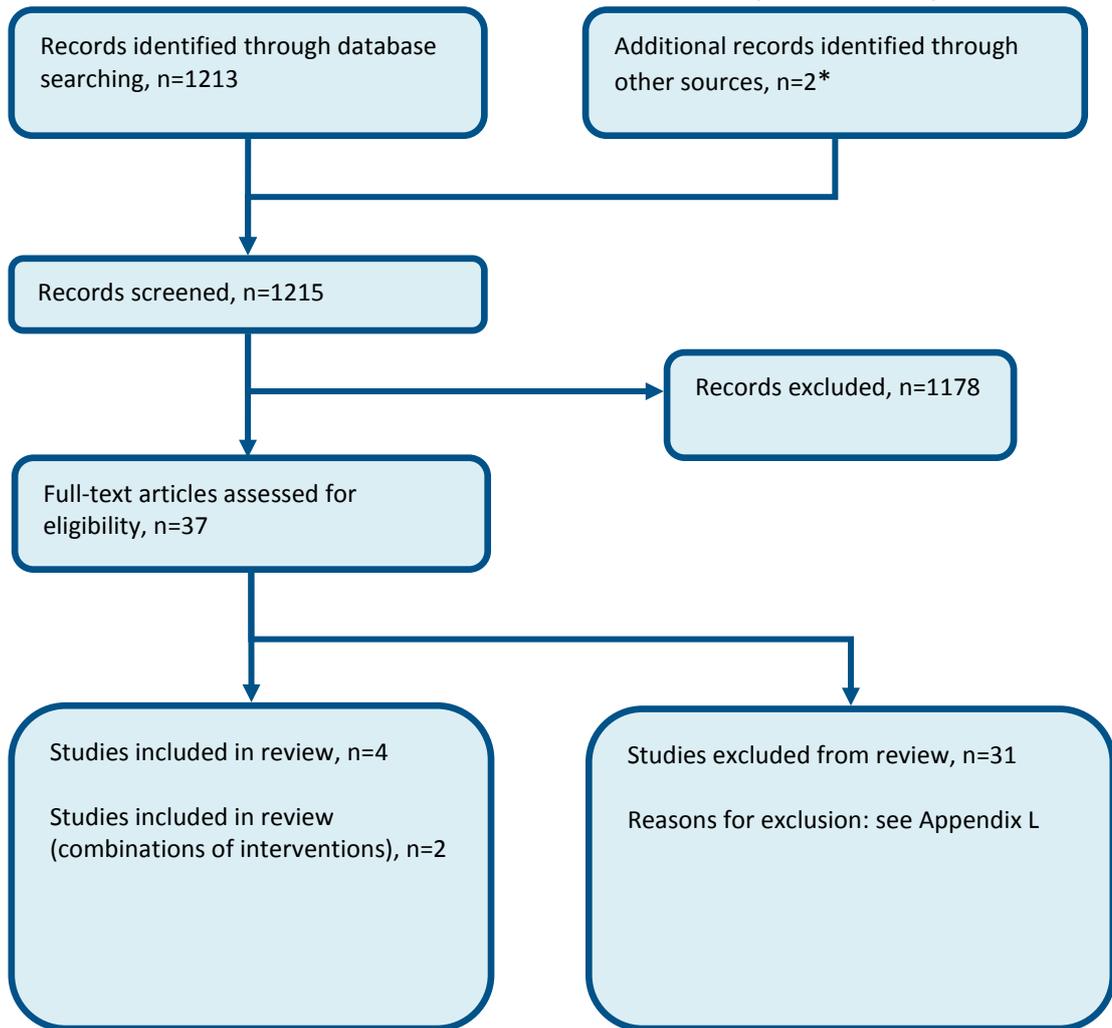
*\*9 were identified through combination of interventions, MBR and RTW searches. For studies excluded from review for combination of interventions, see Appendix L*

**Figure 5: Flow chart of clinical article selection for the review of exercise therapies**



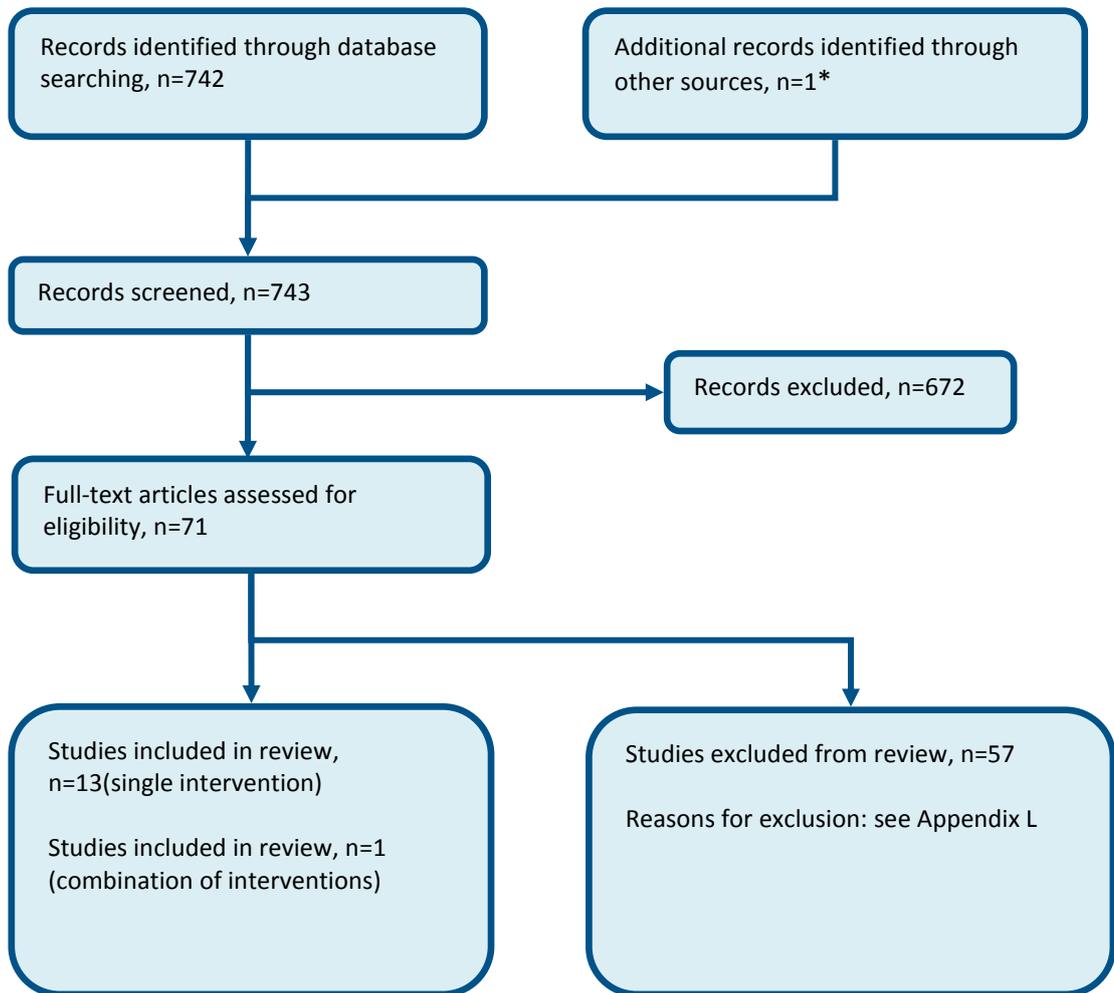
*\*n=17 were identified through combination of interventions, MBR and RTW searches. For studies excluded from review for combination of interventions, see Appendix L*

**Figure 6: Flow chart of clinical article selection for the review of postural therapies**



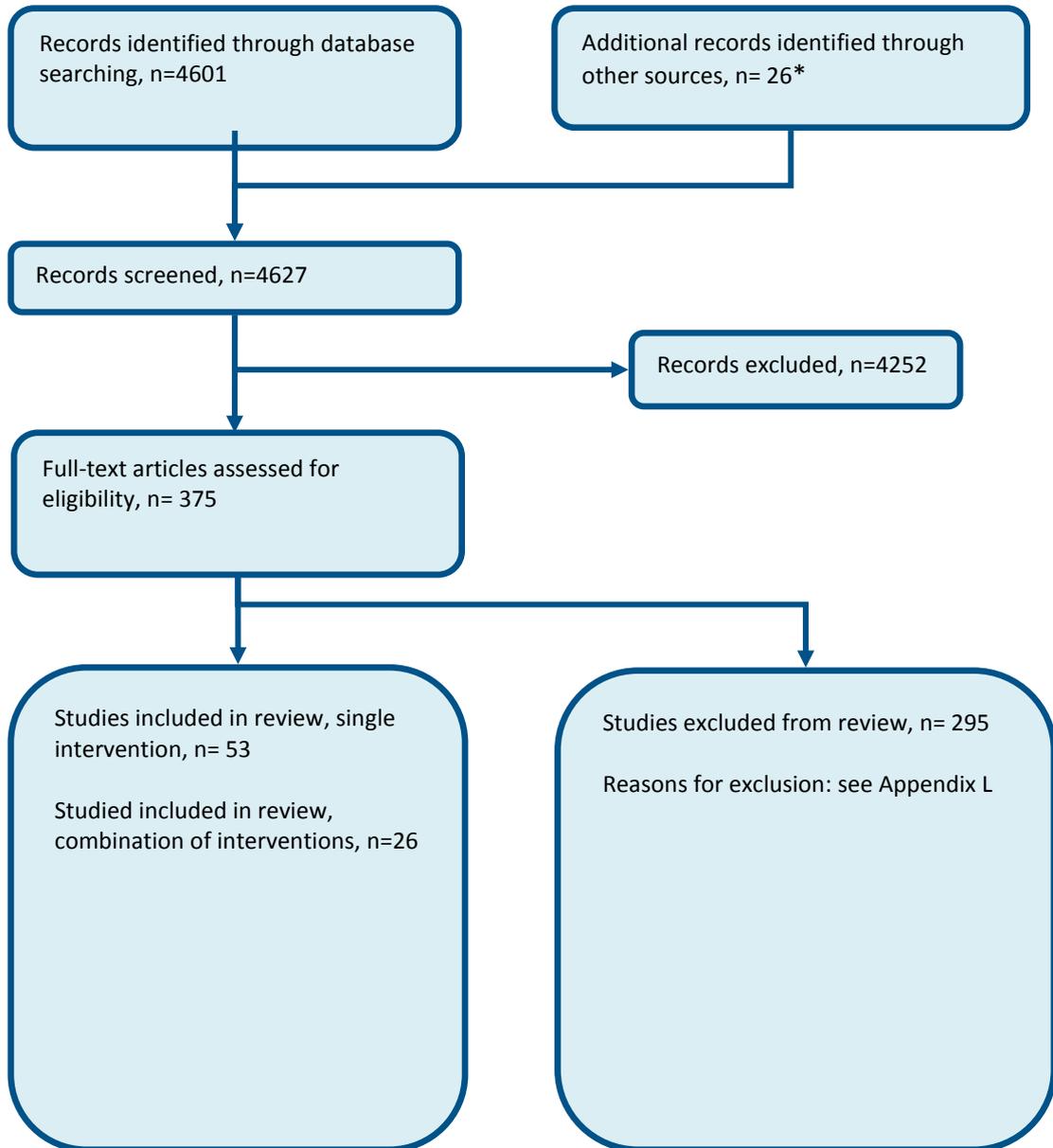
*\*n=2 were identified through combination of interventions, MBR and RTW searches. For studies excluded from review for combination of interventions, see Appendix L*

**Figure 7: Flow chart of clinical article selection for the review of orthotics and appliances**



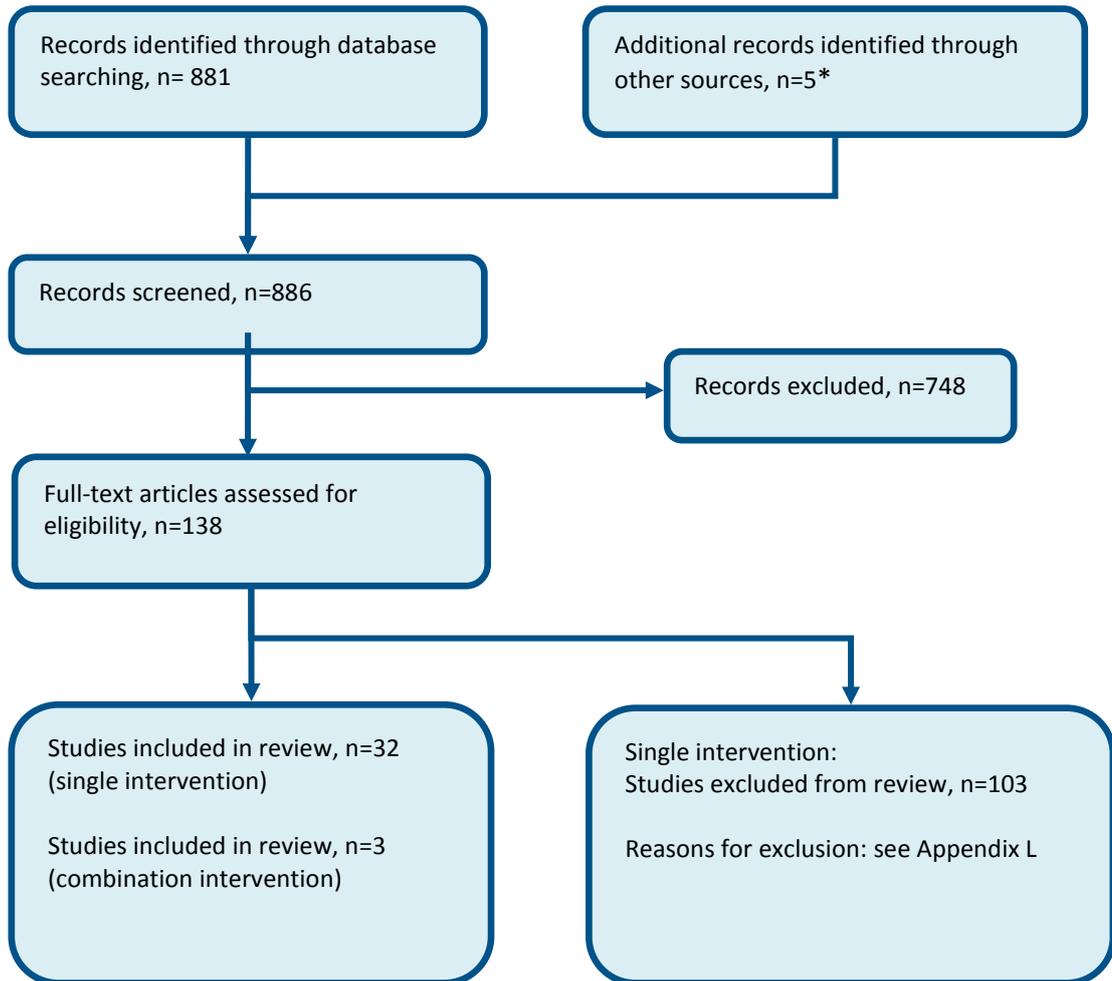
*\*n=1 was identified through combination of interventions, MBR and RTW searches. For studies excluded from review for combination of interventions, see Appendix L*

**Figure 8: Flow chart of clinical article selection for the review of manual therapy**



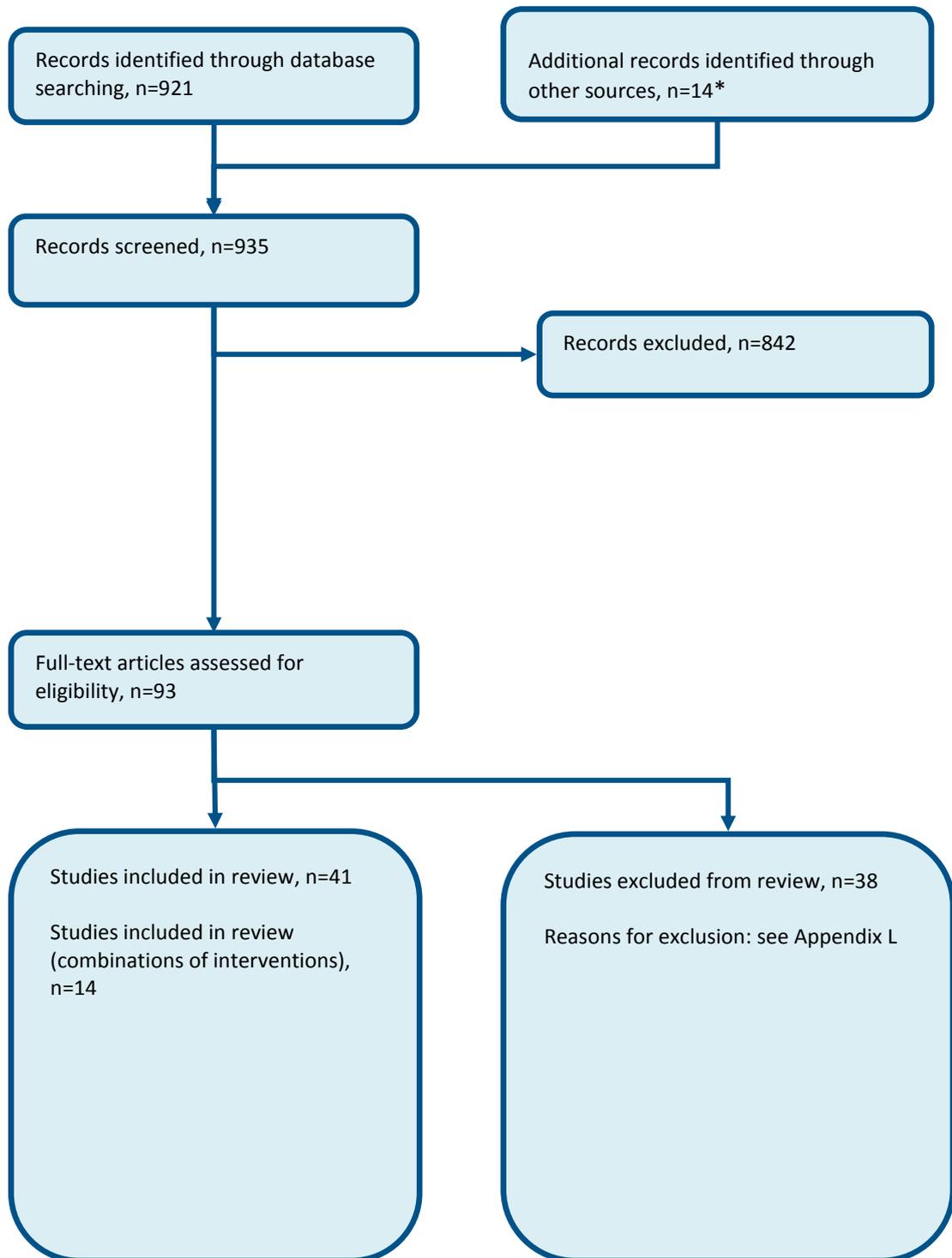
*\*n=26 were identified through combination of interventions, MBR and RTW searches. For studies excluded from review for combination of interventions, see Appendix L*

**Figure 9: Flow chart of clinical article selection for the review of acupuncture**



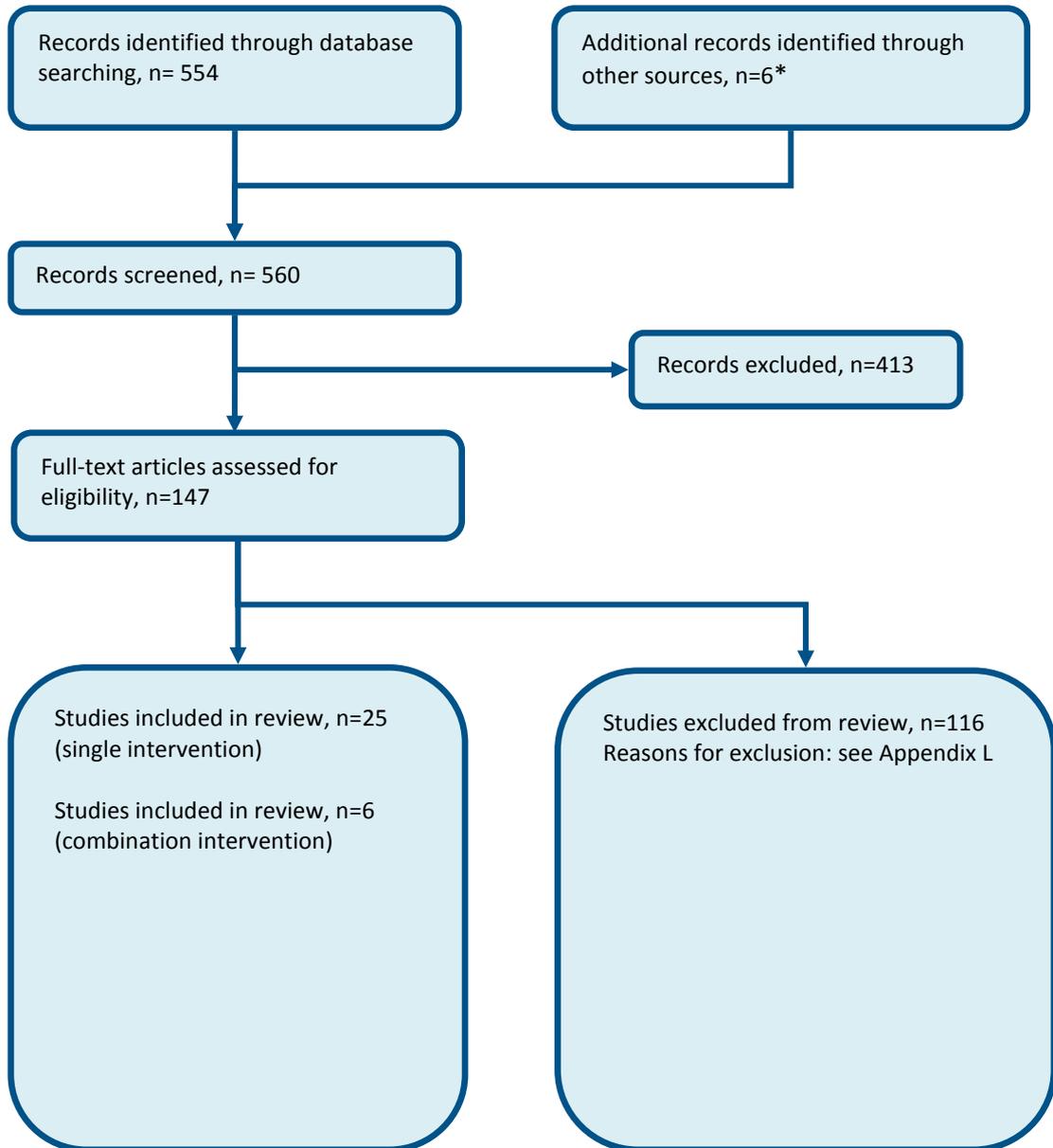
*\*n=3 were identified through combination of interventions, MBR and RTW searches. For studies excluded from review for combination of interventions, see Appendix L*

**Figure 10: Flow chart of clinical article selection for the review of electrotherapies**



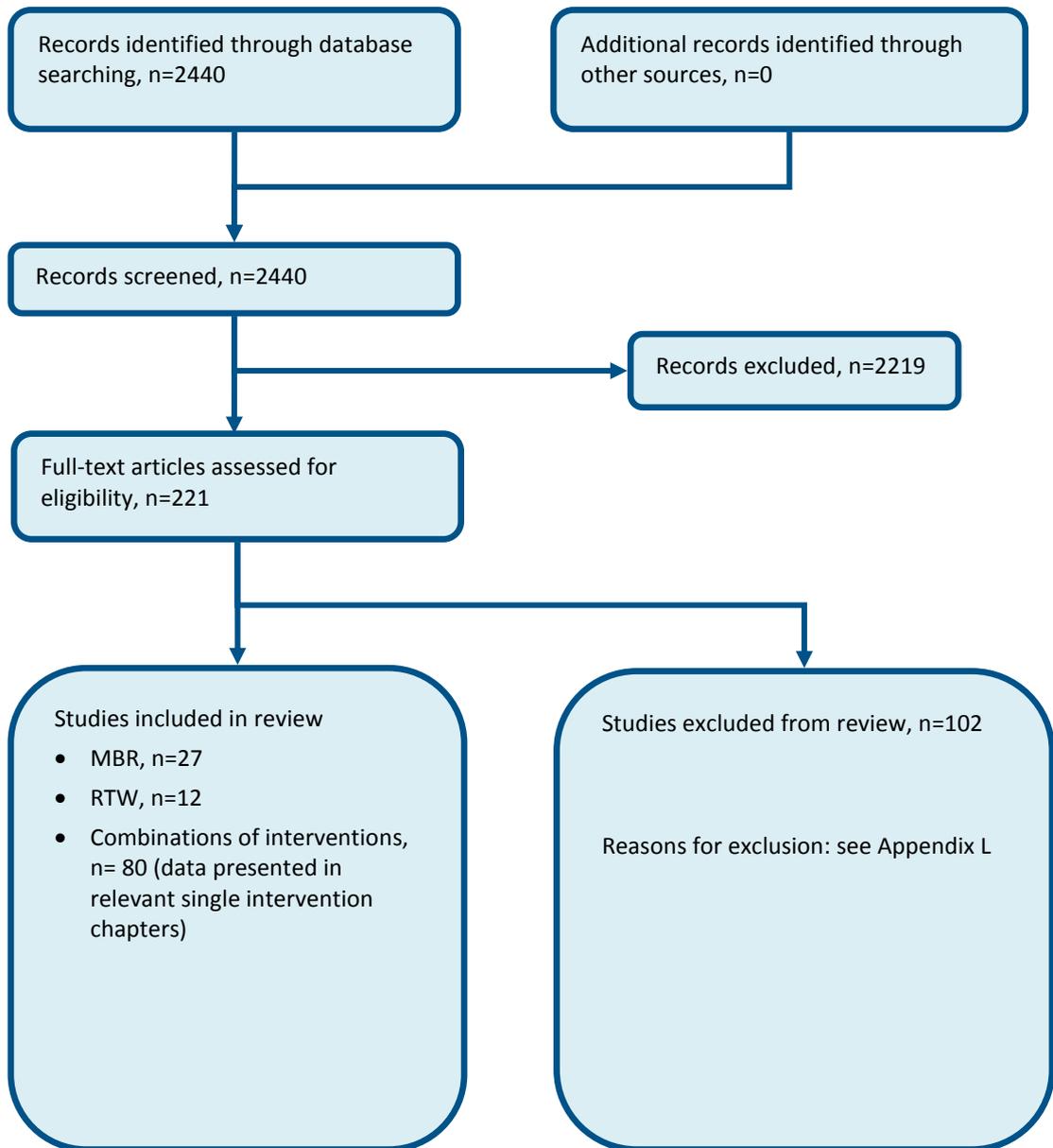
*\*n=14 were identified through combination of interventions, MBR and RTW searches. For studies excluded from review for combination of interventions, see Appendix H*

**Figure 11: Flow chart of clinical article selection for the review of psychological interventions**

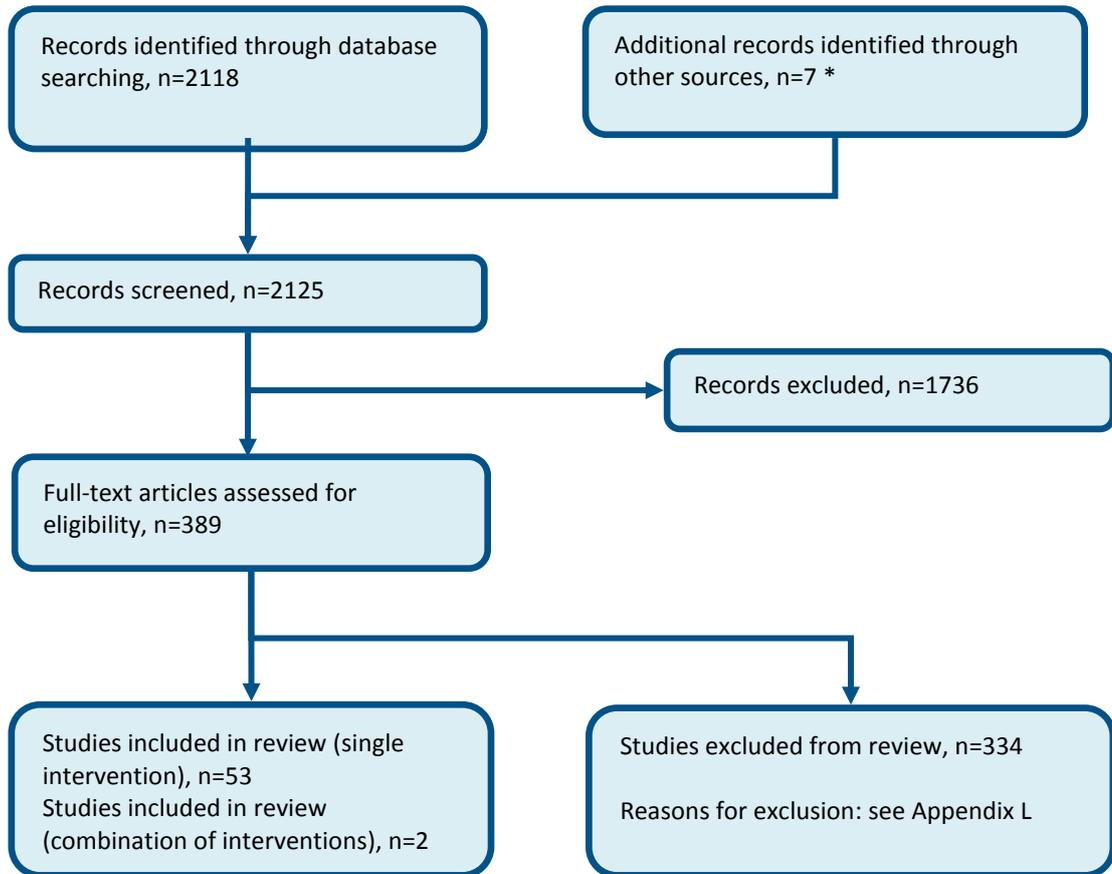


*\*n=6 were identified through combination of interventions, MBR and RTW searches. For studies excluded from review for combination of interventions, see Appendix H*

**Figure 12: Flow chart of clinical article selection for the review of combination of interventions, MBR and RTW**

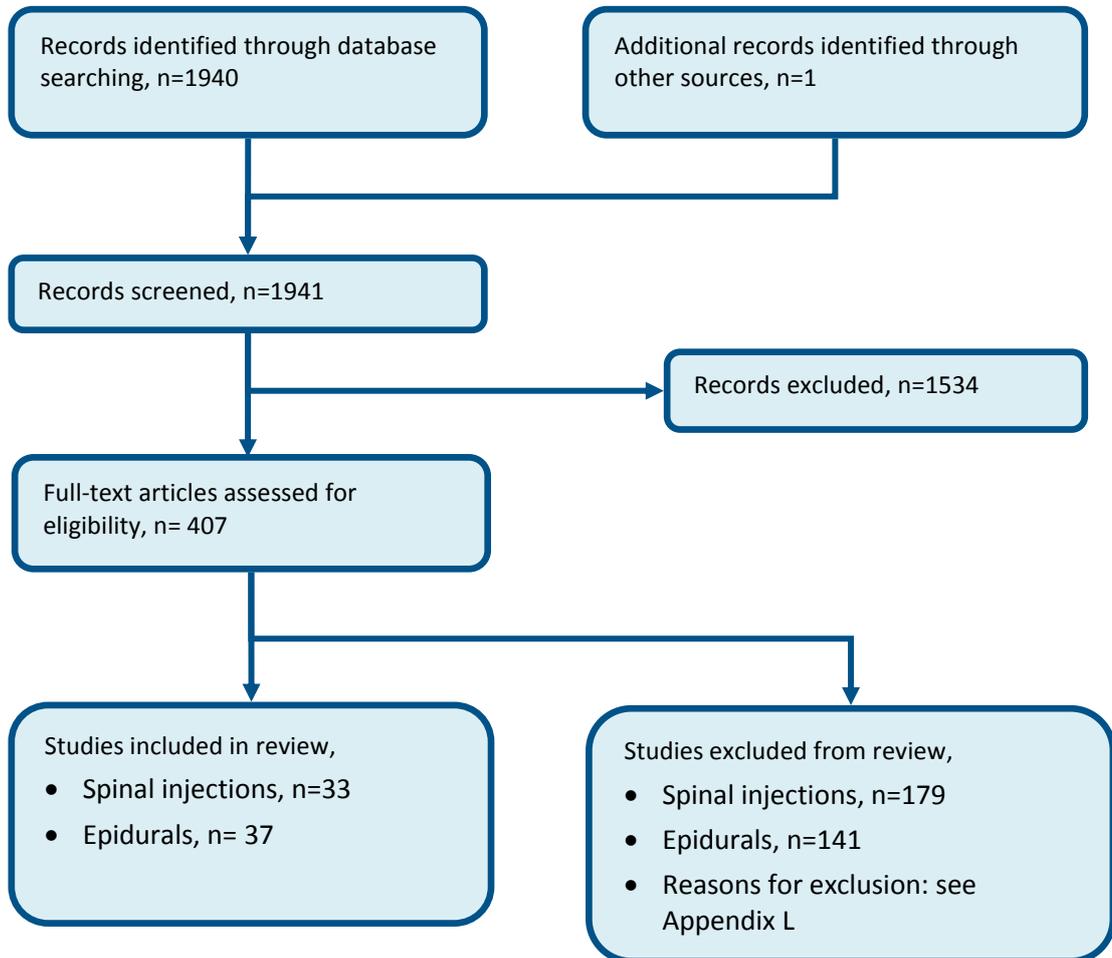


**Figure 13: Flow chart of clinical article selection for the review of pharmacological interventions**

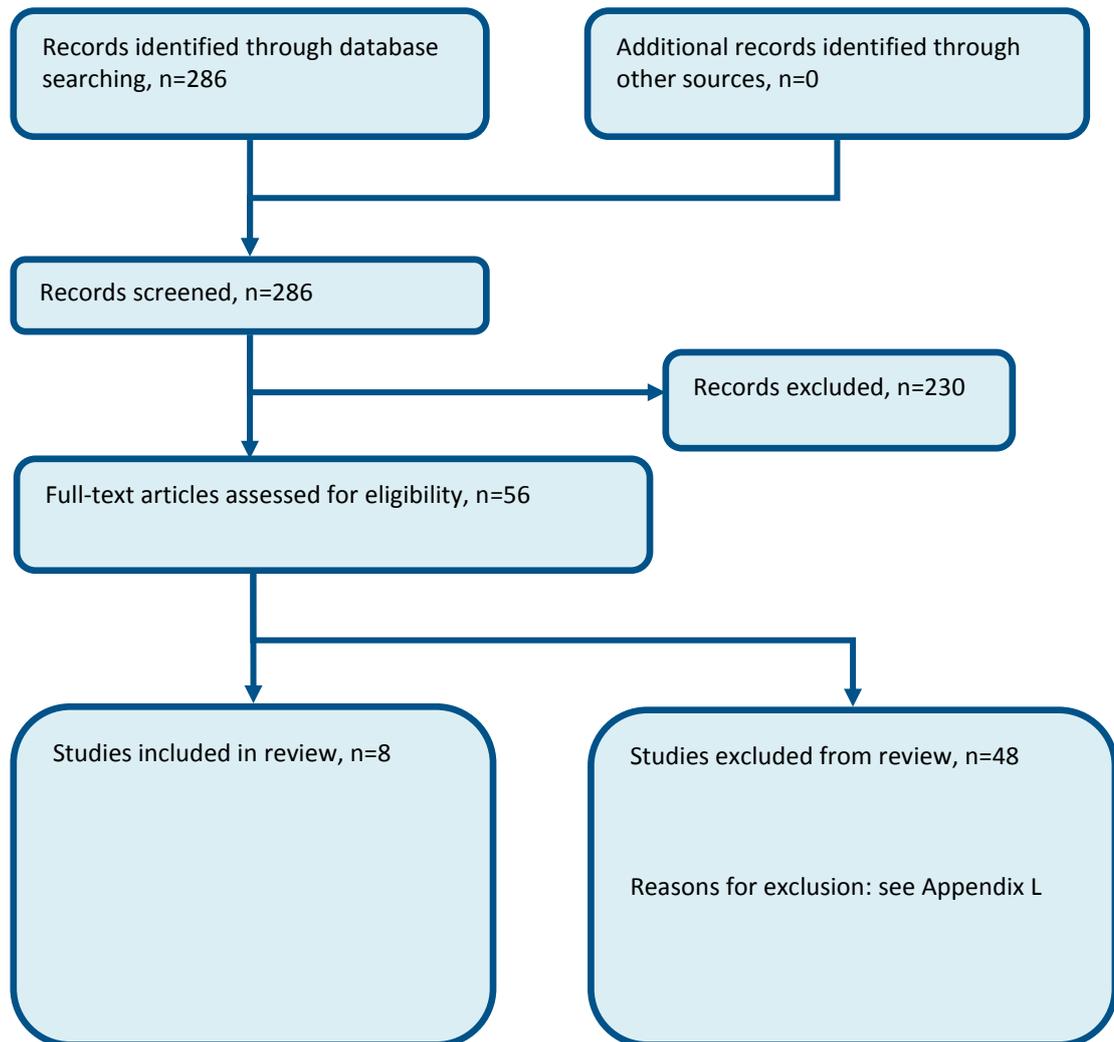


*\*n=2 were identified through combination of interventions, MBR and RTW searches. For studies excluded from review for combination of interventions, see Appendix H*

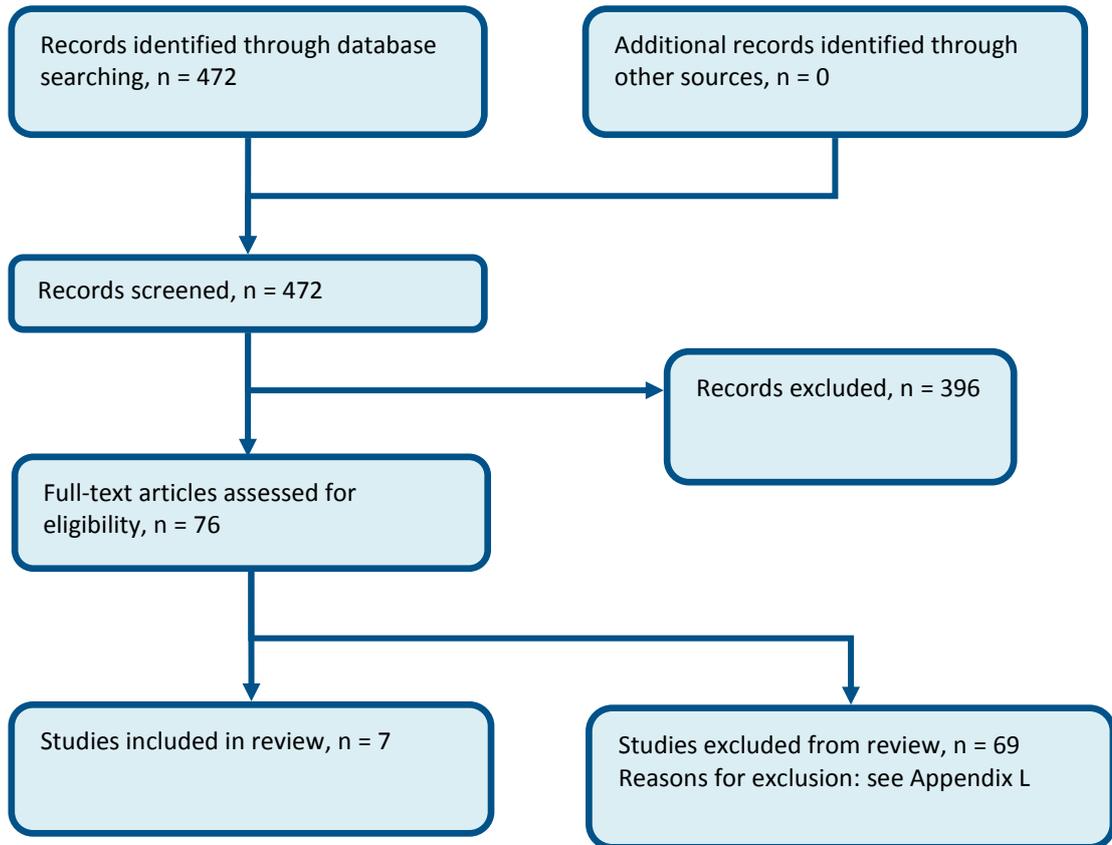
**Figure 14: Flow chart of clinical article selection for the review of Spinal Injections and epidurals**



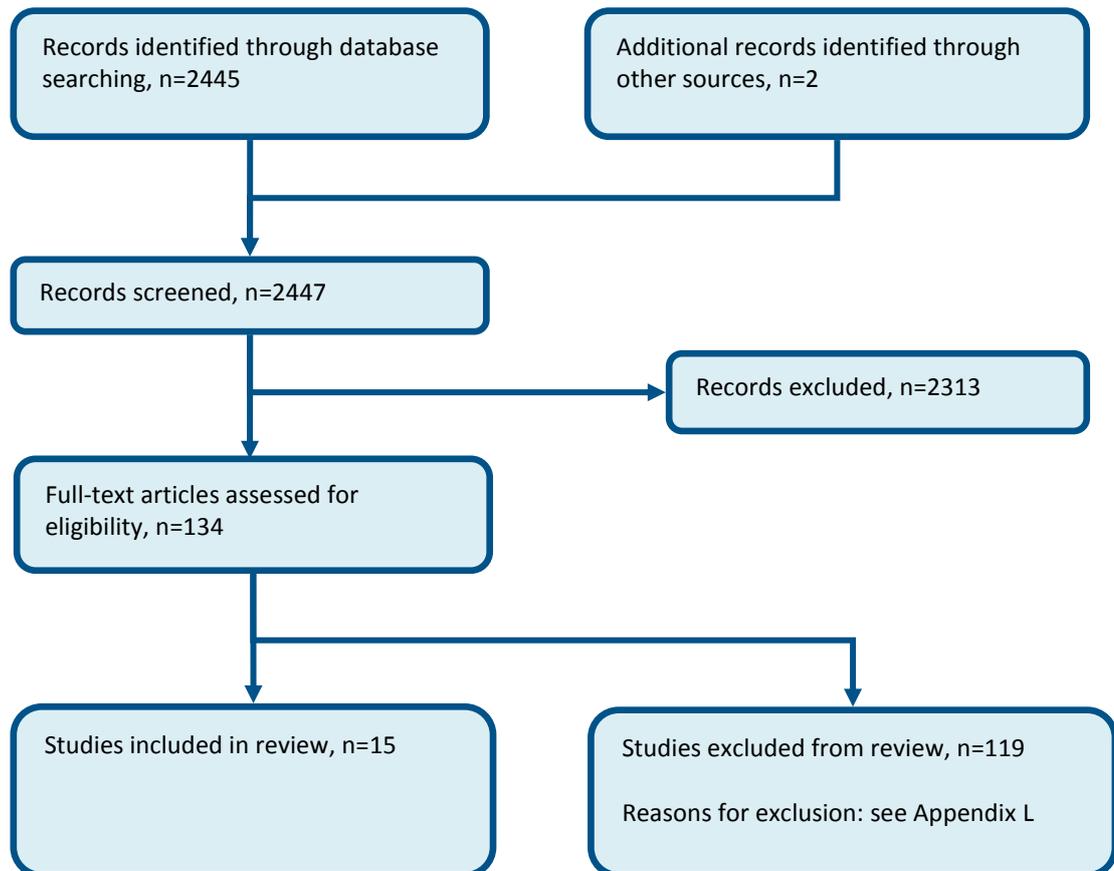
**Figure 15: Flow chart of clinical article selection for the review of radiofrequency denervation**



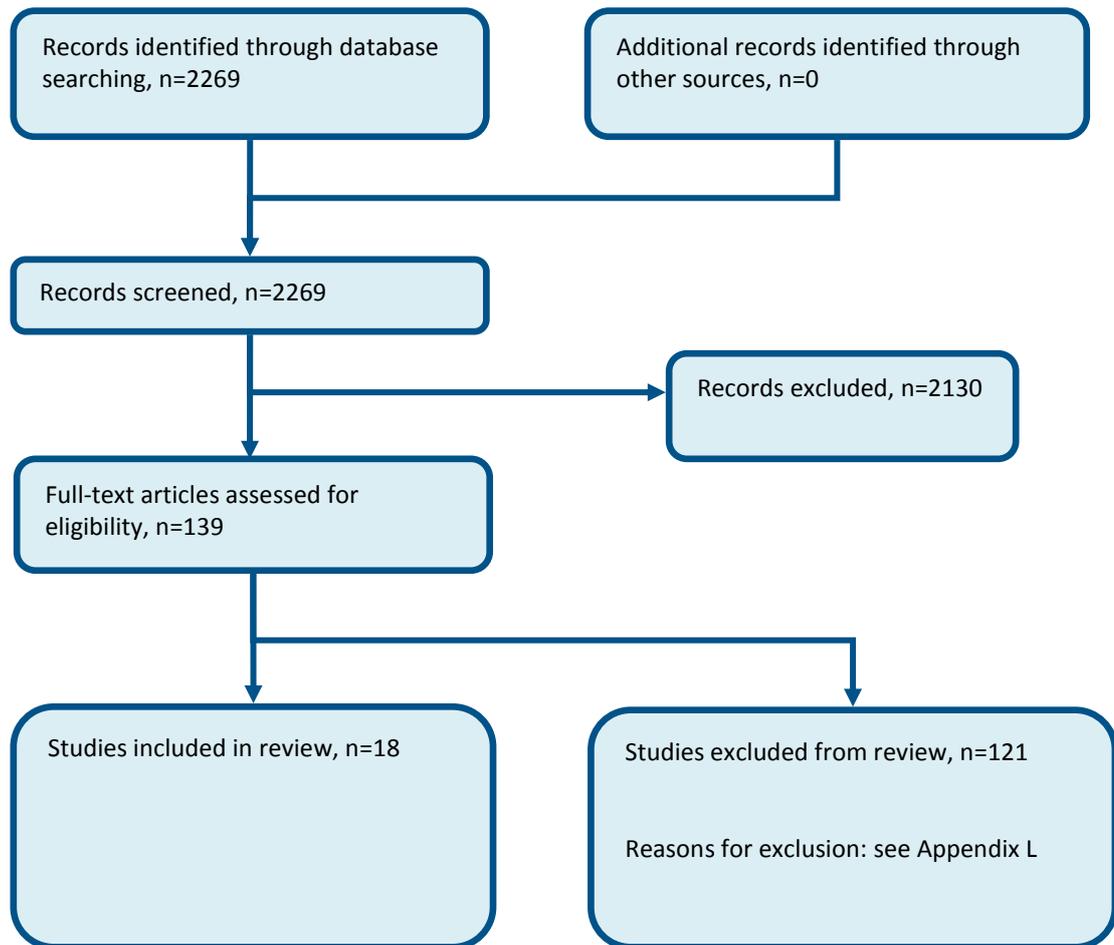
**Figure 16: Flow diagram of article selection for referral for surgery review**



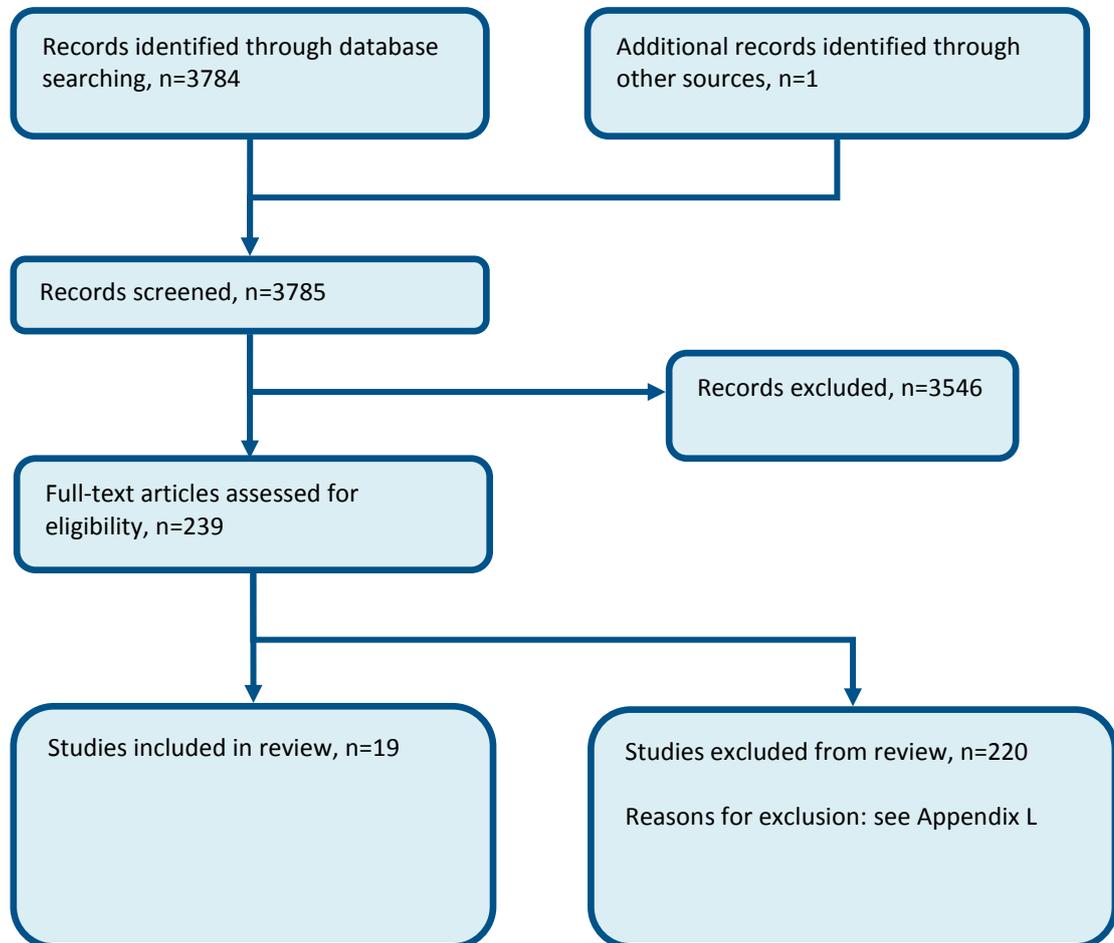
**Figure 17: Flow chart of clinical article selection for the review of Disc replacement**



**Figure 18: Flow chart of clinical article selection for the review of Spinal Fusion**

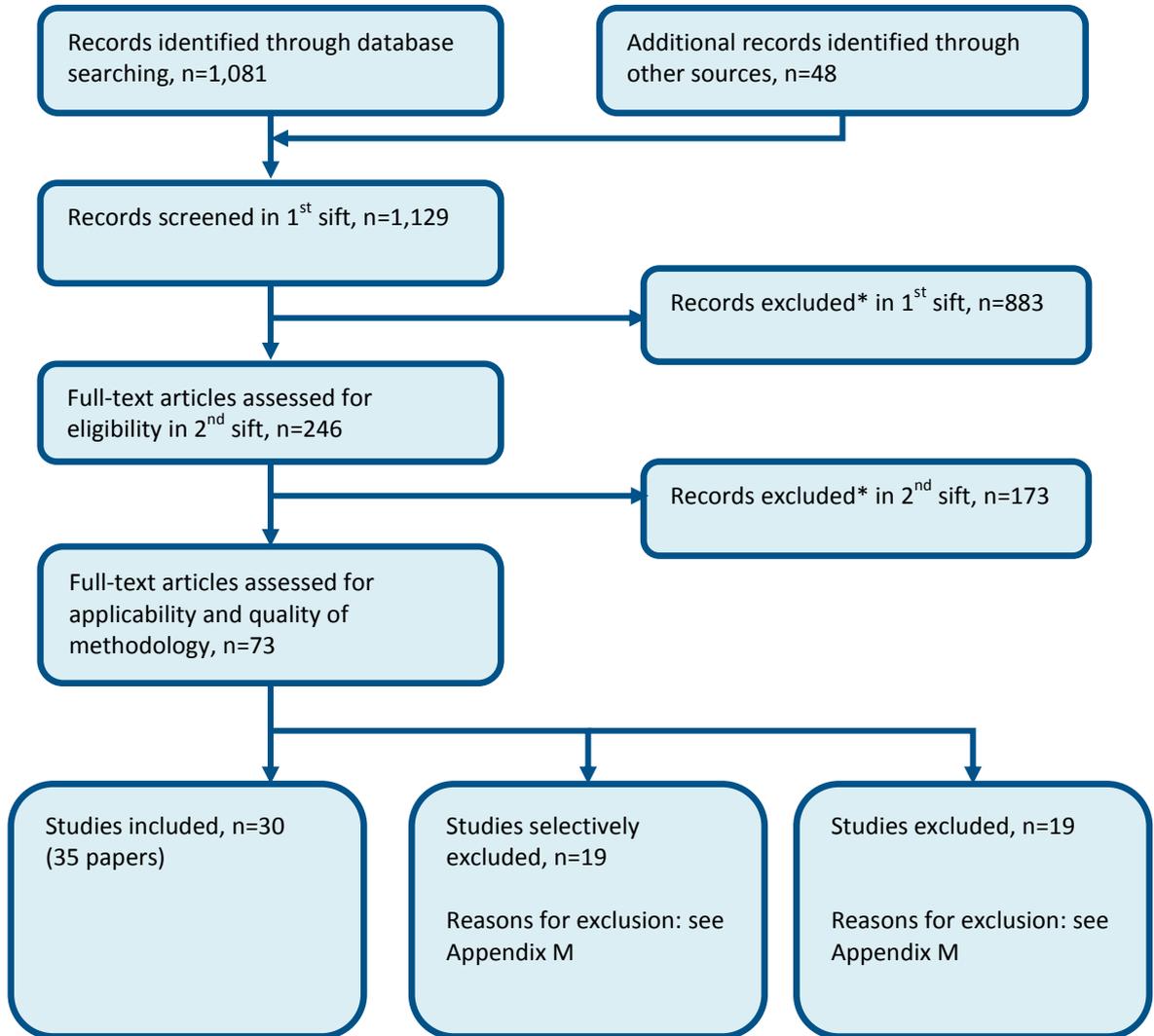


**Figure 19: Flow chart of clinical article selection for the review of Spinal Decompression**



## Appendix F: Health economic article selection

Figure 20: Flow chart of economic article selection for the guideline



\* Non-relevant population, intervention, comparison, design or setting; non-English language

## Appendix G: Literature search strategies

### G.1.1 Contents

|                      |   |
|----------------------|---|
| <b>Introduction</b>  | <b>Search methodology</b>   |
| <b>Section G.1.2</b> | <b>Standard population search strategy</b><br>This population was used for all search questions unless stated |
| <b>Section G.1.3</b> | <b>Study filter terms</b>   |
| G.1.3.1              | Excluded study designs and publication types  |
| G.1.3.2              | Randomised controlled trials (RCT)  |
| G.1.3.3              | Systematic reviews (SR)   |
| G.1.3.4              | Health economic studies (HE)  |
| G.1.3.5              | Diagnostic filter (DIAG)  |
| G.1.3.6              | Observational studies (OBS)   |
| G.1.3.7              | Prognostic filter (PROG)  |
| <b>Section G.1.4</b> | <b>Searches for specific questions with intervention</b>  |
| G.1.4.1              | Assessment: clinical examination  |
| G.1.4.2              | Assessment: risk assessment tools   |
| G.1.4.3              | Assessment: imaging   |
| G.1.4.4              | Lifestyle interventions: self-management strategies   |
| G.1.4.5              | Combinations of interventions   |
| G.1.4.6              | Non-invasive interventions: exercise interventions  |
| G.1.4.7              | Non-invasive interventions: postural therapies  |
| G.1.4.8              | Non-invasive interventions: orthotics and appliances  |
| G.1.4.9              | Non-invasive interventions: manual therapies  |
| G.1.4.10             | Non-invasive interventions: acupuncture   |
| G.1.4.11             | Non-invasive interventions: electrotherapy  |
| G.1.4.12             | Non-invasive interventions: psychological interventions (RCTs and SRs)  |
| G.1.4.13             | Non-invasive interventions: psychological interventions (observational studies)                               |
| G.1.4.12             | Non-invasive interventions: pharmacological treatment (RCTs and SRs)  |
| G.1.4.15             | Non-invasive interventions: pharmacological treatment (observational studies)                                 |
| G.1.4.16             | Invasive and surgical procedures: radiofrequency ablation   |
| G.1.4.17             | Invasive and surgical procedures: epidural injections   |
| G.1.4.18             | Referral for surgical opinion: non-specific LBP and suspected sciatica  |
| G.1.4.19             | Invasive and surgical procedures: disc replacement surgery  |
| G.1.4.20             | Invasive and surgical procedures: spinal fusion or arthrodesis  |
| G.1.4.18             | Invasive and surgical procedures: spinal decompression  |
| <b>Section G.1.5</b> | <b>Health economics searches</b>  |
| G.1.5.1              | Health economic reviews   |
| G.1.5.2              | QoL EQ5D  |

Search strategies used for the lower back pain guideline are outlined below and were run in accordance with the methodology in the NICE guidelines manual 2012. {National Institute for Health and Clinical Excellence, 2012 NICE2012 /id} All searches were run up to **15 December 2015** unless otherwise stated. Any studies added to the databases after this date (even those published prior to this date) were not included unless specifically stated in the text. We do not routinely search for electronic, ahead of print or 'online early' publications. Where possible searches were limited to retrieve material published in English.

**Table 25: Database date parameters**

| Database                                 | Dates searched  |
|--|---|
| Medline                                  | 1946 – 15 December 2015   |
| Embase                                   | 1980 – 15 December 2015   |
| The Cochrane Library                     | Cochrane Reviews to 2015 Issue 12 of 12<br>CENTRAL to 2015 Issue 11 of 12<br>DARE to 2015 Issue 2 of 4<br>HTA to 2015 Issue 4 of 4<br>NHSEED to 2015 Issue 2 of 4 |
| Amed (Allied and Complementary Medicine) | 1985 to 15 December 2015  |
| PsycINFO (Ovid)                          | 1806 – 15 December 2015   |
| PsycINFO (ProQuest)                      | 1806 – 2015   |
| CINAHL                                   | 1981 – 15 December 2015   |

**Table 2: Databases searched**

|          | Question  | Databases  |
|----------|---|--|
| G.1.4.1  | Assessment: clinical examination  | Medline/Embase/Cochrane Library                      |
| G.1.4.2  | Assessment: imaging   | Medline/Embase/Cochrane Library                      |
| G.1.4.2  | Assessment: risk assessment tools   | Medline/Embase/Cochrane Library                      |
| G.1.4.4  | Lifestyle interventions: self-management strategies                           | Medline/Embase/Cochrane Library/CINAHL               |
| G.1.4.5  | Combinations of interventions   | Medline/Embase/Cochrane Library/AMED/CINAHL/PsycINFO |
| G.1.4.6  | Non-invasive interventions: acupuncture                                       | Medline/Embase/Cochrane/AMED/CINAHL                  |
| G.1.4.11 | Non-invasive interventions: electrotherapy                                    | Medline/Embase/Cochrane Library/CINAHL               |
| G.1.4.6  | Non-invasive interventions: exercise interventions                            | Medline/Embase/Cochrane Library/AMED/CINAHL          |
| G.1.4.9  | Non-invasive interventions: manual therapies                                  | Medline/Embase/Cochrane Library/AMED/CINAHL          |
| G.1.4.8  | Non-invasive interventions: orthotics and appliances                          | Medline/Embase/Cochrane Library/AMED/CINAHL          |
| G.1.4.12 | Non-invasive interventions: pharmacological treatment (RCTs and SRs)          | Medline/Embase/Cochrane Library                      |
| G.1.4.15 | Non-invasive interventions: pharmacological treatment (observational studies) | Medline/Embase                                       |
| G.1.4.7  | Non-invasive interventions: postural  | Medline/Embase/Cochrane                              |

|          | Question  | Databases                                |
|----------|---|--|
|          | therapies   | Library/AMED/CINAHL                      |
| G.1.4.12 | Non-invasive interventions: psychological interventions (RCTs and SRs)          | Medline/Embase/Cochrane Library/PsycINFO |
| G.1.4.13 | Non-invasive interventions: psychological interventions (observational studies) | Medline/Embase/Cochrane Library/PsycINFO |
| G.1.4.18 | Referral for surgical opinion: non-specific LBP and suspected sciatica          | Medline/Embase/Cochrane Library          |
| G.1.4.16 | Invasive and surgical procedures: radiofrequency ablation                       | Medline/Embase/Cochrane Library          |
| G.1.4.17 | Invasive and surgical procedures: epidural injections                           | Medline/Embase/Cochrane Library          |
| G.1.4.18 | Invasive and surgical procedures: spinal decompression                          | Medline/Embase/Cochrane Library          |
| G.1.4.20 | Invasive and surgical procedures: spinal fusion or arthrodesis                  | Medline/Embase/Cochrane Library          |
| G.1.4.19 | Invasive and surgical procedures: disc replacement surgery                      | Medline/Embase/Cochrane Library          |

Searches for the **clinical reviews** were run in Medline (OVID), Embase (OVID) and the Cochrane Library (Wiley). Additional searches were run in AMED (OVID), CINAHL (EBSCO) and PsycINFO (OVID/ProQuest) for some questions

Searches for **intervention and diagnostic studies** were usually constructed using a PICO format where population (P) terms were combined with Intervention (I) and sometimes Comparison (C) terms. An intervention can be a drug, a procedure or a diagnostic test. Outcomes (O) are rarely used in search strategies for interventions. Search filters were also added to the search where appropriate.

Searches for **prognostic studies** were usually constructed combining population terms with prognostic variable terms and sometimes outcomes. Search filters were added to the search where appropriate.

Searches for the **health economic reviews** were run in Medline (OVID), Embase (OVID), the NHS Economic Evaluations Database (NHS EED), the Health Technology Assessment (HTA) database and the Health Economic Evaluation Database (HEED). The Health Economic Evaluation Database (HEED) ceased production in 2014 with access ceasing in January 2015. For the final dates of HEED searches, please see individual economic questions. Searches in NHS EED and HEED were constructed using population terms only. For Medline and Embase an economic filter (instead of a study type filter) was added to the same clinical search strategy.

## G.1.2 Population search strategies

### Medline search terms

|    |  |
|----|--|
| 1. | low back pain/   |
| 2. | sciatica/  |
| 3. | radiculopathy/   |
| 4. | ((lumbar or lumbosacral or lumbo-sacral or back) adj5 (pain* or ache* or aching)).ti,ab. |
| 5. | (backache* or lumbago or sciatica).ti,ab.  |
| 6. | (radiculopathy or radiculitis or radicular pain*).ti,ab.                                 |

|     |   |
|-----|---|
| 7.  | (nerve root* adj5 (pain* or avulsion or compress* or disorder* or pinch* or inflam* or imping* or irritat* or entrap* or trap*)).ti,ab. |
| 8.  | or/6-7  |
| 9.  | (back* or lumbosacral or lumbo-sacral or lumbar).ti,ab.   |
| 10. | 8 and 9   |
| 11. | or/1-5,10   |

#### Embase search terms

|     |   |
|-----|---|
| 1.  | *low back pain/   |
| 2.  | *sciatica/  |
| 3.  | *radiculopathy/   |
| 4.  | *radicular pain/  |
| 5.  | *radiculitis/   |
| 6.  | exp *"nerve root injury"/   |
| 7.  | (backache* or lumbago or sciatica).ti,ab.   |
| 8.  | ((lumbar or lumbosacral or lumbo-sacral or back) adj5 (pain* or ache* or aching)).ti,ab.  |
| 9.  | (radiculopathy or radiculitis or radicular pain*).ti,ab.  |
| 10. | (nerve root* adj5 (pain* or avulsion or compress* or disorder* or pinch* or inflam* or imping* or irritat* or entrap* or trap*)).ti,ab. |
| 11. | or/9-10   |
| 12. | (back* or lumbosacral or lumbo-sacral or lumbar).ti,ab.   |
| 13. | 11 and 12   |
| 14. | or/1-8,13   |

#### Cochrane search terms

|      |   |
|------|---|
| #1.  | [mh "low back pain"]  |
| #2.  | [mh sciatica]   |
| #3.  | [mh radiculopathy]  |
| #4.  | ((lumbar or lumbosacral or lumbo-sacral or back) near/5 (pain* or ache* or aching)):ti,ab,kw  |
| #5.  | (backache* or lumbago or sciatica):ti,ab,kw   |
| #6.  | (radiculopathy or radiculitis or radicular pain*):ti,ab,kw  |
| #7.  | (nerve root* near/5 (pain* or avulsion or compress* or disorder* or pinch* or inflam* or imping* or irritat* or entrap* or trap*)):ti,ab,kw |
| #8.  | {or #6-#7}  |
| #9.  | (back* or lumbosacral or lumbo-sacral or lumbar):ti,ab,kw   |
| #10. | #8 and #9   |
| #11. | {or #1-#5, #10}   |

#### AMED search terms

|    |   |
|----|---|
| 1. | low back pain/  |
| 2. | sciatica/   |
| 3. | ((lumbar or lumbosacral or lumbo-sacral or back) adj5 (pain* or ache* or aching)).ti,ab.  |
| 4. | (backache* or lumbago or sciatica).ti,ab.   |
| 5. | (radiculopathy or radiculitis or radicular pain*):ti,ab.  |
| 6. | (nerve root* adj5 (pain* or avulsion or compress* or disorder* or pinch* or inflam* or imping* or irritat* or entrap* or trap*)).ti,ab. |
| 7. | or/5-6  |

|     |   |
|-----|---|
| 8.  | (back* or lumbosacral or lumbo-sacral or lumbar).ti,ab. |
| 9.  | 7 and 8   |
| 10. | or/1-4,9  |

#### CINAHL search terms

|      |  |
|------|--|
| S1.  | (MH "low back pain")   |
| S2.  | (MH "sciatica")  |
| S3.  | (MH "radiculopathy")   |
| S4.  | (lumbar or lumbosacral or lumbo-sacral or back) N5 (pain* or ache* or aching)  |
| S5.  | backache* or lumbago or sciatica   |
| S6.  | radiculopathy or radiculitis or radicular pain*  |
| S7.  | nerve root* n5 (pain* or avulsion or compress* or disorder* or pinch* or inflam* or imping* or irritat* or entrap* or trap*) |
| S8.  | S6 or S7   |
| S9.  | back* or lumbosacral or lumbo-sacral or lumbar   |
| S10. | S8 and S9  |
| S11. | S1 or S2 or S3 or S4 or S5 or S10  |

#### PsycINFO search terms

|    |   |
|----|---|
| 1. | back pain/  |
| 2. | ((lumbar or lumbosacral or lumbo-sacral or back) adj5 (pain* or ache* or aching)).ti,ab.  |
| 3. | (backache* or lumbago or sciatica).ti,ab.   |
| 4. | (radiculopathy or radiculitis or radicular pain*).ti,ab.  |
| 5. | (nerve root* adj5 (pain* or avulsion or compress* or disorder* or pinch* or inflam* or imping* or irritat* or entrap* or trap*)).ti,ab. |
| 6. | 4 or 5  |
| 7. | (back* or lumbosacral or lumbo-sacral or lumbar).ti,ab.   |
| 8. | 6 and 7   |
| 9. | or/1-3,8  |

#### PsycINFO search terms (ProQuest)

|     |  |
|-----|--|
| S1. | ((su.exact("back pain") or ti,ab((lumbar or lumbosacral or lumbo-sacral or back) near/5 (pain* or ache* or aching)) or ti,ab (backache* or lumbago or sciatica)) or ((ti,ab(radiculopathy or radiculitis or radicular pain*) or ti,ab(nerve root* near/5 (pain* or avulsion or compress* or disorder* or pinch* or inflam* or imping* or irritat* or entrap* or trap*))) and ti,ab(back* or lumbosacral or lumbo-sacral or lumbar))) |
|-----|--|

#### CRD search terms

|      |  |
|------|--|
| #1.  | MeSH descriptor low back pain explode all trees  |
| #2.  | MeSH descriptor sciatica explode all trees   |
| #3.  | MeSH descriptor radiculopathy explode all trees  |
| #4.  | MeSH descriptor polyradiculoneuropathy explode all trees   |
| #5.  | MeSH descriptor polyradiculopathy explode all trees  |
| #6.  | ((lumbar or lumbosacral or lumbo-sacral or back) near (pain* or ache* or aching))  |
| #7.  | ((backache* or lumbago or sciatica))   |
| #8.  | ((radiculopathy or radiculitis or radicular pain*))  |
| #9.  | ((nerve root* near (pain* or avulsion or compress* or disorder* or pinch* or inflam* or imping* or irritat* or entrap* or trap*))) |
| #10. | ((polyradiculoneuritis or polyradiculitis))  |

|      |  |
|------|--|
| #11. | ((back* or lumbosacral or lumbo-sacral or lumbar)) |
| #12. | #8 or #9 or #10                                    |
| #13. | #11 and #12  |
| #14. | #1 or #2 or #3 or #4 or #5 or #6 or #7 or #13      |

#### HEED search terms

|     |  |
|-----|--|
| 1.  | ax=(lumbar or lumbosacral or lumbo-sacral or back) and (pain* or ache* or aching)                              |
| 2.  | ax=backache* or lumbago or sciatica  |
| 3.  | ax=radiculopathy or radiculitis or radicular pain  |
| 4.  | ax=nerve root or nerve roots   |
| 5.  | ax=pain* or avulsion or compress* or disorder* or pinch* or inflam* or imping* or irritat* or entrap* or trap* |
| 6.  | cs=4 and 5   |
| 7.  | ax=polyradiculoneuritis or polyradiculitis or polyradiculopathy or polyradiculoneuropathy                      |
| 8.  | cs=3 or 6 or 7   |
| 9.  | ax=(back* or lumbosacral or lumbo-sacral or lumbar)  |
| 10. | cs=8 and 9   |
| 11. | cs=1 or 2 or 10  |

### G.1.3 Study filter search terms

#### G.1.3.1 Excluded study designs and publication types

The following study designs and publication types were removed from retrieved results using the NOT operator.

#### Medline search terms

|     |  |
|-----|--|
| 1.  | letter/  |
| 2.  | editorial/                                     |
| 3.  | news/  |
| 4.  | exp historical article/                        |
| 5.  | anecdotes as topic/                            |
| 6.  | comment/                                       |
| 7.  | case report/                                   |
| 8.  | (letter or comment*).ti.                       |
| 9.  | or/1-8   |
| 10. | randomized controlled trial/ or random*.ti,ab. |
| 11. | 9 not 10                                       |
| 12. | animals/ not humans/                           |
| 13. | exp animals, laboratory/                       |
| 14. | exp animal experimentation/                    |
| 15. | exp models, animal/                            |
| 16. | exp rodentia/                                  |
| 17. | (rat or rats or mouse or mice).ti.             |
| 18. | or/11-17                                       |

#### Embase search terms

|    |                       |
|----|-----------------------|
| 1. | letter.pt. or letter/ |
|----|-----------------------|

|     |  |
|-----|--|
| 2.  | note.pt.                                       |
| 3.  | editorial.pt.                                  |
| 4.  | case report/ or case study/                    |
| 5.  | (letter or comment*).ti.                       |
| 6.  | or/1-5   |
| 7.  | randomized controlled trial/ or random*.ti,ab. |
| 8.  | 6 not 7  |
| 9.  | animal/ not human/                             |
| 10. | nonhuman/                                      |
| 11. | exp animal experiment/                         |
| 12. | exp experimental animal/                       |
| 13. | animal model/                                  |
| 14. | exp rodent/                                    |
| 15. | (rat or rats or mouse or mice).ti.             |
| 16. | or/8-15  |

#### AMED search terms

|    |   |
|----|---|
| 1. | case report/                                    |
| 2. | (letter or comment*).ti.                        |
| 3. | or/1-2  |
| 4. | randomized controlled trials/ or random*.ti,ab. |
| 5. | 3 not 4   |
| 6. | animals/ not humans/                            |
| 7. | (rat or rats or mouse or mice).ti.              |
| 8. | or/5-7  |

#### CINAHL search terms

|     |  |
|-----|--|
| S1. | PT anecdote or PT audiovisual or PT bibliography or PT biography or PT book or PT book review or PT brief item or PT cartoon or PT commentary or PT computer program or PT editorial or PT games or PT glossary or PT historical material or PT interview or PT letter or PT listservs or PT masters thesis or PT obituary or PT pamphlet or PT pamphlet chapter or PT pictorial or PT poetry or PT proceedings or PT "questions and answers" or PT response or PT software or PT teaching materials or PT website |
|-----|--|

#### G.1.3.2 Randomised controlled trials (RCTs) search terms

##### Medline search terms

|    |                                 |
|----|---------------------------------|
| 1. | randomized controlled trial.pt. |
| 2. | controlled clinical trial.pt.   |
| 3. | randomi#ed.ab.                  |
| 4. | placebo.ab.                     |
| 5. | drug therapy.fs.                |
| 6. | randomly.ab.                    |
| 7. | trial.ab.                       |
| 8. | groups.ab.                      |
| 9. | or/1-8                          |

##### Embase search terms

|     |  |
|-----|--|
| 1.  | random*.ti,ab.   |
| 2.  | factorial*.ti,ab.                                      |
| 3.  | (crossover* or cross over*).ti,ab.                     |
| 4.  | ((doubl* or singl*) adj blind*).ti,ab.                 |
| 5.  | (assign* or allocat* or volunteer* or placebo*).ti,ab. |
| 6.  | crossover procedure/                                   |
| 7.  | double blind procedure/                                |
| 8.  | single blind procedure/                                |
| 9.  | randomized controlled trial/                           |
| 10. | or/1-9   |

#### AMED search terms

|    |                                 |
|----|---------------------------------|
| 1. | randomized controlled trial.pt. |
| 2. | randomized controlled trials/   |
| 3. | controlled clinical trial.pt.   |
| 4. | placebo.ab.                     |
| 5. | random*.ti,ab.                  |
| 6. | trial.ti,ab.                    |
| 7. | groups.ab.                      |
| 8. | or/1-7                          |

### G.1.3.3 Systematic review search terms

#### Medline search terms

|     |  |
|-----|--|
| 1.  | meta-analysis/   |
| 2.  | meta-analysis as topic/  |
| 3.  | (meta analy* or metanaly* or metaanaly*).ti,ab.  |
| 4.  | ((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.  |
| 5.  | (reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.   |
| 6.  | (search strategy or search criteria or systematic search or study selection or data extraction).ab.  |
| 7.  | (search* adj4 literature).ab.  |
| 8.  | (medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or CINAHL or science citation index or bids or cancerlit).ab. |
| 9.  | cochrane.jw.   |
| 10. | ((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.   |
| 11. | or/1-10  |

#### Embase search terms

|    |  |
|----|--|
| 1. | systematic review/   |
| 2. | meta-analysis/   |
| 3. | (meta analy* or metanaly* or metaanaly*).ti,ab.  |
| 4. | ((systematic or evidence) adj3 (review* or overview*)).ti,ab.  |
| 5. | (reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.   |
| 6. | (search strategy or search criteria or systematic search or study selection or data extraction).ab.  |
| 7. | (search* adj4 literature).ab.  |
| 8. | (medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or CINAHL or science citation index or bids or cancerlit).ab. |

|     |   |
|-----|---|
| 9.  | ((pool* or combined) adj2 (data or trials or studies or results)).ab. |
| 10. | cochrane.jw.  |
| 11. | or/1-10   |

#### AMED search terms

|    |  |
|----|--|
| 1. | Meta-Analysis/   |
| 2. | (meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.   |
| 3. | ((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.  |
| 4. | (reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.   |
| 5. | (search strategy or search criteria or systematic search or study selection or data extraction).ab.  |
| 6. | (search* adj4 literature).ab.  |
| 7. | (medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab. |
| 8. | ((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.   |
| 9. | or/1-8   |

#### G.1.3.4 Health economics search terms

##### Medline search terms

|     |   |
|-----|---|
| 1.  | economics/  |
| 2.  | value of life/  |
| 3.  | exp "costs and cost analysis"/  |
| 4.  | exp economics, hospital/  |
| 5.  | exp economics, medical/   |
| 6.  | economics, nursing/   |
| 7.  | economics, pharmaceutical/  |
| 8.  | exp "fees and charges"/   |
| 9.  | exp budgets/  |
| 10. | budget*.ti,ab.  |
| 11. | cost*.ti.   |
| 12. | (economic* or pharmaco?economic*).ti.   |
| 13. | (price* or pricing*).ti,ab.   |
| 14. | (cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab. |
| 15. | (financ* or fee or fees).ti,ab.   |
| 16. | (value adj2 (money or monetary)).ti,ab.   |
| 17. | or/1-16   |

##### Embase search terms

|    |                                       |
|----|---------------------------------------|
| 1. | health economics/                     |
| 2. | exp economic evaluation/              |
| 3. | exp health care cost/                 |
| 4. | exp fee/                              |
| 5. | budget/                               |
| 6. | funding/                              |
| 7. | budget*.ti,ab.                        |
| 8. | cost*.ti.                             |
| 9. | (economic* or pharmaco?economic*).ti. |

|     |   |
|-----|---|
| 10. | (price* or pricing*).ti,ab.   |
| 11. | (cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab. |
| 12. | (financ* or fee or fees).ti,ab.   |
| 13. | (value adj2 (money or monetary)).ti,ab.   |
| 14. | or/1-13   |

### G.1.3.5 Diagnostic studies search terms

#### Medline search terms

|     |  |
|-----|--|
| 1.  | exp "sensitivity and specificity"/   |
| 2.  | (sensitivity or specificity).ti,ab.  |
| 3.  | ((pre test or pretest or post test) adj probability).ti,ab.  |
| 4.  | (predictive value* or ppv or npv).ti,ab.   |
| 5.  | likelihood ratio*.ti,ab.   |
| 6.  | likelihood function/   |
| 7.  | (roc curve* or auc).ti,ab.   |
| 8.  | (diagnos* adj3 (performance* or accurac* or utilit* or value* or efficien* or effectiveness)).ti,ab. |
| 9.  | gold standard.ab.  |
| 10. | or/1-9   |

#### Embase search terms

|     |  |
|-----|--|
| 1.  | exp "sensitivity and specificity"/   |
| 2.  | (sensitivity or specificity).ti,ab.  |
| 3.  | ((pre test or pretest or post test) adj probability).ti,ab.  |
| 4.  | (predictive value* or ppv or npv).ti,ab.   |
| 5.  | likelihood ratio*.ti,ab.   |
| 6.  | (roc curve* or auc).ti,ab.   |
| 7.  | (diagnos* adj3 (performance* or accurac* or utilit* or value* or efficien* or effectiveness)).ti,ab. |
| 8.  | diagnostic accuracy/   |
| 9.  | diagnostic test accuracy study/  |
| 10. | gold standard.ab.  |
| 11. | or/1-10  |

### G.1.3.6 Observational studies search terms

#### Medline search terms

|    |   |
|----|---|
| 1. | epidemiologic studies/  |
| 2. | exp case control studies/   |
| 3. | exp cohort studies/   |
| 4. | cross-sectional studies/  |
| 5. | case control.ti,ab.   |
| 6. | (cohort adj (study or studies or analys*)).ti,ab.   |
| 7. | ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab. |
| 8. | ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab. |

|    |        |
|----|--------|
| 9. | or/1-8 |
|----|--------|

#### Embase search terms

|     |   |
|-----|---|
| 1.  | clinical study/   |
| 2.  | exp case control study/   |
| 3.  | family study/   |
| 4.  | longitudinal study/   |
| 5.  | retrospective study/  |
| 6.  | prospective study/  |
| 7.  | cross-sectional study/  |
| 8.  | cohort analysis/  |
| 9.  | follow-up/  |
| 10. | cohort*.ti,ab.  |
| 11. | 9 and 10  |
| 12. | case control.ti,ab.   |
| 13. | (cohort adj (study or studies or analys*)).ti,ab.   |
| 14. | ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab. |
| 15. | ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab. |
| 16. | or/1-8,11-15  |

#### G.1.3.7 Prognostic studies search terms

##### Medline search terms

|     |   |
|-----|---|
| 1.  | predict.ti.   |
| 2.  | (validat* or rule*).ti,ab.  |
| 3.  | (predict* and (outcome* or risk* or model*)).ti,ab.   |
| 4.  | ((history or variable* or criteria or scor* or characteristic* or finding* or factor*) and (predict* or model* or decision* or identif* or prognos*)).ti,ab.      |
| 5.  | decision*.ti,ab. and logistic models/   |
| 6.  | (decision* and (model* or clinical*)).ti,ab.  |
| 7.  | (prognostic and (history or variable* or criteria or scor* or characteristic* or finding* or factor* or model*)).ti,ab.   |
| 8.  | (stratification or discrimination or discriminate or c statistic or "area under the curve" or auc or calibration or indices or algorithm or multivariable).ti,ab. |
| 9.  | roc curve/  |
| 10. | or/1-9  |

##### Embase search terms

|    |  |
|----|--|
| 1. | predict*.ti.   |
| 2. | (validat* or rule*).ti,ab.   |
| 3. | (predict* and (outcome* or risk* or model*)).ti,ab.  |
| 4. | ((history or variable* or criteria or scor* or characteristic* or finding* or factor*) and (predict* or model* or decision* or identif* or prognos*)).ti,ab. |
| 5. | decision*.ti,ab. and statistical model/  |
| 6. | (decision* and (model* or clinical*)).ti,ab.   |
| 7. | (prognostic and (history or variable* or criteria or scor* or characteristic* or finding* or   |

|     |   |
|-----|---|
|     | factor* or model*)):ti,ab.  |
| 8.  | (stratification or discrimination or discriminate or c statistic or "area under the curve" or auc or calibration or indices or algorithm or multivariable).ti,ab. |
| 9.  | receiver operating characteristic/  |
| 10. | or/1-9  |

#### Cochrane search terms

|      |  |
|------|--|
| #1.  | predict:ti   |
| #2.  | (validat* or rule*):ti,ab  |
| #3.  | (predict* and (outcome* or risk* or model*)):ti,ab   |
| #4.  | ((history or variable* or criteria or scor* or characteristic* or finding* or factor*) and (predict* or model* or decision* or identif* or prognos*)):ti,ab      |
| #5.  | decision*:ti,ab and [mh "logistic models"]   |
| #6.  | (decision* and (model* or clinical*)):ti,ab  |
| #7.  | (prognostic and (history or variable* or criteria or scor* or characteristic* or finding* or factor* or model*)):ti,ab   |
| #8.  | (stratification or discrimination or discriminate or c statistic or "area under the curve" or auc or calibration or indices or algorithm or multivariable):ti,ab |
| #9.  | [mh "roc curve"]   |
| #10. | {or #1-#9}   |

### G.1.4 Searches for specific questions

#### G.1.4.1 Assessment: clinical examination

- What is the diagnostic accuracy of clinical examination in the assessment of sciatica?

#### Medline search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]                                      |
| 2.  | Excluded study designs and publication types [G.1.3.1]                           |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | *physical examination/   |
| 6.  | exp range of motion, articular/  |
| 7.  | exp muscle strength/   |
| 8.  | exp neurologic examination/  |
| 9.  | ((neurological or physical or clinical) adj2 exam*).ti,ab.                       |
| 10. | (stretch* adj4 test*).ti,ab.   |
| 11. | (leg adj3 (raise* or raising)).ti,ab.  |
| 12. | (muscle* adj2 (strength or strong or motor*)):ti,ab.                             |
| 13. | (prone knee* adj2 (bend* or flex*)):ti,ab.                                       |
| 14. | ((dermatome* or dermatomal) adj4 (sense* or sensory) adj4 (loss or lost)).ti,ab. |
| 15. | reflex* impair*.ti,ab.   |
| 16. | slump* test*.ti,ab.  |
| 17. | or/5-16  |
| 18. | Study filters RCT [G.1.3.2] or SR [G.1.3.3]                                      |
| 19. | 4 and 17 and 18  |
| 20. | See <b>Table 25</b> for date parameters  |

### Embase search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]                                      |
| 2.  | Excluded study designs and publication types [G.1.3.1]                           |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | *physical examination/   |
| 6.  | exp muscle strength/   |
| 7.  | exp neurologic examination/  |
| 8.  | exp "joint characteristics and functions"/                                       |
| 9.  | ((neurological or physical or clinical) adj2 exam*).ti,ab.                       |
| 10. | (stretch* adj4 test*).ti,ab.   |
| 11. | (leg adj3 (raise* or raising)).ti,ab.  |
| 12. | (muscle* adj2 (strength or strong or motor*)).ti,ab.                             |
| 13. | (prone knee* adj2 (bend* or flex*)).ti,ab.                                       |
| 14. | ((dermatome* or dermatomal) adj4 (sense* or sensory) adj4 (loss or lost)).ti,ab. |
| 15. | reflex* impair*.ti,ab.   |
| 16. | slump* test*.ti,ab.  |
| 17. | or/5-16  |
| 18. | Study filters RCT [G.1.3.2] or SR [G.1.3.3]                                      |
| 19. | 4 and 17 and 18  |
| 20. | See <b>Table 25</b> for date parameters  |

### Cochrane search terms

|      |   |
|------|---|
| #1.  | Standard lower back pain population [G.1.2]   |
| #2.  | MeSH descriptor: [physical examination] this term only                              |
| #3.  | MeSH descriptor: [range of motion, articular] explode all trees                     |
| #4.  | MeSH descriptor: [muscle strength] explode all trees                                |
| #5.  | MeSH descriptor: [neurologic examination] explode all trees                         |
| #6.  | ((neurological or physical or clinical) near/2 exam*).ti,ab                         |
| #7.  | (stretch* near/4 test*).ti,ab   |
| #8.  | (leg near/3 (raise* or raising)).ti,ab  |
| #9.  | (muscle* near/2 (strength or strong or motor*)).ti,ab                               |
| #10. | (prone knee* near/2 (bend* or flex*)).ti,ab   |
| #11. | ((dermatome* or dermatomal) near/4 (sense* or sensory) near/4 (loss or lost)).ti,ab |
| #12. | reflex* impair*.ti,ab   |
| #13. | slump* test*.ti,ab  |
| #14. | {or #2-#13}   |
| #15. | #1 and #14  |
| #16. | See <b>Table 25</b> for date parameters   |

#### G.1.4.2 Assessment: risk assessment tools

Searches for the following two questions were run as one search:

- Which validated risk assessment tools are the most accurate for identifying people with low back pain or sciatica at risk of poor outcome/delayed improvement?
- What is the clinical and cost effectiveness of stratifying management of non-specific low back pain or sciatica according to outcome of a risk assessment tool/questionnaire?

### Medline search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Excluded study designs and publication types [G.1.3.1]   |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | dram.ti,ab.  |
| 6.  | orebro.ti,ab.  |
| 7.  | (gatchel or delitto or flynn or hancock or sullivan).ti,ab.  |
| 8.  | gatchel rj.au.   |
| 9.  | delitto a.au.  |
| 10. | flynn t.au.  |
| 11. | hancock mj.au.   |
| 12. | (o'sullivan p or o'sullivan pb).au.  |
| 13. | childs jd.au.  |
| 14. | risk assessment/   |
| 15. | ((risk* or stratif* or predict* or assess* or screen* or score* or scoring or equation* or algorithm) adj4 (tool* or rule* or instrument*1 or index* or test* or technique* or analys* or criteria or calculat* or questionnaire*)).ti,ab. |
| 16. | or/5-15  |
| 17. | 4 and 16   |
| 18. | (start back or startback).ti,ab.   |
| 19. | Study filters OBS [G.1.3.6] or DIAG [G.1.3.5] or PROG [G.1.3.7]  |
| 20. | (17 or 18) and 19  |
| 21. | Date parameters: 1985-15/12/15   |

### Embase search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Excluded study designs and publication types [G.1.3.1]   |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | dram.ti,ab.  |
| 6.  | orebro.ti,ab.  |
| 7.  | (gatchel or delitto or flynn or hancock or sullivan or "o'sullivan").ti,ab.  |
| 8.  | gatchel rj.au.   |
| 9.  | delitto a.au.  |
| 10. | flynn t.au.  |
| 11. | hancock mj.au.   |
| 12. | (o'sullivan p or o'sullivan pb).au.  |
| 13. | childs jd.au.  |
| 14. | risk assessment/   |
| 15. | ((risk* or stratif* or predict* or assess* or screen* or score* or scoring or equation* or algorithm) adj4 (tool* or rule* or instrument*1 or index* or test* or technique* or analys* or criteria or calculat* or questionnaire*)).ti,ab. |
| 16. | or/5-15  |
| 17. | 4 and 16   |
| 18. | (start back or startback).ti,ab.   |
| 19. | Study filters OBS [G.1.3.6] or DIAG [G.1.3.5] or PROG [G.1.3.7]  |

|     |                                |
|-----|--------------------------------|
| 20. | (17 or 18) and 19              |
| 21. | Date parameters: 1985-15/12/15 |

#### Cochrane search terms

|      |   |
|------|---|
| #1.  | Standard lower back pain population [G.1.2]   |
| #2.  | (dram or 'orebro' or gatchel or delitto or flynn or hancock or sullivan or "o'sullivan"):ti,ab,kw   |
| #3.  | gatchel rj:au   |
| #4.  | delitto a:au  |
| #5.  | flynn t:au  |
| #6.  | hancock mj:au   |
| #7.  | (o'sullivan p or o'sullivan pb):au  |
| #8.  | childs jd:au  |
| #9.  | MeSH descriptor: [risk assessment] explode all trees  |
| #10. | ((risk* or stratif* or predict* or assess* or screen* or score* or scoring or equation* or algorithm) near/4 (tool* or rule* or instrument*1 or index* or test* or technique* or analys* or criteria or calculat* or questionnaire*)):ti,ab |
| #11. | {or #2-#10}   |
| #12. | #1 and #11  |
| #13. | (start back or startback):ti,ab   |
| #14. | #12 or #13  |
| #15. | Date parameters: 1985-15/12/15  |

#### G.1.4.3 Assessment: imaging

- What is the clinical and cost effectiveness of performing imaging (X-ray or MRI) compared with no investigation to improve functional disability, pain or psychological distress in people with low back pain and/or sciatica?

#### Medline search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]                                  |
| 2.  | Excluded study designs and publication types [G.1.3.1]                       |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | exp radiography/   |
| 6.  | ra.fs.   |
| 7.  | x-ray.ti,ab.   |
| 8.  | exp magnetic resonance imaging/  |
| 9.  | mri.ti,ab.   |
| 10. | ((magnetic resonance or mr or nmr) adj2 (tomogra* or imag* or scan*)):ti,ab. |
| 11. | exp tomography, x-ray computed/  |
| 12. | ((ct or cat) adj2 (imag* or scan* or diagnos*)):ti,ab.                       |
| 13. | (compute* adj3 tomogra*):ti,ab.  |
| 14. | or/5-13  |
| 15. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6]                 |
| 16. | 4 and 14 and 15  |
| 17. | See <b>Table 25</b> for date parameters                                      |

#### Embase search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]                                  |
| 2.  | Excluded study designs and publication types [G.1.3.1]                       |
| 3.  | 1 not 2  |
| 4.  | limit 3 to english language  |
| 5.  | exp radiography/   |
| 6.  | rt.fs.   |
| 7.  | x ray.ti,ab.   |
| 8.  | exp nuclear magnetic resonance imaging/                                      |
| 9.  | mri.ti,ab.   |
| 10. | ((magnetic resonance or mr or nmr) adj2 (tomogra* or imag* or scan*)).ti,ab. |
| 11. | exp computer assisted tomography/  |
| 12. | ((ct or cat) adj2 (imag* or scan* or diagnos*)).ti,ab.                       |
| 13. | (compute* adj3 tomogra*).ti,ab.  |
| 14. | or/4-13  |
| 15. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6]                 |
| 16. | 4 and 14 and 15  |
| 17. | See <b>Table 25</b> for date parameters                                      |

#### Cochrane search terms

|      |  |
|------|--|
| #1.  | Standard lower back pain population [G.1.2]                                      |
| #2.  | MeSH descriptor: [radiography] explode all trees                                 |
| #3.  | Any MeSH descriptor with qualifier(s): [radiography - ra]                        |
| #4.  | x-ray:ti,ab,kw   |
| #5.  | MeSH descriptor: [magnetic resonance imaging] explode all trees                  |
| #6.  | mri:ti,ab,kw   |
| #7.  | ((magnetic resonance or mr or nmr) near/2 (tomogra* or imag* or scan*)):ti,ab,kw |
| #8.  | ((ct or cat) near/2 (imag* or scan* or diagnos*)):ti,ab,kw                       |
| #9.  | (compute* near/3 tomogra*):ti,ab,kw  |
| #10. | {or #2-#9}   |
| #11. | #1 and #10   |
| #12. | See <b>Table 25</b> for date parameters  |

#### G.1.4.4 Lifestyle interventions: self-management strategies

- What is the clinical and cost effectiveness of self-management strategies in the management of non-specific low back pain and sciatica?

#### Medline search terms

|    |  |
|----|--|
| 1. | Standard lower back pain population [G.1.2]            |
| 2. | Excluded study designs and publication types [G.1.3.1] |
| 3. | 1 not 2  |
| 4. | Limit 3 to English language                            |
| 5. | self care/   |
| 6. | patient education as topic/                            |
| 7. | self-help groups/                                      |
| 8. | ((support* or help*) adj2 group*).ti,ab.               |
| 9. | back book*.ti,ab.                                      |

|     |  |
|-----|--|
| 10. | back school*.ti,ab.  |
| 11. | rest/  |
| 12. | bed rest/  |
| 13. | ((people or person or patient* or carer* or caregiver*) adj3 (information* or educat* or learn* or train* or program* or advi?e* or instruction* or teach* or assurance* or reassurance* or support*)).ti,ab.                                |
| 14. | pamphlets/   |
| 15. | "activities of daily living"/  |
| 16. | (advi?e adj3 exercis*).ti,ab.  |
| 17. | ((stay* or keep* or remain*) adj2 (active or mobile or moving)).ti,ab.   |
| 18. | ((personal or daily or day* or ordinary or normal* or usual or avoid*) adj2 activit*).ti,ab.   |
| 19. | ((self or own or personal) adj3 (rehab* or efficacy or treatment* or programme* or program* or technique* or manage* or intervention* or therap* or train* or strateg* or method* or counsel* or care* or caring or treat* or help*)).ti,ab. |
| 20. | (pamphlet* or leaflet* or booklet* or manual* or brochure* or handout* or website* or web site* or web page* or webpage* or video* or dvd*).ti,ab.   |
| 21. | ((bed* adj2 rest*) or bedrest*).ti,ab.   |
| 22. | or/5-21  |
| 23. | Study filters RCT [A.3.2] or SR [A.3.3]  |
| 24. | 4 and 22 and 23  |
| 25. | See <b>Table 25</b> for date parameters  |

#### Embase search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Excluded study designs and publication types [G.1.3.1]   |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | ((people or person or patient* or carer* or caregiver*) adj3 (information* or educat* or learn* or train* or program* or advi?e* or instruction* or teach* or assurance* or reassurance* or support*)).ti,ab.                                |
| 6.  | ((support* or help*) adj2 group*).ti,ab.   |
| 7.  | back book*.ti,ab.  |
| 8.  | back school*.ti,ab.  |
| 9.  | (advi?e adj3 exercis*).ti,ab.  |
| 10. | ((stay* or keep* or remain*) adj2 (active or mobile or moving)).ti,ab.   |
| 11. | ((personal or daily or day* or ordinary or normal* or usual or avoid*) adj2 activit*).ti,ab.   |
| 12. | (pamphlet* or leaflet* or booklet* or manual* or brochure* or handout* or website* or web site* or web page* or webpage* or video* or dvd*).ti,ab.   |
| 13. | ((bed* adj2 rest*) or bedrest*).ti,ab.   |
| 14. | ((self or own or personal) adj3 (rehab* or efficacy or treatment* or programme* or program* or technique* or manage* or intervention* or therap* or train* or strateg* or method* or counsel* or care* or caring or treat* or help*)).ti,ab. |
| 15. | *support group/  |
| 16. | exp *self care/  |
| 17. | *patient education/  |
| 18. | *bed rest/   |
| 19. | *rest/   |
| 20. | *daily life activity/  |

|     |   |
|-----|---|
| 21. | or/5-20                                 |
| 22. | Study filters RCT [A.3.2] or SR [A.3.3] |
| 23. | 4 and 21 and 22                         |
| 24. | See <b>Table 25</b> for date parameters |

#### Cochrane search terms

|      |   |
|------|---|
| #1.  | Standard lower back pain population [G.1.2]   |
| #2.  | [mh "patient education as topic"]   |
| #3.  | [mh "self-help groups"]   |
| #4.  | [mh rest]   |
| #5.  | [mh "bed rest"]   |
| #6.  | [mh pamphlets]  |
| #7.  | [mh "activities of daily living"]   |
| #8.  | ((support* or help*) near/2 group*):ti,ab   |
| #9.  | back book*:ti,ab  |
| #10. | back school*:ti,ab  |
| #11. | ((people or person or patient* or carer* or caregiver*) near/3 (information* or educat* or learn* or train* or program* or advi?e* or instruction* or teach* or assurance* or reassurance* or support*)):ti,ab                                |
| #12. | (advi?e near/3 exercis*):ti,ab  |
| #13. | ((stay* or keep* or remain*) near/2 (active or mobile or moving)):ti,ab   |
| #14. | ((personal or daily or day* or ordinary or normal* or usual or avoid*) near/2 activit*):ti,ab   |
| #15. | ((self or own or personal) near/3 (rehab* or efficacy or treatment* or programme* or program* or technique* or manage* or intervention* or therap* or train* or strateg* or method* or counsel* or care* or caring or treat* or help*)):ti,ab |
| #16. | (pamphlet* or leaflet* or booklet* or manual* or brochure* or handout* or website* or web site* or web page* or webpage* or video* or dvd*):ti,ab   |
| #17. | ((bed* near/2 rest*) or bedrest*):ti,ab   |
| #18. | {or #2-#17}   |
| #19. | #1 and #18  |
| #20. | See <b>Table 25</b> for date parameters   |

#### CINAHL search terms

|      |  |
|------|--|
| S1.  | Standard lower back pain population [G.1.2]  |
| S2.  | Excluded study designs and publication types [G.1.3.1]   |
| S3.  | 1 not 2  |
| S4.  | Limit 3 to English language  |
| S5.  | (support* or help*) n2 group*  |
| S6.  | back book*   |
| S7.  | back school*   |
| S8.  | (people or person or patient* or carer* or caregiver*) n3 (information* or educat* or learn* or train* or program* or advi?e* or instruction* or teach* or assurance* or reassurance* or support*) |
| S9.  | advi?e n3 exercis*   |
| S10. | (stay* or keep* or remain*) n2 (active or mobile or moving)  |
| S11. | (personal or daily or day* or ordinary or normal* or usual or avoid*) n2 activit*  |
| S12. | (self or own or personal) n3 (rehab* or efficacy or treatment* or programme* or program* or technique* or manage* or intervention* or therap* or train* or strateg* or method* or                  |

|      |   |
|------|---|
|      | counsel* or care* or caring or treat* or help*)   |
| S13. | pamphlet* or leaflet* or booklet* or manual* or brochure* or handout* or website* or web site* or web page* or webpage* or video* or dvd* |
| S14. | (bed* n2 rest*) or bedrest*   |
| S15. | (mh "patient education")  |
| S16. | (mh "self care")  |
| S17. | (mh "support groups")   |
| S18. | (mh "bed rest")   |
| S19. | (mh "activities of daily living+")  |
| S20. | (mh "pamphlets")  |
| S21. | S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 or S18 or S19 or S20                                   |
| S22. | S4 and S21 Limiters – Human   |
| S23. | See <b>Table 25</b> for date parameters   |

#### G.1.4.5 Combinations of interventions

- What is the clinical and cost effectiveness of combinations of non-invasive interventions in the management of non-specific LBP and sciatica?
- What is the clinical and cost effectiveness of workplace / return to work interventions in the management of non-specific low back pain and sciatica?

#### Medline search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Excluded study designs and publication types [G.1.3.1]   |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | combined modality therapy/   |
| 6.  | ((combin* or multi*) adj3 (facet* or interven* or treat* or therap* or approach* or manag* or program*)).ti,ab.        |
| 7.  | (package* or bundle* or pathway*).ti,ab.   |
| 8.  | (multifacet* or multimod* or multidisc*).ti,ab.  |
| 9.  | (combin* adj2 psych* adj2 physical*).ti,ab.  |
| 10. | (pain adj2 program*).ti,ab.  |
| 11. | (function* adj2 (restor* or recover*)).ti,ab.  |
| 12. | workplace/   |
| 13. | return to work/  |
| 14. | (work* adj3 (modification* or modify or program* or train* or therap* or treat* or exercise* or intervention*)).ti,ab. |
| 15. | interdisc*.ti,ab.  |
| 16. | or/5-15  |
| 17. | Study filters RCT [A.3.2] or SR [A.3.3]  |
| 18. | 4 and 16 and 17  |
| 19. | See <b>Table 25</b> for date parameters  |

#### Embase search terms

|    |  |
|----|--|
| 1. | Standard lower back pain population [G.1.2]            |
| 2. | Excluded study designs and publication types [G.1.3.1] |

|     |  |
|-----|--|
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | ((combin* or multi*) adj3 (facet* or interven* or treat* or therap* or approach* or manag* or program*)):ti,ab.        |
| 6.  | (package* or bundle* or pathway*):ti,ab.   |
| 7.  | (multifacet* or multimod* or multidisc*):ti,ab.  |
| 8.  | (combin* adj2 psych* adj2 physical*):ti,ab.  |
| 9.  | (pain adj2 program*):ti,ab.  |
| 10. | (function* adj2 (restor* or recover*)):ti,ab.  |
| 11. | workplace/   |
| 12. | return to work/  |
| 13. | (work* adj3 (modification* or modify or program* or train* or therap* or treat* or exercise* or intervention*)):ti,ab. |
| 14. | interdisc*:ti,ab.  |
| 15. | or/5-14  |
| 16. | Study filters RCT [A.3.2] or SR [A.3.3]  |
| 17. | 4 and 15 and 16  |
| 18. | See <b>Table 25</b> for date parameters  |

#### Cochrane search terms

|      |   |
|------|---|
| #1.  | Standard lower back pain population [G.1.2]   |
| #2.  | ((combin* or multi*) near/3 (facet* or interven* or treat* or therap* or approach* or manag* or program*)):ti,ab        |
| #3.  | (package* or bundle* or pathway* or multifacet* or multimod* or multidisc* or interdisc*):ti,ab                         |
| #4.  | (combin* near/2 psych* near/2 physical*):ti,ab  |
| #5.  | (pain near/2 program*):ti,ab  |
| #6.  | (function* near/2 (restor* or recover*)):ti,ab  |
| #7.  | [mh workplace]  |
| #8.  | [mh "return to work"]   |
| #9.  | (work* near/3 (modification* or modify or program* or train* or therap* or treat* or exercise* or intervention*)):ti,ab |
| #10. | [mh "combined modality therapy"]  |
| #11. | {or #2-#10}   |
| #12. | #1 and #11  |
| #13. | See <b>Table 25</b> for date parameters   |

#### AMED search terms

|    |   |
|----|---|
| 1. | Standard lower back pain population [G.1.2]   |
| 2. | Excluded study designs and publication types [G.1.3.1]  |
| 3. | 1 not 2   |
| 4. | Limit 3 to English language   |
| 5. | ((combin* or multi*) adj3 (facet* or interven* or treat* or therap* or approach* or manag* or program*)):ti,ab. |
| 6. | (package* or bundle* or pathway*):ti,ab.  |
| 7. | (multifacet* or multimod* or multidisc*):ti,ab.   |
| 8. | (combin* adj2 psych* adj2 physical*):ti,ab.   |

|     |  |
|-----|--|
| 9.  | (pain adj2 program*).ti,ab.  |
| 10. | (function* adj2 (restor* or recover*)).ti,ab.  |
| 11. | workplace/   |
| 12. | (work* adj3 (modification* or modify or program* or train* or therap* or treat* or exercise* or intervention*)).ti,ab. |
| 13. | interdisc*.ti,ab.  |
| 14. | combined modality therapy/   |
| 15. | or/5-14  |
| 16. | Study filters RCT [A.3.2] or SR [A.3.3]  |
| 17. | 4 and 15 and 16  |
| 18. | See <b>Table 25</b> for date parameters  |

### CINAHL search terms

|      |   |
|------|---|
| S1.  | Standard lower back pain population [G.1.2]   |
| S2.  | Excluded study designs and publication types [G.1.3.1]  |
| S3.  | 1 not 2   |
| S4.  | Limit 3 to English language   |
| S5.  | (mh "combined modality therapy")  |
| S6.  | ((combin* or multi*) n3 (facet* or interven* or treat* or therap* or approach* or manag* or program*))        |
| S7.  | (package* or bundle* or pathway* or multifacet* or multimod* or multidisc* or interdisc*)                     |
| S8.  | (pain n2 program*)  |
| S9.  | (function* n2 (restor* or recover*))  |
| S10. | (work* n3 (modification* or modify or program* or train* or therap* or treat* or exercise* or intervention*)) |
| S11. | (mh "work environment")   |
| S12. | (mh "job re-entry")   |
| S13. | S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12   |
| S14. | S4 and S13  |
| S15. | See <b>Table 25</b> for date parameters   |

### PsycINFO (Ovid) search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Limit 1 to English language  |
| 3.  | interdisciplinary treatment approach/  |
| 4.  | multimodal treatment approach/   |
| 5.  | ((combin* or multi*) adj3 (facet* or interven* or treat* or therap* or approach* or manag* or program*)).ti,ab.        |
| 6.  | (package* or bundle* or pathway*).ti,ab.   |
| 7.  | (multifacet* or multimod* or multidisc*).ti,ab.  |
| 8.  | interdisc*.ti,ab.  |
| 9.  | (combin* adj2 psych* adj2 physical*).ti,ab.  |
| 10. | (pain adj2 program*).ti,ab.  |
| 11. | (function* adj2 (restor* or recover*)).ti,ab.  |
| 12. | (work* adj3 (modification* or modify or program* or train* or therap* or treat* or exercise* or intervention*)).ti,ab. |
| 13. | or/3-12  |

|     |   |
|-----|---|
| 14. | 2 and 13                                |
| 15. | See <b>Table 25</b> for date parameters |

#### PsycINFO search terms (ProQuest)

|     |   |
|-----|---|
| S1. | Standard lower back pain population [G.1.2]   |
| S2. | Limit S1 to English language  |
| S3. | ((su.exact("interdisciplinary treatment approach") or su.exact("multimodal treatment approach")) or ti,ab((combin* or multi*) near/3 (facet* or interven* or treat* or therap* or approach* or manag* or program*)) or (ti,ab(package* or bundle* or pathway*) or ti,ab(multifacet* or multimod* or multidisc*) or ti,ab(interdisc*) or ti,ab(combin* near/2 psych* near/2 physical*)) or (ti,ab(pain near/2 program*) or ti,ab(function* near/2 (restor* or recover*)) or ti,ab(work* near/3 (modification* or modify or program* or train* or therap* or treat* or exercise* or intervention*)))))) |
| S4. | S2 and S3   |
| S5. | See <b>Table 25</b> for date parameters   |

#### G.1.4.6 Non-invasive interventions: exercise interventions

- What is the clinical and cost effectiveness of non-invasive interventions in the management of non-specific LBP and sciatica?

#### Medline search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]   |
| 2.  | Excluded study designs and publication types [G.1.3.1]  |
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | exp exercise/   |
| 6.  | exp exercise therapy/   |
| 7.  | exp "physical education and training"/  |
| 8.  | (pilates or yoga or mckenzie or feldenkrais or swim* or walk* or run* or jog* or treadmill* or tread mill*).ti,ab.  |
| 9.  | (stretch* adj3 (active* or passive* or relax* or static* or dynamic* or gentl* or ballistic* or force* or isometric or technique* or exercis* or therap*)).ti,ab. |
| 10. | (aerobic* adj (exercise* or train* or therap*)).ti,ab.  |
| 11. | ((corrective* or biomechanic*) adj (exercise* or train* or therap*)).ti,ab.   |
| 12. | (biomechanic* adj (method* or course*)).ti,ab.  |
| 13. | ((strength* or stabil* or program* or train* or therap* or technique* or treat*) adj3 exercise*).ti,ab.   |
| 14. | (fitness* adj3 (program* or train* or therap*)).ti,ab.  |
| 15. | (tai ji or tai chi or taichi or taiji or taijiquan).ti,ab.  |
| 16. | (qigong or ch'i k#ng or ch'i g#ng or chi k#ng or chi g#ng or qi k#ng or qi g#ng).ti,ab.   |
| 17. | core stability.ti,ab.   |
| 18. | yoga/   |
| 19. | qigong/   |
| 20. | tai ji/   |
| 21. | exercise movement techniques/   |
| 22. | exp hydrotherapy/   |
| 23. | exp balneology/   |
| 24. | (balneology or balneotherap*).ti,ab.  |

|     |   |
|-----|---|
| 25. | ((water* or bath* or pool or pools or shower* or underwater* or spa or spas or aqua*) adj2 (exercise* or train* or therap* or treat* or manag*)).ti,ab. |
| 26. | (hydrotherap* or hydro-therap*).ti,ab.  |
| 27. | or/5-26   |
| 28. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6]  |
| 29. | 4 and 27 and 28   |
| 30. | See <b>Table 25</b> for date parameters   |

### Embase search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]   |
| 2.  | Excluded study designs and publication types [G.1.3.1]  |
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | exp *exercise/  |
| 6.  | exp *kinesiotherapy/  |
| 7.  | exp *physical education/  |
| 8.  | *yoga/  |
| 9.  | *tai chi/   |
| 10. | (qigong or ch'i k#ng or ch'i g#ng or chi k#ng or chi g#ng or qi k#ng or qi g#ng).ti,ab.   |
| 11. | feldenkrais method/   |
| 12. | pilates/  |
| 13. | *walking/   |
| 14. | *running/   |
| 15. | *stretching/  |
| 16. | *jogging/   |
| 17. | *treadmill/   |
| 18. | (pilates or yoga or mckenzie or feldenkrais or swim* or walk* or run* or jog* or treadmill* or tread mill*).ti,ab.  |
| 19. | (stretch* adj3 (active* or passive* or relax* or static* or dynamic* or gentl* or ballistic* or force* or isometric or technique* or exercis* or therap*)).ti,ab. |
| 20. | (aerobic* adj (exercise* or train* or therap*)).ti,ab.  |
| 21. | ((corrective* or biomechanic*) adj (exercise* or train* or therap*)).ti,ab.   |
| 22. | (biomechanic* adj (method* or course*)).ti,ab.  |
| 23. | ((strength* or stabil* or program* or train* or therap* or technique* or treat*) adj3 exercise*).ti,ab.   |
| 24. | (fitness* adj3 (program* or train* or therap*)).ti,ab.  |
| 25. | (tai ji or tai chi or taichi or taiji or taijiquan).ti,ab.  |
| 26. | core stability.ti,ab.   |
| 27. | exp *balneotherapy/   |
| 28. | (balneology or balneotherap*).ti,ab.  |
| 29. | ((water* or bath* or pool or pools or shower* or underwater* or spa or spas or aqua*) adj2 (exercise* or train* or therap* or treat* or manag*)).ti,ab.           |
| 30. | (hydrotherap* or hydro-therap*).ti,ab.  |
| 31. | or/5-31   |
| 32. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6]  |
| 33. | 4 and 31 and 32   |
| 34. | See <b>Table 25</b> for date parameters   |

### Cochrane search terms

|      |  |
|------|--|
| #1.  | Standard lower back pain population [G.1.2]  |
| #2.  | [mh exercise]  |
| #3.  | [mh "exercise therapy"]  |
| #4.  | [mh "physical education and training"]   |
| #5.  | [mh yoga]  |
| #6.  | [mh qigong]  |
| #7.  | [mh "tai ji"]  |
| #8.  | [mh "exercise movement techniques"]  |
| #9.  | (pilates or yoga or mckenzie or feldenkrais or swim* or walk* or run* or jog* or treadmill* or tread mill*):ti,ab  |
| #10. | (stretch* near/3 (active* or passive* or relax* or static* or dynamic* or gentl* or ballistic* or force* or isometric or technique* or exercis* or therap*)):ti,ab |
| #11. | (aerobic* near (exercise* or train* or therap*)):ti,ab   |
| #12. | ((corrective* or biomechanic*) near (exercise* or train* or therap*)):ti,ab  |
| #13. | (biomechanic* near (method* or course*)):ti,ab   |
| #14. | ((strength* or stabil* or program* or train* or therap* or technique* or treat*) near/3 exercise*):ti,ab   |
| #15. | (fitness* near/3 (program* or train* or therap*)):ti,ab  |
| #16. | (tai ji or tai chi or taichi or taiji or taijiquan):ti,ab  |
| #17. | (qigong or ch'i k?ng or ch'i g?ng or chi k?ng or chi g?ng or qi k?ng or qi g?ng):ti,ab   |
| #18. | core stability:ti,ab   |
| #19. | (balneology or balneotherap* or hydrotherap* or hydro-therap*):ti,ab   |
| #20. | ((water* or bath* or pool or pools or shower* or underwater* or spa or spas or aqua*) near/2 (exercise* or train* or therap* or treat* or manag*)):ti,ab           |
| #21. | {or #2-#20}  |
| #22. | #1 and #21   |
| #23. | See <b>Table 25</b> for date parameters  |

### AMED search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]   |
| 2.  | Excluded study designs and publication types [G.1.3.1]  |
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | (pilates or yoga or mckenzie or feldenkrais or swim* or walk* or run* or jog* or treadmill* or tread mill*):ti,ab.  |
| 6.  | (stretch* adj3 (active* or passive* or relax* or static* or dynamic* or gentl* or ballistic* or force* or isometric or technique* or exercis* or therap*)):ti,ab. |
| 7.  | (aerobic* adj (exercise* or train* or therap*)):ti,ab.  |
| 8.  | ((corrective* or biomechanic*) adj (exercise* or train* or therap*)):ti,ab.   |
| 9.  | (biomechanic* adj (method* or course*)):ti,ab.  |
| 10. | ((strength* or stabil* or program* or train* or therap* or technique* or treat*) adj3 exercise*):ti,ab.   |
| 11. | (fitness* adj3 (program* or train* or therap*)):ti,ab.  |
| 12. | (tai ji or tai chi or taichi or taiji or taijiquan):ti,ab.  |
| 13. | (qigong or ch'i k#ng or ch'i g#ng or chi k#ng or chi g#ng or qi k#ng or qi g#ng):ti,ab.   |
| 14. | core stability:ti,ab.   |

|     |  |
|-----|--|
| 15. | exp exercise/  |
| 16. | exp exercise therapy/  |
| 17. | exp physical education/  |
| 18. | yoga/  |
| 19. | exp tai chi/   |
| 20. | qigong/  |
| 21. | feldenkrais technique/   |
| 22. | swimming/  |
| 23. | jogging/   |
| 24. | walking/   |
| 25. | running/   |
| 26. | exp hydrotherapy/  |
| 27. | (balneology or balneotherap*).ti,ab.   |
| 28. | (hydrotherap* or hydro-therap*).ti,ab.   |
| 29. | ((water* or bath* or pool or pools or shower* or underwater* or spa or spas or aqua*) adj2 (exercise* or train* or therap* or treat* or manag*).ti,ab. |
| 30. | or/5-29  |
| 31. | Study filters RCT [G.1.3.2] or SR [G.1.3.3]  |
| 32. | 4 and 30 and 31  |
| 33. | See <b>Table 25</b> for date parameters  |

#### CINAHL search terms

|      |  |
|------|--|
| S1.  | Standard lower back pain population [G.1.2]  |
| S2.  | Excluded study designs and publication types [G.1.3.1]   |
| S3.  | 1 not 2  |
| S4.  | Limit 3 to English language  |
| S5.  | (pilates or yoga or mckenzie or feldenkrais or swim* or walk* or run* or jog* or treadmill* or tread mill*)  |
| S6.  | (stretch* n3 (active* or passive* or relax* or static* or dynamic* or gentl* or ballistic* or force* or isometric or technique* or exercis* or therap*)) |
| S7.  | (aerobic* n1 (exercise* or train* or therap*))   |
| S8.  | ((corrective* or biomechanic*) n1 (exercise* or train* or therap*))  |
| S9.  | (biomechanic* n1 (method* or course*))   |
| S10. | ((strength* or stabil* or program* or train* or therap* or technique* or treat*) n3 exercise*)   |
| S11. | (fitness* n3 (program* or train* or therap*))  |
| S12. | (tai ji or tai chi or taichi or taiji or taijiquan)  |
| S13. | (qigong or ch'i k?ng or ch'i g?ng or chi k?ng or chi g?ng or qi k?ng or qi g?ng)   |
| S14. | core stability   |
| S15. | (mh "exercise+")   |
| S16. | (mh "therapeutic exercise+")   |
| S17. | (mh "physical education and training")   |
| S18. | (mh "feldenkrais method")  |
| S19. | (mh "hydrotherapy+")   |
| S20. | (mh "balneology")  |
| S21. | balneology or balneotherap* or hydrotherap* or hydro-therap*   |
| S22. | ((water* or bath* or pool or pools or shower* or underwater* or spa or spas or aqua*) n2   |

|      |   |
|------|---|
|      | (exercise* or train* or therap* or treat* or manag*)  |
| S23. | S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 or S18 or S19 or S20 or S21 or S22 |
| S24. | S4 and S23  |
| S25. | See <b>Table 25</b> for date parameters   |

#### G.1.4.7 Non-invasive interventions: postural therapies

- What is the clinical and cost effectiveness of non-invasive interventions in the management of non-specific LBP and sciatica?

##### Medline search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Excluded study designs and publication types [G.1.3.1]   |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | posture/   |
| 6.  | postural balance/  |
| 7.  | (postur* adj2 (balanc* or train* or therap* or treat* or educat* or reeducat* or exercis* or stabili* or stable or fitness or strength*)).ti,ab. |
| 8.  | alexander technique*.ti,ab.  |
| 9.  | or/5-8   |
| 10. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6]   |
| 11. | 4 and 9 and 10   |
| 12. | See <b>Table 25</b> for date parameters  |

##### Embase search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Excluded study designs and publication types [G.1.3.1]   |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | alexander technique/   |
| 6.  | *body posture/   |
| 7.  | *body equilibrium/   |
| 8.  | (postur* adj2 (balanc* or train* or therap* or treat* or educat* or reeducat* or exercis* or stabili* or stable or fitness or strength*)).ti,ab. |
| 9.  | alexander technique*.ti,ab.  |
| 10. | or/5-9   |
| 11. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6]   |
| 12. | 4 and 10 and 11  |
| 13. | See <b>Table 25</b> for date parameters  |

##### Cochrane search terms

|     |  |
|-----|--|
| #1. | Standard lower back pain population [G.1.2]  |
| #2. | posture:kw   |
| #3. | (postur* near/2 (balanc* or train* or therap* or treat* or educat* or reeducat* or exercis* or stabili* or stable or fitness or strength*)).ti,ab,kw |
| #4. | alexander technique*:ti,ab,kw  |

|     |   |
|-----|---|
| #5. | {or #2-#4}                              |
| #6. | #1 and #5                               |
| #7. | See <b>Table 25</b> for date parameters |

#### AMED search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Limit 1 to English language  |
| 3.  | alexander technique/   |
| 4.  | postural therapies/  |
| 5.  | posture/   |
| 6.  | alexander technique*.ti,ab.  |
| 7.  | (postur* adj2 (balanc* or train* or therap* or treat* or educat* or reeducat* or exercis* or stabili* or stable or fitness or strength*)).ti,ab. |
| 8.  | or/3-7   |
| 9.  | 2 and 8  |
| 10. | See <b>Table 25</b> for date parameters  |

#### CINAHL search terms

|      |   |
|------|---|
| S1.  | Standard lower back pain population [G.1.2]   |
| S2.  | Limit 1 to English language   |
| S3.  | (mh "posture")  |
| S4.  | (mh "alexander technique")  |
| S5.  | (mh "balance, postural")  |
| S6.  | postur* n2 (balanc* or train* or therap* or treat* or educat* or reeducat* or exercis* or stabili* or stable or fitness or strength*) |
| S7.  | alexander technique*  |
| S8.  | S3 or S4 or S5 or S6 or S7  |
| S9.  | S2 and S8   |
| S10. | See <b>Table 25</b> for date parameters   |

#### G.1.4.8 Non-invasive interventions: orthotics and appliances

What is the clinical and cost effectiveness of non-invasive interventions in the management of non-specific low back pain and sciatica?

#### Medline search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Excluded study designs and publication types [G.1.3.1]   |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | exp orthotic devices/  |
| 6.  | ((foot or feet or insole* or shoe*) adj2 orthotic*).ti,ab.   |
| 7.  | ((foot or feet) adj2 (orthos* or support*)).ti,ab.   |
| 8.  | (belt* or corset*).ti,ab.  |
| 9.  | ((back* or lumbosacral or lumbo-sacral or lumbar) adj2 (device* or support* or orthos* or orthotic* or brace*)).ti,ab. |
| 10. | or/5-9   |

|     |  |
|-----|--|
| 11. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6] |
| 12. | 4 and 10 and 11  |
| 13. | See <b>Table 25</b> for date parameters                      |

#### Embase search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]   |
| 2.  | Excluded study designs and publication types [G.1.3.1]  |
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | exp *orthosis/  |
| 6.  | ((foot or feet or insole* or shoe*) adj2 orthotic*).ti,ab.  |
| 7.  | ((foot or feet) adj2 (orthos* or support*).ti,ab.   |
| 8.  | (belt* or corset*).ti,ab.   |
| 9.  | ((back* or lumbosacral or lumbo-sacral or lumbar) adj2 (device* or support* or orthos* or orthotic*).ti,ab. |
| 10. | or/5-9  |
| 11. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6]  |
| 12. | 4 and 10 and 11   |
| 13. | See <b>Table 25</b> for date parameters   |

#### Cochrane search terms

|     |  |
|-----|--|
| #1. | Standard lower back pain population [G.1.2]  |
| #2. | [mh "orthotic devices"]  |
| #3. | ((foot or feet or insole* or shoe*) near/2 orthotic*).ti,ab  |
| #4. | ((foot or feet) near/2 (orthos* or support*).ti,ab   |
| #5. | (belt* or corset*).ti,ab   |
| #6. | ((back* or lumbosacral or lumbo-sacral or lumbar) near/2 (device* or support* or orthos* or orthotic* or brace*).ti,ab |
| #7. | {or #2-#6}   |
| #8. | #1 and #7  |
| #9. | See <b>Table 25</b> for date parameters  |

#### AMED search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]   |
| 2.  | Excluded study designs and publication types [G.1.3.1]  |
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | exp orthotic devices/   |
| 6.  | ((foot or feet or insole* or shoe*) adj2 orthotic*).ti,ab.  |
| 7.  | ((foot or feet) adj2 (orthos* or support*).ti,ab.   |
| 8.  | (belt* or corset*).ti,ab.   |
| 9.  | ((back* or lumbosacral or lumbo-sacral or lumbar) adj2 (device* or support* or orthos* or orthotic*).ti,ab. |
| 10. | or/5-9  |
| 11. | Study filters RCT [G.1.3.2] or SR [G.1.3.3]   |
| 12. | 4 and 10 and 11   |

|     |   |
|-----|---|
| 13. | See <b>Table 25</b> for date parameters |
|-----|---|

#### CINAHL search terms

|      |   |
|------|---|
| S1.  | Standard lower back pain population [G.1.2]   |
| S2.  | Excluded study designs and publication types [G.1.3.1]  |
| S3.  | 1 not 2   |
| S4.  | Limit 3 to English language   |
| S5.  | (mh "orthoses+")  |
| S6.  | ((foot or feet or insole* or shoe*) n2 orthotic*)   |
| S7.  | ((foot or feet) n2 (orthos* or support*))   |
| S8.  | (belt* or corset*)  |
| S9.  | ((back* or lumbosacral or lumbo-sacral or lumbar) n2 (device* or support* or orthos* or orthotic*)) |
| S10. | S5 or S6 or S7 or S8 or S9  |
| S11. | S4 and S10  |
| S12. | See <b>Table 25</b> for date parameters   |

#### G.1.4.9 Non-invasive interventions: manual therapies

What is the clinical and cost effectiveness of non-invasive interventions in the management of non-specific LBP and sciatica?

#### Medline search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Excluded study designs and publication types [G.1.3.1]   |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | exp musculoskeletal manipulations/   |
| 6.  | physical therapy modalities/   |
| 7.  | physiotherap*.ti,ab.   |
| 8.  | (massage* or rolfing).ti,ab.   |
| 9.  | (acupressure or shiat#u or chih ya or zhi ya).ti,ab.   |
| 10. | (musculoskeletal adj manipulation*).ti,ab.   |
| 11. | ((manual or manipul* or mobili*) adj3 (therap* or treat*)).ti,ab.  |
| 12. | ((osteopath* or chiropract* or manual* or ortho*) adj3 (manipulat* or mobili#ation or adjust*)).ti,ab.           |
| 13. | ((spine or spinal or lumbosacral or lumbo-sacral or lumbar) adj3 (manipulat* or mobili#ation or adjust*)).ti,ab. |
| 14. | somatic dysfunct*.ti,ab.   |
| 15. | (bone sett* or bone-sett* or bonesett*).ti,ab.   |
| 16. | traction/  |
| 17. | traction*.ti,ab.   |
| 18. | or/5-17  |
| 19. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6]   |
| 20. | 4 and 18 and 19  |
| 21. | See <b>Table 25</b> for date parameters  |

#### Embase search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Excluded study designs and publication types [G.1.3.1]   |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | exp *manipulative medicine/  |
| 6.  | exp *soft tissue/  |
| 7.  | exp *physiotherapy/  |
| 8.  | physiotherap*.ti,ab.   |
| 9.  | (massage* or rolfing).ti,ab.   |
| 10. | (acupressure or shiat#u or chih ya or zhi ya).ti,ab.   |
| 11. | (musculoskeletal adj manipulation*).ti,ab.   |
| 12. | ((manual or manipulat* or mobili*) adj3 (therap* or treat*)).ti,ab.  |
| 13. | ((osteopath* or chiropract* or manual* or ortho*) adj3 (manipulat* or mobili#ation or adjust*)).ti,ab.           |
| 14. | ((spine or spinal or lumbosacral or lumbo-sacral or lumbar) adj3 (manipulat* or mobili#ation or adjust*)).ti,ab. |
| 15. | somatic dysfunct*.ti,ab.   |
| 16. | (bone sett* or bone-sett* or bonesett*).ti,ab.   |
| 17. | traction/  |
| 18. | traction*.ti,ab.   |
| 19. | or/5-18  |
| 20. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6]   |
| 21. | 4 and 19 and 20  |
| 22. | See <b>Table 25</b> for date parameters  |

#### Cochrane search terms

|      |   |
|------|---|
| #1.  | Standard lower back pain population [G.1.2]   |
| #2.  | MeSH descriptor: [musculoskeletal manipulations] explode all trees  |
| #3.  | MeSH descriptor: [traction] explode all trees   |
| #4.  | MeSH descriptor: [physical therapy modalities] this term only   |
| #5.  | physiotherap*:ti,ab   |
| #6.  | (massage* or rolfing):ti,ab   |
| #7.  | (acupressure or shiat?u or chih ya or zhi ya):ti,ab   |
| #8.  | (musculoskeletal near manipulation*):ti,ab  |
| #9.  | ((manual or manipulat* or mobili*) near/3 (therap* or treat*)):ti,ab  |
| #10. | ((osteopath* or chiropract* or manual* or ortho*) near/3 (manipulat* or mobili?ation or adjust*)):ti,ab     |
| #11. | ((spine or spinal or lumbosacral or lumbo-sacral or lumbar) near/3 (manipulat* or mobili?ation or adjust*)) |
| #12. | somatic dysfunct*.ti,ab.  |
| #13. | (bone sett* or bone-sett* or bonesett*) .ti,ab.   |
| #14. | {or #2-#13}   |
| #15. | #1 and #14  |
| #16. | See <b>Table 25</b> for date parameters   |

#### AMED search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Excluded study designs and publication types [G.1.3.1]   |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | exp musculoskeletal manipulations/   |
| 6.  | traction/  |
| 7.  | massage/ or exp mobilisation/  |
| 8.  | soft tissue/   |
| 9.  | exp physical therapy modalities/   |
| 10. | physiotherap*.ti,ab.   |
| 11. | (massage* or rolfing).ti,ab.   |
| 12. | (acupressure or shiat#u or chih ya or zhi ya).ti,ab.   |
| 13. | (musculoskeletal adj manipulation*).ti,ab.   |
| 14. | ((manual or manipul* or mobili*) adj3 (therap* or treat*)).ti,ab.  |
| 15. | ((osteopath* or chiropract* or manual* or ortho*) adj3 (manipulat* or mobili#ation or adjust*)).ti,ab.           |
| 16. | ((spine or spinal or lumbosacral or lumbo-sacral or lumbar) adj3 (manipulat* or mobili#ation or adjust*)).ti,ab. |
| 17. | somatic dysfunct*.ti,ab.   |
| 18. | (bone sett* or bone-sett* or bonesett*).ti,ab.   |
| 19. | traction*.ti,ab.   |
| 20. | or/5-19  |
| 21. | Study filters RCT [G.1.3.2] or SR [G.1.3.3]  |
| 22. | 4 and 20 and 21  |
| 23. | See <b>Table 25</b> for date parameters  |

#### CINAHL search terms

|      |  |
|------|--|
| S1.  | Standard lower back pain population [G.1.2]  |
| S2.  | Limit 1 to English language  |
| S3.  | (mh "manipulation, chiropractic") or (mh "manipulation, orthopedic") or (mh "manipulation, osteopathic") |
| S4.  | (mh "joint mobilization")  |
| S5.  | (mh "manual therapy+")   |
| S6.  | (mh "physical therapy")  |
| S7.  | (mh "massage+")  |
| S8.  | (mh "traction")  |
| S9.  | physiotherap*  |
| S10. | massage* or rolfing  |
| S11. | (acupressure or shiat?u or chih ya or zhi ya)  |
| S12. | (musculoskeletal n1 manipulation*)   |
| S13. | ((manual or manipul* or mobili*) n3 (therap* or treat*))   |
| S14. | ((osteopath* or chiropract* or manual* or ortho*) n3 (manipulat* or mobili?ation or adjust*))            |
| S15. | ((spine or spinal or lumbosacral or lumbo-sacral or lumbar) n3 (manipulat* or mobili?ation or adjust*))  |
| S16. | somatic dysfunct*  |
| S17. | (bone sett* or bone-sett* or bonesett*)  |

|      |   |
|------|---|
| S18. | S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or 17 |
| S19. | S2 and 18   |
| S20. | See <b>Table 25</b> for date parameters   |

#### G.1.4.10 Non-invasive interventions: acupuncture

- What is the clinical and cost effectiveness of non-invasive interventions in the management of non-specific LBP and sciatica?

##### Medline search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]            |
| 2.  | Excluded study designs and publication types [G.1.3.1] |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language                            |
| 5.  | exp acupuncture therapy/                               |
| 6.  | (acupuncture or electroacupuncture).ti,ab.             |
| 7.  | 5 or 6   |
| 8.  | Study filters RCT [A.3.2] or SR [A.3.3]                |
| 9.  | 4 and 7 and 8  |
| 10. | See <b>Table 25</b> for date parameters                |

##### Embase search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]            |
| 2.  | Excluded study designs and publication types [G.1.3.1] |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language                            |
| 5.  | exp acupuncture/                                       |
| 6.  | (acupuncture or electroacupuncture).ti,ab.             |
| 7.  | 5 or 6   |
| 8.  | Study filters RCT [A.3.2] or SR [A.3.3]                |
| 9.  | 4 and 7 and 8  |
| 10. | See <b>Table 25</b> for date parameters                |

##### Cochrane search terms

|     |   |
|-----|---|
| #1. | Standard lower back pain population [G.1.2]                         |
| #2. | (acupuncture or electroacupuncture or electro-acupuncture):ti,ab,kw |
| #3. | #1 and #2   |
| #4. | See <b>Table 25</b> for date parameters                             |

##### AMED search terms

|    |  |
|----|--|
| 1. | Standard lower back pain population [G.1.2]            |
| 2. | Excluded study designs and publication types [G.1.3.1] |
| 3. | 1 not 2  |
| 4. | Limit 3 to English language                            |
| 5. | exp acupuncture therapy/                               |
| 6. | (acupuncture or electroacupuncture).ti,ab.             |
| 7. | 5 or 6   |
| 8. | Study filters RCT [A.3.2] or SR [A.3.3]                |

|     |   |
|-----|---|
| 9.  | 4 and 7 and 8                           |
| 10. | See <b>Table 25</b> for date parameters |

#### CINAHL search terms

|     |  |
|-----|--|
| S1. | Standard lower back pain population [G.1.2]            |
| S2. | Excluded study designs and publication types [G.1.3.1] |
| S3. | 1 not 2  |
| S4. | Limit 3 to English language                            |
| S5. | (mh "acupuncture+")                                    |
| S6. | acupuncture or electroacupuncture                      |
| S7. | S5 or S6   |
| S8. | S4 and S7  |
| S9. | See <b>Table 25</b> for date parameters                |

#### G.1.4.11 Non-invasive interventions: electrotherapy

- What is the clinical and cost effectiveness of non-invasive interventions in the management of non-specific LBP and sciatica?

#### Medline search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]   |
| 2.  | Excluded study designs and publication types [G.1.3.1]  |
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | transcutaneous electric nerve stimulation/  |
| 6.  | (tens or pens).ti,ab.   |
| 7.  | (electroanalges* or electro analges*).ti,ab.  |
| 8.  | electric stimulation therapy/   |
| 9.  | electrotherap*.ti,ab.   |
| 10. | ((transcutaneous or percutaneous or cutaneous or transderm*) adj3 (stimulat* or electr*)).ti,ab.  |
| 11. | electrostimulat*.ti,ab.   |
| 12. | (interferential adj2 current*).ti,ab.   |
| 13. | ((electric* or electro or interferential) adj2 (stimulat* or therap*)).ti,ab.                     |
| 14. | laser therapy, low-level/   |
| 15. | (laser adj2 (therap* or treat* or phototherap* or irradiat* or biostimulat* or stimulat*)).ti,ab. |
| 16. | ultrasonic therapy/   |
| 17. | ((ultrasound or ultrasonic) adj3 (contin* or therap* or treat* or stimulat*)).ti,ab.              |
| 18. | or/5-17   |
| 19. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6]                                      |
| 20. | 4 and 18 and 19   |
| 21. | See <b>Table 25</b> for date parameters   |

#### Embase search terms

|    |  |
|----|--|
| 1. | Standard lower back pain population [G.1.2]            |
| 2. | Excluded study designs and publication types [G.1.3.1] |
| 3. | 1 not 2  |

|     |   |
|-----|---|
| 4.  | Limit 3 to English language   |
| 5.  | transcutaneous nerve stimulation/   |
| 6.  | electrostimulation therapy/   |
| 7.  | low level laser therapy/  |
| 8.  | ultrasound therapy/   |
| 9.  | electroanalgesia/   |
| 10. | (tens or pens).ti,ab.   |
| 11. | (electroanalges* or electro analges*).ti,ab.  |
| 12. | electrotherap*.ti,ab.   |
| 13. | ((transcutaneous or percutaneous or cutaneous or transderm*) adj3 (stimulat* or electr*)).ti,ab.  |
| 14. | electrostimulat*.ti,ab.   |
| 15. | (interferential adj2 current*).ti,ab.   |
| 16. | ((electric* or electro or interferential) adj2 (stimulat* or therap*)).ti,ab.                     |
| 17. | (laser adj2 (therap* or treat* or phototherap* or irradiat* or biostimulat* or stimulat*)).ti,ab. |
| 18. | ((ultrasound or ultrasonic) adj3 (contin* or therap* or treat* or stimulat*)).ti,ab.              |
| 19. | or/5-18   |
| 20. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6]                                      |
| 21. | 4 and 19 and 20   |
| 22. | See <b>Table 25</b> for date parameters   |

#### Cochrane search terms

|      |   |
|------|---|
| #1.  | Standard lower back pain population [G.1.2]   |
| #2.  | (tens or pens or electroanalges* or electro analges* or electrotherap* or electrostimulat*):ti,ab,kw  |
| #3.  | (interferential near/2 current*):ti,ab,kw   |
| #4.  | ((electric* or electro or interferential) near/2 (stimulat* or therap*)):ti,ab,kw                     |
| #5.  | (laser near/2 (therap* or treat* or phototherap* or irradiat* or biostimulat* or stimulat*)):ti,ab,kw |
| #6.  | ((ultrasound or ultrasonic) near/3 (contin* or therap* or treat* or stimulat*)):ti,ab,kw              |
| #7.  | ((transcutaneous or percutaneous or cutaneous or transderm*) near/3 (stimulat* or electr*)):ti,ab,kw  |
| #8.  | {or #2-#7}  |
| #9.  | #1 and #8   |
| #10. | See <b>Table 25</b> for date parameters   |

#### CINAHL search terms

|      |   |
|------|---|
| S1.  | Standard lower back pain population [G.1.2]   |
| S2.  | Excluded study designs and publication types [G.1.3.1]                                    |
| S3.  | 1 not 2   |
| S4.  | Limit 3 to English language   |
| S5.  | tens or pens or electroanalges* or electro analges* or electrotherap* or electrostimulat* |
| S6.  | ((transcutaneous or percutaneous or cutaneous or transderm*) n3 (stimulat* or electr*))   |
| S7.  | (interferential n2 current*)  |
| S8.  | ((electric* or electro or interferential) n2 (stimulat* or therap*))                      |
| S9.  | (laser n2 (therap* or treat* or phototherap* or irradiat* or biostimulat* or stimulat*))  |
| S10. | ((ultrasound or ultrasonic) n3 (contin* or therap* or treat* or stimulat*))               |

|      |  |
|------|--|
| S11. | (mh "transcutaneous electric nerve stimulation")                     |
| S12. | (mh "electric stimulation")  |
| S13. | (mh "electrotherapy")  |
| S14. | (mh "laser therapy+")  |
| S15. | (mh "ultrasonic therapy")  |
| S16. | S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 |
| S17. | S4 and S16   |
| S18. | See <b>Table 25</b> for date parameters                              |

#### G.1.4.12 Non-invasive interventions: psychological interventions (RCTs and SRs)

- What is the clinical and cost effectiveness of non-invasive interventions in the management of non-specific LBP and sciatica?

##### Medline search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]                                     |
| 2.  | Excluded study designs and publication types [G.1.3.1]                          |
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | exp cognitive therapy/  |
| 6.  | behavior therapy/   |
| 7.  | ((acceptance* or commitment*) adj2 (therap* or psychotherap*)).ti,ab.           |
| 8.  | (cbt or mindful*).ti,ab.  |
| 9.  | ((cognitive or cognition or behavio?r*) adj2 (therap* or psychotherap*)).ti,ab. |
| 10. | (psych* adj2 (therap* or treatment*)).ti,ab.                                    |
| 11. | or/5-10   |
| 12. | Study filters RCT [G.1.3.2] or SR [G.1.3.3]                                     |
| 13. | 4 and 11 and 12   |
| 14. | See <b>Table 25</b> for date parameters   |

##### Embase search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]                                     |
| 2.  | Excluded study designs and publication types [G.1.3.1]                          |
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | exp *cognitive therapy/   |
| 6.  | *behavior therapy/  |
| 7.  | *mindfulness/   |
| 8.  | ((acceptance* or commitment*) adj2 (therap* or psychotherap*)).ti,ab.           |
| 9.  | (cbt or mindful*).ti,ab.  |
| 10. | ((cognitive or cognition or behavio?r*) adj2 (therap* or psychotherap*)).ti,ab. |
| 11. | (psych* adj2 (therap* or treatment*)).ti,ab.                                    |
| 12. | or/5-11   |
| 13. | Study filters RCT [G.1.3.2] or SR [G.1.3.3]                                     |
| 14. | 4 and 12 and 13   |
| 15. | See <b>Table 25</b> for date parameters   |

### Cochrane search terms

|      |  |
|------|--|
| #1.  | Standard lower back pain population [G.1.2]                                      |
| #2.  | [mh "cognitive therapy"]   |
| #3.  | [mh "behavior therapy"]  |
| #4.  | ((acceptance* or commitment*) near/2 (therap* or psychotherap*)):ti,ab           |
| #5.  | (cbt or mindful*):ti,ab  |
| #6.  | ((cognitive or cognition or behavio?r*) near/2 (therap* or psychotherap*)):ti,ab |
| #7.  | (psych* near/2 (therap* or treatment*)):ti,ab                                    |
| #8.  | {or #2-#7}   |
| #9.  | #1 and #8  |
| #10. | See <b>Table 25</b> for date parameters  |

### PsycINFO search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]                                     |
| 2.  | Limit 1 to English language   |
| 3.  | exp cognitive behavior therapy/   |
| 4.  | cognitive therapy/  |
| 5.  | behavior therapy/   |
| 6.  | mindfulness/  |
| 7.  | ((acceptance* or commitment*) adj2 (therap* or psychotherap*)):ti,ab.           |
| 8.  | (cbt or mindful*):ti,ab.  |
| 9.  | ((cognitive or cognition or behavio?r*) adj2 (therap* or psychotherap*)):ti,ab. |
| 10. | (psych* adj2 (therap* or treatment*)):ti,ab.                                    |
| 11. | or/3-10   |
| 12. | 2 and 11  |
| 13. | See <b>Table 25</b> for date parameters   |

### PsycINFO search terms (ProQuest)

|     |  |
|-----|--|
| S1. | Standard lower back pain population [G.1.2]  |
| S2. | su.exact.explode("cognitive behavior therapy") or su.exact("cognitive therapy") or su.exact("behavior therapy") or su.exact("mindfulness") or ti,ab((acceptance* or commitment*) near/2 (therap* or psychotherap*)) or ti,ab(cbt or mindful*) or ti,ab((cognitive or cognition or behavio*r*) near/2 (therap* or psychotherap*)) or ti,ab(psych* near/2 (therap* or treatment*)) |
| S3. | S1 and S2  |
| S4. | See <b>Table 25</b> for date parameters  |

#### G.1.4.13 Non-invasive interventions: psychological interventions (observational studies)

- What is the clinical and cost effectiveness of non-invasive interventions in the management of non-specific LBP and sciatica?

### Medline search terms

|    |  |
|----|--|
| 1. | Standard lower back pain population [G.1.2]            |
| 2. | Excluded study designs and publication types [G.1.3.1] |
| 3. | 1 not 2  |
| 4. | Limit 3 to English language                            |
| 5. | mindfulness/   |

|     |   |
|-----|---|
| 6.  | "acceptance and commitment therapy"/                                  |
| 7.  | ((acceptance* or commitment*) adj2 (therap* or psychotherap*)).ti,ab. |
| 8.  | mindful*.ti,ab.   |
| 9.  | or/5-8  |
| 10. | Study filter OBS [G.1.3.6]  |
| 11. | 4 and 9 and 10  |
| 12. | See <b>Table 25</b> for date parameters                               |

#### Embase search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]                           |
| 2.  | Excluded study designs and publication types [G.1.3.1]                |
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | "acceptance and commitment therapy"/                                  |
| 6.  | mindfulness/  |
| 7.  | ((acceptance* or commitment*) adj2 (therap* or psychotherap*)).ti,ab. |
| 8.  | mindful*.ti,ab.   |
| 9.  | or/5-8  |
| 10. | Study filter OBS [G.1.3.6]  |
| 11. | 4 and 9 and 10  |
| 12. | See <b>Table 25</b> for date parameters                               |

#### PsycINFO search terms

|    |   |
|----|---|
| 1. | Standard lower back pain population [G.1.2]                           |
| 2. | Limit 1 to English language   |
| 3. | mindfulness/  |
| 4. | ((acceptance* or commitment*) adj2 (therap* or psychotherap*)).ti,ab. |
| 5. | "acceptance and commitment therapy"/                                  |
| 6. | mindful*.ti,ab.   |
| 7. | or/3-6  |
| 8. | 2 and 8   |
| 9. | See <b>Table 25</b> for date parameters                               |

#### PsycINFO search terms (ProQuest)

|     |  |
|-----|--|
| S1. | standard lower back pain population [G.1.2]  |
| S2. | su.exact("mindfulness") or ti,ab((acceptance* or commitment*) near/2 (therap* or psychotherap*)) or su.exact("acceptance and commitment therapy") or ti,ab(mindful*) |
| S3. | S1 and S2  |
| S4. | See <b>Table 25</b> for date parameters  |

#### G.1.4.14 Non-invasive interventions: pharmacological treatment (RCTs and SRs)

- Pharmacological treatment (oral/sublingual, rectal, intra-muscular and transdermal but not intravenous)

#### Medline search terms

|    |  |
|----|--|
| 1. | Standard lower back pain population [G.1.2]            |
| 2. | Excluded study designs and publication types [G.1.3.1] |

|     |   |
|-----|---|
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | analgesics/   |
| 6.  | analgesic*.ti,ab.   |
| 7.  | ((antiinflamm* or anti-inflamm*) adj2 (non-steroid* or nonsteroid*)).ti,ab.                                 |
| 8.  | ((cox2 or cox-2 or coxii or cox-ii) adj2 inhibitor*).ti,ab.   |
| 9.  | ((cyclo-oxygenase2 or cyclo-oxygenase-2 or cyclooxygenase-2 or cyclooxygenase2) adj2 inhibitor*).ti,ab.     |
| 10. | ((cyclo-oxygenase-ii or cyclo-oxygenaseii or cyclooxygenase-ii or cyclooxygenaseii) adj2 inhibitor*).ti,ab. |
| 11. | exp anti-inflammatory agents, non-steroidal/  |
| 12. | exp cyclooxygenase 2 inhibitors/  |
| 13. | nsaid*.ti,ab.   |
| 14. | acetaminophen/  |
| 15. | (acetaminophen or paracetamol).ti,ab.   |
| 16. | exp analgesics, opioid/   |
| 17. | fentanyl.ti,ab.   |
| 18. | hydrocodone.ti,ab.  |
| 19. | hydromorphone.ti,ab.  |
| 20. | levorphanol.ti,ab.  |
| 21. | meperidine.ti,ab.   |
| 22. | morphine.ti,ab.   |
| 23. | oxycodone.ti,ab.  |
| 24. | oxymorphone.ti,ab.  |
| 25. | pentazocine.ti,ab.  |
| 26. | propoxyphene.ti,ab.   |
| 27. | sufentanil.ti,ab.   |
| 28. | tramadol.ti,ab.   |
| 29. | codeine.ti,ab.  |
| 30. | tapentadol.ti,ab.   |
| 31. | acetylsalicyl*.ti,ab.   |
| 32. | carbasalate calcium.ti,ab.  |
| 33. | diflunisal.ti,ab.   |
| 34. | aceclofenac.ti,ab.  |
| 35. | alclofenac.ti,ab.   |
| 36. | diclofenac.ti,ab.   |
| 37. | indometacin.ti,ab.  |
| 38. | sulindac.ti,ab.   |
| 39. | meloxicam.ti,ab.  |
| 40. | piroxicam.ti,ab.  |
| 41. | dexibuprofen.ti,ab.   |
| 42. | dexketoprofen.ti,ab.  |
| 43. | fenoprofen.ti,ab.   |
| 44. | flurbiprofen.ti,ab.   |
| 45. | ibuprofen.ti,ab.  |

|     |   |
|-----|---|
| 46. | ketoprofen.ti,ab.                                   |
| 47. | naproxen.ti,ab.                                     |
| 48. | tiapro*.ti,ab.                                      |
| 49. | metamizol.ti,ab.                                    |
| 50. | phenylbutazone.ti,ab.                               |
| 51. | phenazone.ti,ab.                                    |
| 52. | propyphenazone.ti,ab.                               |
| 53. | celecoxib.ti,ab.                                    |
| 54. | etoricoxib.ti,ab.                                   |
| 55. | nabumeton.ti,ab.                                    |
| 56. | parecoxib.ti,ab.                                    |
| 57. | exp muscle relaxants, central/                      |
| 58. | muscle relaxant*.ti,ab.                             |
| 59. | diazepam.ti,ab.                                     |
| 60. | tetrazepam.ti,ab.                                   |
| 61. | cyclobenzaprine.ti,ab.                              |
| 62. | carisoprodol.ti,ab.                                 |
| 63. | chlorzoxazone.ti,ab.                                |
| 64. | meprobramate.ti,ab.                                 |
| 65. | methocarbamol.ti,ab.                                |
| 66. | metaxalone.ti,ab.                                   |
| 67. | orphenadrine.ti,ab.                                 |
| 68. | tizanidine.ti,ab.                                   |
| 69. | flupirtine.ti,ab.                                   |
| 70. | baclofen.ti,ab.                                     |
| 71. | dantrolene.ti,ab.                                   |
| 72. | exp antidepressive agents/                          |
| 73. | (antidepress* or anti-depress*).ti,ab.              |
| 74. | serotonin norepinephrine reuptake inhibitor*.ti,ab. |
| 75. | selective serotonin reuptake inhibitor*.ti,ab.      |
| 76. | (ssri or snri).ti,ab.                               |
| 77. | amoxapine.ti,ab.                                    |
| 78. | bupropion.ti,ab.                                    |
| 79. | citalopram.ti,ab.                                   |
| 80. | fluoxetine.ti,ab.                                   |
| 81. | fluvoxamine.ti,ab.                                  |
| 82. | maprotiline.ti,ab.                                  |
| 83. | mianserin.ti,ab.                                    |
| 84. | paroxetine.ti,ab.                                   |
| 85. | quipazine.ti,ab.                                    |
| 86. | ritanserin.ti,ab.                                   |
| 87. | sulpiride.ti,ab.                                    |
| 88. | trazodone.ti,ab.                                    |
| 89. | tryptophan.ti,ab.                                   |
| 90. | viloxazine.ti,ab.                                   |

|      |  |
|------|--|
| 91.  | amitriptyline.ti,ab.                               |
| 92.  | clomipramine.ti,ab.                                |
| 93.  | desipramine.ti,ab.                                 |
| 94.  | dothiepin.ti,ab.                                   |
| 95.  | doxepin.ti,ab.                                     |
| 96.  | imipramine.ti,ab.                                  |
| 97.  | iprindole.ti,ab.                                   |
| 98.  | lofepramine.ti,ab.                                 |
| 99.  | nortriptyline.ti,ab.                               |
| 100. | opipramol.ti,ab.                                   |
| 101. | protriptyline.ti,ab.                               |
| 102. | trimipramine.ti,ab.                                |
| 103. | exp anticonvulsants/                               |
| 104. | gabapentin.ti,ab.                                  |
| 105. | pregabalin.ti,ab.                                  |
| 106. | carbamazepine.ti,ab.                               |
| 107. | phenytoin.ti,ab.                                   |
| 108. | topiramate.ti,ab.                                  |
| 109. | exp anti-bacterial agents/                         |
| 110. | antibiotic*.ti,ab.                                 |
| 111. | (anti-bacterial* or antibacterial*).ti,ab.         |
| 112. | (anti-microbial* or antimicrobial*).ti,ab.         |
| 113. | (anti-mycobacterial* or antimycobacterial*).ti,ab. |
| 114. | (bacteriocid* or bactericid*).ti,ab.               |
| 115. | exp vitamin d/                                     |
| 116. | vitamin d.ti,ab.                                   |
| 117. | or/5-116   |
| 118. | Study filters RCT [G.1.3.2] or SR [G.1.3.3]        |
| 119. | 4 and 117 and 118                                  |
| 120. | See <b>Table 25</b> for date parameters            |

#### Embase search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]   |
| 2.  | Excluded study designs and publication types [G.1.3.1]  |
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | exp *analgesic agent/   |
| 6.  | analgesic*.ti,ab.   |
| 7.  | ((antiinflamm* or anti-inflamm*) adj2 (non- steroid* or nonsteroid*)).ti,ab.                                |
| 8.  | ((cox2 or cox-2 or coxii or cox-ii) adj2 inhibitor*).ti,ab.   |
| 9.  | ((cyclo-oxygenase2 or cyclo-oxygenase-2 or cyclooxygenase-2 or cyclooxygenase2) adj2 inhibitor*).ti,ab.     |
| 10. | ((cyclo-oxygenase-ii or cyclo-oxygenaseii or cyclooxygenase-ii or cyclooxygenaseii) adj2 inhibitor*).ti,ab. |
| 11. | exp *nonsteroid antiinflammatory agent/   |
| 12. | exp *cyclooxygenase 2 inhibitor/  |

|     |                                       |
|-----|---------------------------------------|
| 13. | nsaid*.ti,ab.                         |
| 14. | *paracetamol/                         |
| 15. | (acetaminophen or paracetamol).ti,ab. |
| 16. | exp *narcotic analgesic agent/        |
| 17. | fentanyl.ti,ab.                       |
| 18. | hydrocodone.ti,ab.                    |
| 19. | hydromorphone.ti,ab.                  |
| 20. | levorphanol.ti,ab.                    |
| 21. | meperidine.ti,ab.                     |
| 22. | morphine.ti,ab.                       |
| 23. | oxycodone.ti,ab.                      |
| 24. | oxymorphone.ti,ab.                    |
| 25. | pentazocine.ti,ab.                    |
| 26. | propoxyphene.ti,ab.                   |
| 27. | sufentanil.ti,ab.                     |
| 28. | tramadol.ti,ab.                       |
| 29. | codeine.ti,ab.                        |
| 30. | tapentadol.ti,ab.                     |
| 31. | acetylsalicyl*.ti,ab.                 |
| 32. | carbasalate calcium.ti,ab.            |
| 33. | diflunisal.ti,ab.                     |
| 34. | aceclofenac.ti,ab.                    |
| 35. | alclofenac.ti,ab.                     |
| 36. | diclofenac.ti,ab.                     |
| 37. | indometacin.ti,ab.                    |
| 38. | sulindac.ti,ab.                       |
| 39. | meloxicam.ti,ab.                      |
| 40. | piroxicam.ti,ab.                      |
| 41. | dexibuprofen.ti,ab.                   |
| 42. | dexketoprofen.ti,ab.                  |
| 43. | fenoprofen.ti,ab.                     |
| 44. | flurbiprofen.ti,ab.                   |
| 45. | ibuprofen.ti,ab.                      |
| 46. | ketoprofen.ti,ab.                     |
| 47. | naproxen.ti,ab.                       |
| 48. | tiapro*.ti,ab.                        |
| 49. | metamizol.ti,ab.                      |
| 50. | phenylbutazone.ti,ab.                 |
| 51. | phenazone.ti,ab.                      |
| 52. | propyphenazone.ti,ab.                 |
| 53. | celecoxib.ti,ab.                      |
| 54. | etoricoxib.ti,ab.                     |
| 55. | nabumeton.ti,ab.                      |
| 56. | parecoxib.ti,ab.                      |
| 57. | exp *muscle relaxant agent/           |

|      |  |
|------|--|
| 58.  | muscle relaxant*.ti,ab.  |
| 59.  | diazepam.ti,ab.  |
| 60.  | tetrazepam.ti,ab.  |
| 61.  | cyclobenzaprine.ti,ab.   |
| 62.  | carisoprodol.ti,ab.  |
| 63.  | chlorzoxazone.ti,ab.   |
| 64.  | meprobramate.ti,ab.  |
| 65.  | methocarbamol.ti,ab.   |
| 66.  | metaxalone.ti,ab.  |
| 67.  | orphenadrine.ti,ab.  |
| 68.  | tizanidine.ti,ab.  |
| 69.  | flupirtine.ti,ab.  |
| 70.  | baclofen.ti,ab.  |
| 71.  | dantrolene.ti,ab.  |
| 72.  | exp *antidepressant agent/<br>(antidepress* or anti-depress*).ti,ab. |
| 73.  | serotonin norepinephrine reuptake inhibitor*.ti,ab.                  |
| 74.  | selective serotonin reuptake inhibitor*.ti,ab.                       |
| 75.  | (ssri or snri).ti,ab.  |
| 76.  | amoxapine.ti,ab.   |
| 77.  | bupropion.ti,ab.   |
| 78.  | citalopram.ti,ab.  |
| 79.  | fluoxetine.ti,ab.  |
| 80.  | fluvoxamine.ti,ab.   |
| 81.  | maprotiline.ti,ab.   |
| 82.  | mianserin.ti,ab.   |
| 83.  | paroxetine.ti,ab.  |
| 84.  | quipazine.ti,ab.   |
| 85.  | ritanserin.ti,ab.  |
| 86.  | sulpiride.ti,ab.   |
| 87.  | trazodone.ti,ab.   |
| 88.  | tryptophan.ti,ab.  |
| 89.  | viloxazine.ti,ab.  |
| 90.  | amitriptyline.ti,ab.   |
| 91.  | clomipramine.ti,ab.  |
| 92.  | desipramine.ti,ab.   |
| 93.  | dothiepin.ti,ab.   |
| 94.  | doxepin.ti,ab.   |
| 95.  | imipramine.ti,ab.  |
| 96.  | iprindole.ti,ab.   |
| 97.  | lofepramine.ti,ab.   |
| 98.  | nortriptyline.ti,ab.   |
| 99.  | opipramol.ti,ab.   |
| 100. | protriptyline.ti,ab.   |
| 101. | trimipramine.ti,ab.  |
| 102. |  |

|      |  |
|------|--|
| 103. | exp *anticonvulsive agent/                         |
| 104. | gabapentin.ti,ab.                                  |
| 105. | pregabalin.ti,ab.                                  |
| 106. | carbamazepine.ti,ab.                               |
| 107. | phenytoin.ti,ab.                                   |
| 108. | topiramate.ti,ab.                                  |
| 109. | exp *antiinfective agent/                          |
| 110. | antibiotic*.ti,ab.                                 |
| 111. | (anti-bacterial* or antibacterial*).ti,ab.         |
| 112. | (anti-microbial* or antimicrobial*).ti,ab.         |
| 113. | (anti-mycobacterial* or antimycobacterial*).ti,ab. |
| 114. | (bacteriocid* or bactericid*).ti,ab.               |
| 115. | exp *vitamin d/                                    |
| 116. | vitamin d.ti,ab.                                   |
| 117. | or/5-116   |
| 118. | Study filters RCT [G.1.3.2] or SR [G.1.3.3]        |
| 119. | 4 and 117 and 118                                  |
| 120. | See <b>Table 25</b> for date parameters            |

#### Cochrane search terms

|      |   |
|------|---|
| #1.  | Standard lower back pain population [G.1.2]   |
| #2.  | [mh analgesics]   |
| #3.  | analgesic*.ti,ab,kw   |
| #4.  | ((antiinflamm* or anti-inflamm*) near/2 (non- steroid* or nonsteroid*)):ti,ab,kw  |
| #5.  | ((cox2 or cox-2 or coxii or cox-ii) near/2 inhibitor*):ti,ab,kw   |
| #6.  | ((cyclo-oxygenase2 or cyclo-oxygenase-2 or cyclooxygenase-2 or cyclooxygenase2) near/2 inhibitor*):ti,ab,kw   |
| #7.  | ((cyclo-oxygenase-ii or cyclo-oxygenaseii or cyclooxygenase-ii or cyclooxygenaseii) near/2 inhibitor*):ti,ab,kw   |
| #8.  | [mh "anti-inflammatory agents, non-steroidal"]  |
| #9.  | [mh "cyclooxygenase 2 inhibitors"]  |
| #10. | nsaid*.ti,ab,kw   |
| #11. | [mh acetaminophen]  |
| #12. | (acetaminophen or paracetamol):ti,ab,kw   |
| #13. | [mh "analgesics, opioid"]   |
| #14. | (fentanyl or hydrocodone or hydromorphone or levorphanol or meperidine or morphine or oxycodone or oxymorphone or pentazocine or propoxyphene or sufentanil or tramadol or codeine or tapentadol or acetylsalicyl* or carbasalate calcium or diflunisal or aceclofenac or alclofenac or diclofenac or indometacin or sulindac or meloxicam or piroxicam or dexibuprofen or dexketoprofen or fenoprofen or flurbiprofen or ibuprofen or ketoprofen or naproxen or tiapro* or metamizol or phenylbutazone or phenazone or propyphenazone or celecoxib or etoricoxib or nabumeton or parecoxib):ti,ab,kw |
| #15. | [mh "muscle relaxants, central"]  |
| #16. | muscle relaxant*.ti,ab,kw   |
| #17. | (diazepam or tetrazepam or cyclobenzaprine or carisoprodol or chlorzoxazone or meprobramate or methocarbamol or metaxalone or orphenadrine or tizanidine or flupirtine or baclofen or dantrolene):ti,ab,kw  |
| #18. | [mh "antidepressive agents"]  |

|      |   |
|------|---|
| #19. | (antidepress* or anti-depress*):ti,ab,kw  |
| #20. | serotonin norepinephrine reuptake inhibitor*:ti,ab,kw   |
| #21. | selective serotonin reuptake inhibitor*:ti,ab,kw  |
| #22. | (ssri or snri):ti,ab,kw   |
| #23. | (amoxapine or bupropion or citalopram or fluoxetine or fluvoxamine or maprotiline or mianserin or paroxetine or quipazine or ritanserin or sulphiride or trazodone or tryptophan or viloxazine or amitriptyline or clomipramine or desipramine or dothiepin or doxepin or imipramine or iprindole or lofepramine or nortriptyline or opipramol or protriptyline or trimipramine):ti,ab,kw |
| #24. | [mh anticonvulsants]  |
| #25. | (gabapentin or pregabalin or carbamazepine or phenytoin or topiramate):ti,ab,kw   |
| #26. | [mh "anti-bacterial agents"]  |
| #27. | antibiotic*:ti,ab,kw  |
| #28. | (anti-bacterial* or antibacterial*):ti,ab,kw  |
| #29. | (anti-microbial* or antimicrobial*):ti,ab,kw  |
| #30. | (anti-mycobacterial* or antimycobacterial*):ti,ab,kw  |
| #31. | (bacteriocid* or bactericid*):ti,ab,kw  |
| #32. | [mh "vitamin d"]  |
| #33. | vitamin d:ti,ab,kw  |
| #34. | {or #2-#33}   |
| #35. | #1 and #34  |
| #36. | See <b>Table 25</b> for date parameters   |

#### G.1.4.15 Non-invasive interventions: pharmacological treatment (observational studies)

- Pharmacological treatment (oral/sublingual, rectal, intra-muscular and transdermal but not intravenous)

##### Medline search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]            |
| 2.  | Excluded study designs and publication types [G.1.3.1] |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language                            |
| 5.  | acetaminophen/   |
| 6.  | (acetaminophen or paracetamol).ti,ab.                  |
| 7.  | exp muscle relaxants, central/                         |
| 8.  | muscle relaxant*.ti,ab.                                |
| 9.  | diazepam.ti,ab.  |
| 10. | tetrazepam.ti,ab.                                      |
| 11. | cyclobenzaprine.ti,ab.                                 |
| 12. | carisoprodol.ti,ab.                                    |
| 13. | chlorzoxazone.ti,ab.                                   |
| 14. | meprobramate.ti,ab.                                    |
| 15. | methocarbamol.ti,ab.                                   |
| 16. | metaxalone.ti,ab.                                      |
| 17. | orphenadrine.ti,ab.                                    |
| 18. | tizanidine.ti,ab.                                      |

|     |  |
|-----|--|
| 19. | flupirtine.ti,ab.                                  |
| 20. | baclofen.ti,ab.                                    |
| 21. | dantrolene.ti,ab.                                  |
| 22. | exp anticonvulsants/                               |
| 23. | gabapentin.ti,ab.                                  |
| 24. | pregabalin.ti,ab.                                  |
| 25. | carbamazepine.ti,ab.                               |
| 26. | phenytoin.ti,ab.                                   |
| 27. | topiramate.ti,ab.                                  |
| 28. | exp anti-bacterial agents/                         |
| 29. | antibiotic*.ti,ab.                                 |
| 30. | (anti-bacterial* or antibacterial*).ti,ab.         |
| 31. | (anti-microbial* or antimicrobial*).ti,ab.         |
| 32. | (anti-mycobacterial* or antimycobacterial*).ti,ab. |
| 33. | (bacteriocid* or bactericid*).ti,ab.               |
| 34. | exp vitamin d/                                     |
| 35. | vitamin d.ti,ab.                                   |
| 36. | or/5-35  |
| 37. | Study filter OBS [G.1.3.6]                         |
| 38. | 4 and 36 and 37                                    |
| 39. | See <b>Table 25</b> for date parameters            |

#### Embase search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]   |
| 2.  | Excluded study designs and publication types [G.1.3.1]  |
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | ((cyclo-oxygenase2 or cyclo-oxygenase-2 or cyclooxygenase-2 or cyclooxygenase2) adj2 inhibitor*).ti,ab. |
| 6.  | exp *nonsteroid antiinflammatory agent/   |
| 7.  | *paracetamol/   |
| 8.  | (acetaminophen or paracetamol).ti,ab.   |
| 9.  | exp *muscle relaxant agent/   |
| 10. | muscle relaxant*.ti,ab.   |
| 11. | diazepam.ti,ab.   |
| 12. | tetrazepam.ti,ab.   |
| 13. | cyclobenzaprine.ti,ab.  |
| 14. | carisoprodol.ti,ab.   |
| 15. | chlorzoxazone.ti,ab.  |
| 16. | meprobramate.ti,ab.   |
| 17. | methocarbamol.ti,ab.  |
| 18. | metaxalone.ti,ab.   |
| 19. | orphenadrine.ti,ab.   |
| 20. | tizanidine.ti,ab.   |
| 21. | flupirtine.ti,ab.   |
| 22. | baclofen.ti,ab.   |

|     |  |
|-----|--|
| 23. | dantrolene.ti,ab.                                  |
| 24. | exp *anticonvulsive agent/                         |
| 25. | gabapentin.ti,ab.                                  |
| 26. | pregabalin.ti,ab.                                  |
| 27. | carbamazepine.ti,ab.                               |
| 28. | phenytoin.ti,ab.                                   |
| 29. | topiramate.ti,ab.                                  |
| 30. | exp *antiinfective agent/                          |
| 31. | antibiotic*.ti,ab.                                 |
| 32. | (anti-bacterial* or antibacterial*).ti,ab.         |
| 33. | (anti-microbial* or antimicrobial*).ti,ab.         |
| 34. | (anti-mycobacterial* or antimycobacterial*).ti,ab. |
| 35. | (bacteriocid* or bactericid*).ti,ab.               |
| 36. | exp *vitamin d/                                    |
| 37. | vitamin d.ti,ab.                                   |
| 38. | or/5-37  |
| 39. | Study filter OBS [G.1.3.6]                         |
| 40. | 4 and 38 and 39                                    |
| 41. | See <b>Table 25</b> for date parameters            |

#### G.1.4.16 Invasive and surgical procedures: radiofrequency ablation

- What is the clinical and cost effectiveness of radiofrequency ablation for facet joint pain in the management of non-specific LBP?

##### Medline search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Excluded study designs and publication types [G.1.3.1]                                       |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | catheter ablation/   |
| 6.  | rhizotomy/   |
| 7.  | rhizotom*.ti,ab.   |
| 8.  | (radiofrequency or radio frequency).ti,ab.   |
| 9.  | neurotom*.ti,ab.   |
| 10. | rhizoly*.ti,ab.  |
| 11. | denervat*.ti,ab.   |
| 12. | denervation/   |
| 13. | neuroly*.ti,ab.  |
| 14. | pulsed radiofrequency treatment/   |
| 15. | chemodenervation.ti,ab.  |
| 16. | cryoablat*.ti,ab.  |
| 17. | exp ablation techniques/   |
| 18. | cryosurg*.ti,ab.   |
| 19. | ablat*.ti,ab.  |
| 20. | (catheter* adj2 (electric* or percutaneous or transvenous or cool* or cold or cryo*)).ti,ab. |

|     |  |
|-----|--|
| 21. | or/5-20  |
| 22. | (media# adj3 (branch* or nerve*)).ti,ab.                     |
| 23. | (facet* or zygapophys#al* or apophyseal* or z joint*).ti,ab. |
| 24. | zygapophyseal joint/   |
| 25. | or/22-24   |
| 26. | 4 and 21 and 25  |
| 27. | See <b>Table 25</b> for date parameters                      |

#### Embase search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Excluded study designs and publication types [G.1.3.1]                                       |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | radiofrequency ablation/   |
| 6.  | catheter ablation/   |
| 7.  | exp rhizotomy/   |
| 8.  | denervation/   |
| 9.  | neurolysis/  |
| 10. | ablation therapy/  |
| 11. | pulsed radiofrequency treatment/   |
| 12. | radiofrequency ablation device/  |
| 13. | cryoablation/  |
| 14. | rhizotom*.ti,ab.   |
| 15. | (radiofrequency or radio frequency).ti,ab.   |
| 16. | neurotom*.ti,ab.   |
| 17. | rhizoly*.ti,ab.  |
| 18. | denervat*.ti,ab.   |
| 19. | neuroly*.ti,ab.  |
| 20. | chemodenervation.ti,ab.  |
| 21. | cryoablat*.ti,ab.  |
| 22. | cryosurg*.ti,ab.   |
| 23. | ablat*.ti,ab.  |
| 24. | (catheter* adj2 (electric* or percutaneous or transvenous or cool* or cold or cryo*)).ti,ab. |
| 25. | or/5-24  |
| 26. | (media# adj3 (branch* or nerve*)).ti,ab.   |
| 27. | (facet* or zygapophys#al* or apophyseal* or z joint*).ti,ab.                                 |
| 28. | zygapophyseal joint/   |
| 29. | or/26-28   |
| 30. | 4 and 25 and 29  |
| 31. | See <b>Table 25</b> for date parameters  |

#### Cochrane search terms

|     |  |
|-----|--|
| #1. | Standard lower back pain population [G.1.2]  |
| #2. | (rhizotom* or radiofrequency or radio frequency or neurotom* or rhizoly* or denervat* or neuroly* or chemodenervation or cryoablat* or cryosurg* or ablat*).ti,ab,kw |
| #3. | (catheter* near/2 (electric* or percutaneous or transvenous or cool* or cold or cryo*)).ti,ab  |

|     |   |
|-----|---|
| #4. | #2 or #3  |
| #5. | (media* near/3 (branch* or nerve*)):ti,ab,kw                |
| #6. | (facet* or zygapophys* or apophyseal* or z joint*):ti,ab,kw |
| #7. | #5 or #6  |
| #8. | 1 and #4 and #7   |
| #9. | See <b>Table 25</b> for date parameters                     |

#### G.1.4.17 Invasive and surgical procedures: epidural injections

Searches for the following two questions were run as one search:

- What is the clinical and cost effectiveness of epidural injections in the management of people with sciatica?
- What is the clinical and cost effectiveness of spinal injections in the management of non-specific low back pain?

#### Medline search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Excluded study designs and publication types [G.1.3.1]   |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | exp injections/  |
| 6.  | exp sclerosing solutions/  |
| 7.  | (scleros* or sclerotherapy or prolotherapy).ti,ab.   |
| 8.  | ((proliferat* or regenerat*) adj2 therap*).ti,ab.  |
| 9.  | exp botulinum toxins/  |
| 10. | (botox or botulin*).ti,ab.   |
| 11. | exp hyaluronic acid/   |
| 12. | viscosupplements/  |
| 13. | viscosupplementation/  |
| 14. | viscosupplement*.ti,ab.  |
| 15. | (hyaluronic or hyaluronate* or hyaluronan*).ti,ab.   |
| 16. | exp anesthetics, local/  |
| 17. | lidocaine/   |
| 18. | (lidocaine or lignocaine).ti,ab.   |
| 19. | inject*.ti,ab.   |
| 20. | exp adrenal cortex hormones/   |
| 21. | exp steroids/  |
| 22. | (glucocorticosteroid* or corticosteroid* or glucocorticoid* or steroid*).ti,ab.  |
| 23. | (local* adj2 (an*esthetic* or an*esthes*)).ti,ab.  |
| 24. | analgesia, epidural/   |
| 25. | (epidural or peridural or extradural).ti,ab.   |
| 26. | ((caudal or sacral or sacrum or interlaminar or transforaminal or lumbar) adj2 (epidural* or analges* or block*)).ti,ab. |
| 27. | exp tumor necrosis factors/ai  |
| 28. | (antitnf or anti-tnf or ((tnf or tumo*r necrosis factor*) adj1 (antagonist* or inhibit*))).ti,ab.                        |
| 29. | or/5-28  |
| 30. | Study filters RCT [G.1.3.2] or SR [G.1.3.3]  |

|     |   |
|-----|---|
| 31. | 4 and 29 and 30                         |
| 32. | See <b>Table 25</b> for date parameters |

#### Embase search terms

|     |  |
|-----|--|
| 1.  | Standard lower back pain population [G.1.2]  |
| 2.  | Excluded study designs and publication types [G.1.3.1]   |
| 3.  | 1 not 2  |
| 4.  | Limit 3 to English language  |
| 5.  | exp *injection/  |
| 6.  | exp *sclerosing agent/   |
| 7.  | (scleros* or sclerotherapy or prolotherapy).ti,ab.   |
| 8.  | ((proliferat* or regenerat*) adj2 therap*).ti,ab.  |
| 9.  | exp *botulinum toxin/  |
| 10. | (botox or botulin*).ti,ab.   |
| 11. | exp *hyaluronic acid/  |
| 12. | *viscosupplement/  |
| 13. | *viscosupplementation/   |
| 14. | viscosupplement*.ti,ab.  |
| 15. | (hyaluronic or hyaluronate* or hyaluronan*).ti,ab.   |
| 16. | exp *local anesthetic agent/   |
| 17. | *lidocaine/  |
| 18. | (lidocaine or lignocaine).ti,ab.   |
| 19. | inject*.ti,ab.   |
| 20. | exp *corticosteroid/   |
| 21. | exp *steroid/  |
| 22. | (glucocorticosteroid* or corticosteroid* or glucocorticoid* or steroid*).ti,ab.  |
| 23. | (local* adj2 (an*esthetic* or an*esthes*)).ti,ab.  |
| 24. | *epidural anesthesia/  |
| 25. | (epidural or peridural or extradural).ti,ab.   |
| 26. | ((caudal or sacral or sacrum or interlaminar or transforaminal or lumbar) adj2 (epidural* or analges* or block*)).ti,ab. |
| 27. | exp *tumor necrosis factor/  |
| 28. | (antitnf or anti-tnf or ((tnf or tumo*r necrosis factor*) adj1 (antagonist* or inhibit*))).ti,ab.                        |
| 29. | or/5-28  |
| 30. | Study filters RCT [G.1.3.2] or SR [G.1.3.3]  |
| 31. | 4 and 29 and 30  |
| 32. | See <b>Table 25</b> for date parameters  |

#### Cochrane search terms

|     |   |
|-----|---|
| #1. | Standard lower back pain population [G.1.2]               |
| #2. | MeSH descriptor: [injections] explode all trees           |
| #3. | MeSH descriptor: [sclerosing solutions] explode all trees |
| #4. | (scleros* or sclerotherapy or prolotherapy):ti,ab         |
| #5. | ((proliferat* or regenerat*) near/2 therap*):ti,ab        |
| #6. | MeSH descriptor: [botulinum toxins] explode all trees     |
| #7. | (botox or botulin*):ti,ab                                 |

|      |   |
|------|---|
| #8.  | MeSH descriptor: [hyaluronic acid] explode all trees  |
| #9.  | MeSH descriptor: [viscosupplements] explode all trees   |
| #10. | MeSH descriptor: [viscosupplementation] explode all trees   |
| #11. | viscosupplement*:ti,ab  |
| #12. | (hyaluronic or hyaluronate* or hyaluronan*):ti,ab   |
| #13. | MeSH descriptor: [anesthetics, local] explode all trees   |
| #14. | MeSH descriptor: [lidocaine] explode all trees  |
| #15. | (lidocaine or lignocaine):ti,ab   |
| #16. | inject*:ti,ab   |
| #17. | MeSH descriptor: [adrenal cortex hormones] explode all trees  |
| #18. | MeSH descriptor: [steroids] explode all trees   |
| #19. | (glucocorticosteroid* or corticosteroid* or glucocorticoid* or steroid*):ti,ab  |
| #20. | (local* near/2 (an*esthetic* or an*esthes*)):ti,ab  |
| #21. | MeSH descriptor: [analgesia, epidural] explode all trees  |
| #22. | (epidural or peridural or extradural):ti,ab   |
| #23. | ((caudal or sacral or sacrum or interlaminar or transforaminal or lumbar) near/2 (epidural* or analges* or block*)):ti,ab |
| #24. | mesh descriptor: [tumor necrosis factors] explode all trees   |
| #25. | (antitnf or anti-tnf or ((tnf or tumo*r necrosis factor*) near/1 (antagonist* or inhibit*)):ti,ab                         |
| #26. | {or #2-#25}   |
| #27. | #1 and #26  |
| #28. | See <b>Table 25</b> for date parameters   |

#### G.1.4.18 Referral for surgical opinion: non-specific LBP and suspected sciatica

Searches for the following two questions were run as one search:

- In people with non-specific low back pain or sciatica, what are the factors (clinical signs and symptoms, patient reported outcomes or prognostic tests) that predict increased benefit or harm from surgical assessment?
- In people with non-specific low back pain or sciatica, what is the optimal timing of referral to a surgeon to improve outcomes?

#### Medline search terms

|    |   |
|----|---|
| 1. | Standard lower back pain population [G.1.2]   |
| 2. | Excluded study designs and publication types [G.1.3.1]  |
| 3. | 1 not 2   |
| 4. | Limit 3 to English language   |
| 5. | ((surg* or spondylodesis or spondylosynthesis or artificial ankylosis or syndesis or arthrodesis or fusion or dis#ectom* or laminectom* or laminotom* or dis# replace* or dis# arthroplast*) adj5 (refer* or assess* or opinion* or criteria* or select* or evaluat* or advice or advise or consult*)):ti,ab. |
| 6. | Study filter PROG [G.1.3.7]   |
| 7. | 4 and 5 and 6   |
| 8. | See <b>Table 25</b> for date parameters   |

#### Embase search terms

|    |  |
|----|--|
| 1. | Standard lower back pain population [G.1.2]            |
| 2. | Excluded study designs and publication types [G.1.3.1] |

|    |  |
|----|--|
| 3. | 1 not 2  |
| 4. | Limit 3 to English language  |
| 5. | ((surg* or spondylodesis or spondylosyndesis or artificial ankylosis or syndesis or arthrodesis or fusion or dis#ectom* or laminectom* or laminotom* or dis# replace* or dis# arthroplast*) adj5 (refer* or assess* or opinion* or criteria* or select* or evaluat* or advice or advise or consult*)).ti,ab. |
| 6. | Study filter PROG [G.1.3.7]  |
| 7. | 4 and 5 and 6  |
| 8. | See <b>Table 25</b> for date parameters  |

#### Cochrane search terms

|     |   |
|-----|---|
| #1. | Standard lower back pain population [G.1.2]   |
| #2. | ((surg* or spondylodesis or spondylosyndesis or artificial ankylosis or syndesis or arthrodesis or fusion or discectom* or diskectom* or laminectom* or laminotom* or disc replace* or disc arthroplast* or disk replace* or disk arthroplast*) near/5 (refer* or assess* or opinion* or criteria* or select* or evaluat* or advice or advise or consult*)):ti,ab |
| #3. | #1 and #2   |
| #4. | See <b>Table 25</b> for date parameters   |

#### G.1.4.19 Invasive and surgical procedures: disc replacement surgery

- What is the clinical and cost effectiveness of disc replacement surgery in people with non-specific low back pain?

#### Medline search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]   |
| 2.  | Excluded study designs and publication types [G.1.3.1]  |
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | exp diskectomy/   |
| 6.  | total disc replacement/   |
| 7.  | dis#ectom*.ti,ab.   |
| 8.  | (dis# adj4 (prosthe* or artificial or remov* or excis* or surg* or resect* or replac* or displac* or hernia* or arthroplast*)).ti,ab. |
| 9.  | ((spine or spinal or intervertebra*) adj2 (device* or arthroplast*)).ti,ab.   |
| 10. | or/5-9  |
| 11. | Study filters RCT [G.1.3.2] or SR [G.1.3.3]   |
| 12. | 4 and 10 and 11   |
| 13. | See <b>Table 25</b> for date parameters   |

#### Embase search terms

|    |   |
|----|---|
| 1. | Standard lower back pain population [G.1.2]   |
| 2. | Excluded study designs and publication types [G.1.3.1]  |
| 3. | 1 not 2   |
| 4. | Limit 3 to English language   |
| 5. | *intervertebral diskectomy/   |
| 6. | *total disc replacement/  |
| 7. | dis#ectom*.ti,ab.   |
| 8. | (dis# adj4 (prosthe* or artificial or remov* or excis* or surg* or resect* or replac* or displac* |

|     |  |
|-----|--|
|     | or hernia* or arthroplast*).ti,ab.   |
| 9.  | ((spine or spinal or intervertebra*) adj2 (device* or arthroplast*).ti,ab. |
| 10. | or/5-9   |
| 11. | Study filters RCT [G.1.3.2] or SR [G.1.3.3]                                |
| 12. | 4 and 10 and 11  |
| 13. | See <b>Table 25</b> for date parameters                                    |

#### Cochrane search terms

|     |   |
|-----|---|
| #1. | Standard lower back pain population [G.1.2]   |
| #2. | MeSH descriptor: [diskectomy] explode all trees   |
| #3. | MeSH descriptor: [total disc replacement] explode all trees   |
| #4. | dis?ectom*:ti,ab  |
| #5. | (dis? near/4 (proste* or artificial or remov* or excis* or surg* or resect* or replac* or displac* or hernia* or arthroplast*)):ti,ab |
| #6. | ((spine or spinal or intervertebra*) near/2 (device* or arthroplast*)):ti,ab  |
| #7. | {or #2-#6}  |
| #8. | #1 and #7   |
| #9. | See <b>Table 25</b> for date parameters   |

#### G.1.4.20 Invasive and surgical procedures: spinal fusion or arthrodesis

- What is the clinical and cost effectiveness of spinal fusion/arthrodesis in people with non-specific low back pain?

#### Medline search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]                                       |
| 2.  | Excluded study designs and publication types [G.1.3.1]                            |
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | spinal fusion/  |
| 6.  | fusion.ti,ab.   |
| 7.  | (alif or plif or tlif or dlif or xlif or ollif or axlif or axialif or lif).ti,ab. |
| 8.  | (arthrodesis or syndesis).ti,ab.  |
| 9.  | (spondylodesis or spondylosyndesis).ti,ab.  |
| 10. | artificial ankylosis.ti,ab.   |
| 11. | arthroplasty/   |
| 12. | total disc replacement/   |
| 13. | arthroplasty, replacement/  |
| 14. | ((disc or disk) adj2 (replac* or arthroplast*)):ti,ab.                            |
| 15. | ((vertebra* or spine or spinal or lumbar) adj2 arthroplast*)):ti,ab.              |
| 16. | or/5-15   |
| 17. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6]                      |
| 18. | 4 and 16 and 17   |
| 19. | See <b>Table 25</b> for date parameters   |

#### Embase search terms

|    |  |
|----|--|
| 1. | Standard lower back pain population [G.1.2]            |
| 2. | Excluded study designs and publication types [G.1.3.1] |

|     |   |
|-----|---|
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | exp spine fusion/   |
| 6.  | arthroplasty/   |
| 7.  | total disc replacement/   |
| 8.  | fusion.ti,ab.   |
| 9.  | (alif or plif or tlif or dlif or xlif or ollif or axlif or axialif or lif).ti,ab. |
| 10. | (arthrodesis or syndesis).ti,ab.  |
| 11. | (spondylodesis or spondylosyndesis).ti,ab.  |
| 12. | artificial ankylosis.ti,ab.   |
| 13. | ((disc or disk) adj2 (replac* or arthroplast*)).ti,ab.                            |
| 14. | ((vertebra* or spine or spinal or lumbar) adj2 arthroplast*).ti,ab.               |
| 15. | or/5-14   |
| 16. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6]                      |
| 17. | 4 and 15 and 16   |
| 18. | See <b>Table 25</b> for date parameters   |

#### Cochrane search terms

|      |  |
|------|--|
| #1.  | Standard lower back pain population [G.1.2]                                      |
| #2.  | [mh "spinal fusion"]   |
| #3.  | [mh arthroplasty]  |
| #4.  | [mh "total disc replacement"]  |
| #5.  | [mh "arthroplasty, replacement"]   |
| #6.  | (fusion or arthrodesis or syndesis or spondylodesis or spondylosyndesis):ti,ab   |
| #7.  | (alif or plif or tlif or dlif or xlif or ollif or axlif or axialif or lif):ti,ab |
| #8.  | (artificial next ankylosis):ti,ab  |
| #9.  | ((disc or disk) near/2 (replac* or arthroplast*)):ti,ab                          |
| #10. | ((vertebra* or spine or spinal or lumbar) near/2 arthroplast*):ti,ab             |
| #11. | {or #2-#10}  |
| #12. | #1 and #11   |
| #13. | See <b>Table 25</b> for date parameters  |

#### G.1.4.21 Invasive and surgical procedures: spinal decompression

- What is the clinical and cost effectiveness of spinal decompression in people with sciatica?

#### Medline search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]   |
| 2.  | Excluded study designs and publication types [G.1.3.1]                                |
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | dis#ectom*.ti,ab.   |
| 6.  | (dis# adj2 (remov* or excis* or surg* or resect* or replac*)):ti,ab.                  |
| 7.  | (lumb* adj2 (remov* or excis* or surg* or resect* or replac* or arthroplast*)):ti,ab. |
| 8.  | exp diskectomy/   |
| 9.  | total disc replacement/   |
| 10. | laminectomy/  |

|     |   |
|-----|---|
| 11. | (laminectom* or laminotom* or laminoplast*).ti,ab.  |
| 12. | (lamina adj2 (remov* or excis* or surg* or resect* or replac* or arthroplast*)).ti,ab.  |
| 13. | foraminotomy/   |
| 14. | (facetectom* or foraminotom* or fenestrat*).ti,ab.  |
| 15. | decompression, surgical/  |
| 16. | ((surg* or lumb* or dis# or intradiscal) adj2 decompress*).ti,ab.   |
| 17. | microdis#ectom*.ti,ab.  |
| 18. | (micro* adj2 (surg* or endoscop* or laser)).ti,ab.  |
| 19. | ((dis# or intradiscal or intervertebral or percutaneous) adj2 (arthroplast* or biacuplast* or annuloplast* or electrothermal or thermomodulation)).ti,ab. |
| 20. | (accutherm or discrode or spinecath or transdiscal).ti,ab.  |
| 21. | (thermal adj2 procedure*).ti,ab.  |
| 22. | apld.ti,ab.   |
| 23. | microdecompression*.ti,ab.  |
| 24. | sequestrectom*.ti,ab.   |
| 25. | lumbar vertebrae/su [surgery]   |
| 26. | or/5-25   |
| 27. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6]  |
| 28. | 4 and 26 and 27   |
| 29. | See <b>Table 25</b> for date parameters   |

#### Embase search terms

|     |   |
|-----|---|
| 1.  | Standard lower back pain population [G.1.2]   |
| 2.  | Excluded study designs and publication types [G.1.3.1]  |
| 3.  | 1 not 2   |
| 4.  | Limit 3 to English language   |
| 5.  | dis#ectom*.ti,ab.   |
| 6.  | (dis# adj2 (remov* or excis* or surg* or resect* or replac*)).ti,ab.  |
| 7.  | (lumb* adj2 (remov* or excis* or surg* or resect* or replac* or arthroplast*)).ti,ab.   |
| 8.  | intervertebral disectomy/   |
| 9.  | total disc replacement/   |
| 10. | laminectomy/  |
| 11. | (laminectom* or laminotom* or laminoplast*).ti,ab.  |
| 12. | (lamina adj2 (remov* or excis* or surg* or resect* or replac* or arthroplast*)).ti,ab.  |
| 13. | foraminotomy/   |
| 14. | fenestration/   |
| 15. | (facetectom* or foraminotom* or fenestration*).ti,ab.   |
| 16. | decompression surgery/  |
| 17. | ((surg* or lumb* or dis# or intradiscal) adj2 decompress*).ti,ab.   |
| 18. | microdis#ectom*.ti,ab.  |
| 19. | (micro* adj2 (surg* or endoscop* or laser)).ti,ab.  |
| 20. | ((dis# or intradiscal or intervertebral or percutaneous) adj2 (arthroplast* or biacuplast* or annuloplast* or electrothermal or thermomodulation)).ti,ab. |
| 21. | (accutherm or discrode or spinecath or transdiscal).ti,ab.  |
| 22. | (thermal adj2 procedure*).ti,ab.  |
| 23. | apld.ti,ab.   |

|     |  |
|-----|--|
| 24. | microdecompression*.ti,ab.                                   |
| 25. | sequestrectom*.ti,ab.  |
| 26. | lumbar vertebra/su [surgery]                                 |
| 27. | or/5-26  |
| 28. | Study filters RCT [G.1.3.2] or SR [G.1.3.3] or OBS [G.1.3.6] |
| 29. | 4 and 27 and 28  |
| 30. | See <b>Table 25</b> for date parameters                      |

### Cochrane search terms

|      |   |
|------|---|
| #1.  | Standard lower back pain population [G.1.2]   |
| #2.  | dis*ectom*:ti,ab,kw   |
| #3.  | (dis* near/2 (remov* or excis* or surg* or resect* or replac*)):ti,ab,kw  |
| #4.  | (lumb* near/2 (remov* or excis* or surg* or resect* or replac* or arthroplast*)):ti,ab,kw   |
| #5.  | MeSH descriptor: [diskectomy] explode all trees   |
| #6.  | MeSH descriptor: [total disc replacement] this term only  |
| #7.  | MeSH descriptor: [laminectomy] this term only   |
| #8.  | (laminectom* or laminotom* or laminoplast*):ti,ab,kw  |
| #9.  | (lamina near/2 (remov* or excis* or surg* or resect* or replac* or arthroplast*)):ti,ab,kw  |
| #10. | MeSH descriptor: [foraminotomy] this term only  |
| #11. | (facetectom* or foraminotom* or fenestrat*):ti,ab,kw  |
| #12. | MeSH descriptor: [decompression, surgical] this term only   |
| #13. | ((surg* or lumb* or dis* or intradiscal) near/2 decompress*):ti,ab,kw   |
| #14. | microdis*ectom*:ti,ab,kw  |
| #15. | (micro* near/2 (surg* or endoscop* or laser)):ti,ab,kw  |
| #16. | ((dis* or intradiscal or intervertebral or percutaneous) near/2 (arthroplast* or biacuplast* or annuloplast* or electrothermal or thermomodulation)):ti,ab,kw |
| #17. | (accutherm or distrode or spinecath or transdiscal):ti,ab,kw  |
| #18. | (thermal near/2 procedure*):ti,ab,kw  |
| #19. | apl:ti,ab,kw  |
| #20. | microdecompression*:ti,ab,kw  |
| #21. | sequestrectom*:ti,ab,kw   |
| #22. | MeSH descriptor: [lumbar vertebrae] this term only and with qualifier(s): [surgery - su]  |
| #23. | {or #2-#22}   |
| #24. | #1 and #23  |
| #25. | See <b>Table 25</b> for date parameters   |

## G.1.5 Health economics search

### G.1.5.1 Health economic reviews

Economic searches were conducted in Medline, Embase, CRD (for NHS EED and HTA) and HEED.

#### Medline & Embase search terms

|    |  |
|----|--|
| 1. | Standard lower back pain population [G.1.2]  |
| 2. | Excluded study designs and publication types [G.1.3.1Error! Reference source not found.] |
| 3. | 1 not 2  |
| 4. | Limit 3 to English language  |

|    |  |
|----|--|
| 5. | Study filter HE [G.1.3.4]              |
| 6. | 4 and 5                                |
| 7. | Date parameters: 2013-15 December 2015 |

#### CRD search terms

|     |  |
|-----|--|
| #1. | Standard lower back pain population [G.1.2]    |
| #2. | Date parameters: Inception to 15 December 2015 |

#### HEED search terms

|    |   |
|----|---|
| 1. | Standard lower back pain population [G.1.2]   |
| 2. | Date parameters: Inception to 29 October 2013 |

### G.1.5.2 Quality of life reviews

#### Medline & Embase search terms

|    |  |
|----|--|
| 1. | Standard lower back pain population [G.1.2]                |
| 2. | (euroqol* or eq5d* or eq 5*).ti,ab.                        |
| 3. | 1 and 2  |
| 4. | See <b>Table 25</b> for date parameters – 21 December 2015 |