



**National Physiotherapy Low Back Pain Audit**  
Improving Back Care in Scotland



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# Foreword

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NHS QIS is delighted to publish this report which provides for the first time anywhere globally, evidence of the standard of physiotherapy management of low back pain throughout a whole country. Nationally led yet locally driven, the results of this work clearly show that the majority of patients with low back pain in Scotland are managed in line with best guidance. It also shows that significant improvements were brought about as a direct consequence of being involved in this work. What has been achieved is extremely positive but we should not be complacent, further improvement needs to happen. The most encouraging achievement however is that now there is an established framework being actively used by all NHS low back pain physiotherapy providers in Scotland (also some private providers) who are committed to continuing to support ongoing improvements and monitor their progress. Scotland's physiotherapy community is leading the way internationally in demonstrating the benefits to patient care and outcome of such an approach, one that is commended and advocated for wider consideration. Well done Scotland!

**Lesley K Holdsworth PhD FCSP DPT**

Head of Health Services Research & Effectiveness

## Acknowledgements

We are very grateful to the clinical physiotherapists who enthusiastically carried out this work. Thanks are also extended to the NHS board/regional representatives who co-ordinated the local efforts without whom this work would not have been possible. The Chartered Society of Physiotherapy is also acknowledged and thanked for their interest and support in this work.

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## Executive summary

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In 2008 NHS Quality Improvement Scotland (NHS QIS) published a systematic review on service delivery organisation for acute low back pain<sup>1</sup>, which recommended that the physiotherapy management of low back pain (LBP) should take account of existing evidence-based guidelines. However, similar to other countries worldwide, Scotland lacked a national view of whether the quality of the physiotherapy management of LBP was compliant with national guidelines. Anecdotal evidence suggested that standards of care varied considerably.

The National Physiotherapy Low Back Pain Audit (NPLBPA) was part of a programme of work established by NHS QIS that over one year developed a framework that aimed to support NHS Scotland in providing consistently applied high quality physiotherapy management of LBP in line with best evidence.

The results demonstrated that the documented care of the physiotherapy management in line with national guidance increased considerably over the two cycles in all NHS boards and the two private provider sites in Scotland.

As a consequence of this work, a standardised framework for the continuous improvement of national standards has been identified and implemented, a mechanism which has the potential to demonstrate high standards of improving patient care.

All LBP service providers are committed to ongoing, monitoring, sharing and continuous improvement.

There is however, a requirement for continuing improvement in line with best evidence, particularly in relation to the documentation of all factors associated with patients at risk of spinal fracture, red flags, Cauda Equina Syndrome (CES) and of neurological assessment on patients with nerve root pain (NRP).

# Introduction

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Low back pain (LBP) has significant socio-economic consequences for the United Kingdom with most recent annual estimates reported to be £5 billion<sup>2</sup>. LBP accounts for 30% of musculoskeletal physiotherapy out patient activity and is the most common condition managed by physiotherapists within the NHS. Estimates from the Information Services Division (ISD) of NHS National Services Scotland suggested a referral rate of approximately 12,000 per annum. The validity of this figure was however challenged by the profession.

Clinical guidelines have been produced to guide physiotherapists in the assessment and management of LBP. They provide clear guidance from a range of sources including the Chartered Society of Physiotherapy<sup>3,4</sup> and the Royal College of General Practitioners.<sup>5</sup> This evidence includes the requirement for patients with LBP to be fully assessed. The overwhelming majority of LBP referrals made to physiotherapy services are mechanical or chronic in nature and appropriate for conservative management (approximately 85%). Fortunately, serious pathology is rarely encountered but the assessment process should be thorough enough to ensure that if present, this is identified and referred for medical management timeously. Examples of serious pathology that can present include carcinomas, spinal and nerve route compression.

Anecdotal evidence also suggested that physiotherapy management of LBP throughout Scotland was neither consistent nor followed evidence-based clinical guidelines.

**“Improved standards of care attempting to make sure patients get same assessment and management across board.”**

## Aim

To develop a framework that supports NHSScotland in providing consistently applied high quality physiotherapy management of LBP in line with best evidence.

## Objectives

The audit had a number of distinctive objectives. To:

- 1 establish the extent to which practice complied with validated guidelines
- 2 provide a framework and resources to support local services in considering, changing and improving their clinical practice
- 3 demonstrate the impact of the implemented framework

and in doing so:

- 4 establish the actual number of patients seen by musculoskeletal outpatient physiotherapy services, and
- 5 provide an overview of their demographic and clinical profile

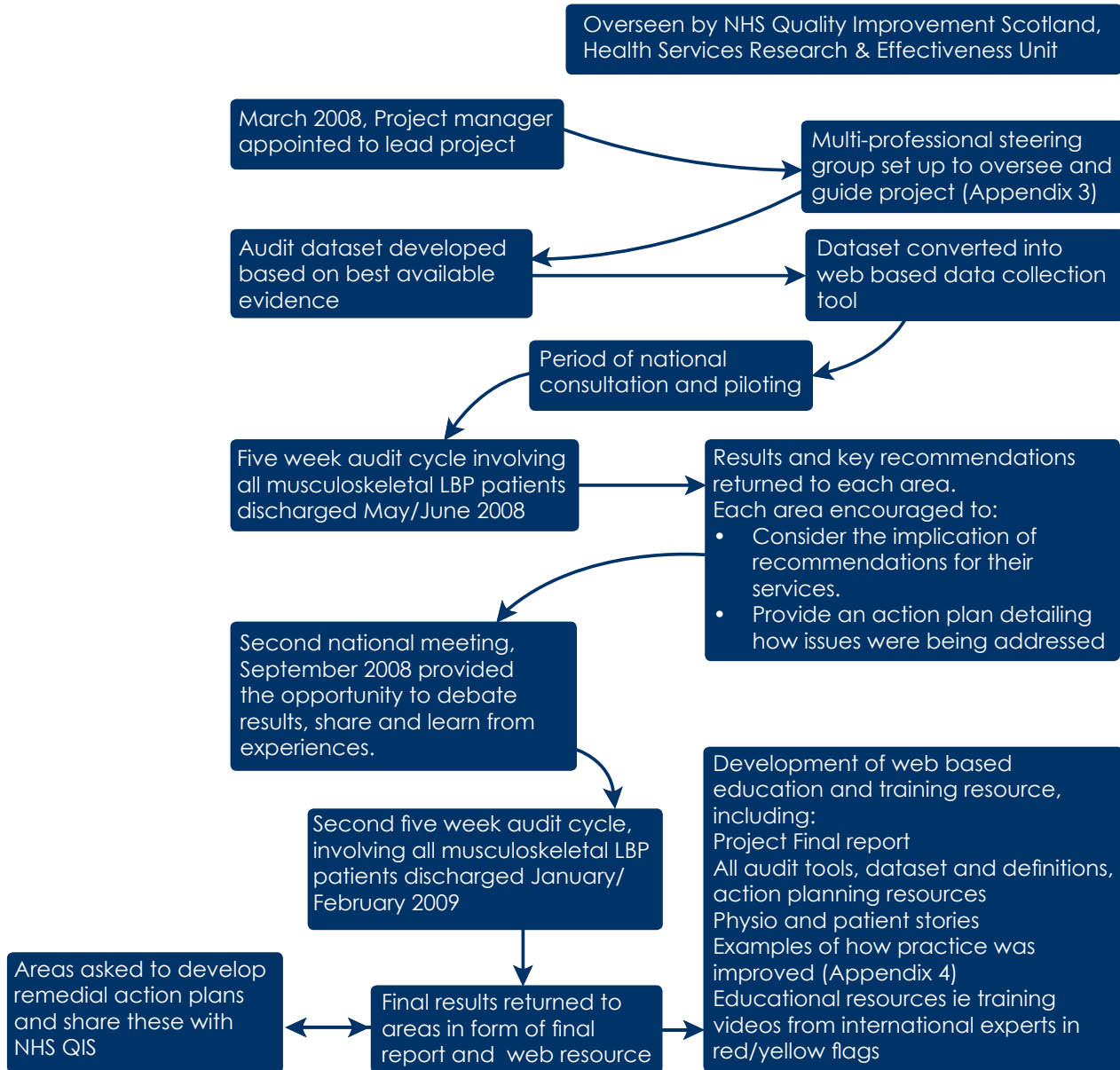
These results (4 and 5) are presented in the Appendices 1 and 2.

## Who took part?

Sixteen areas took part: all NHS boards (n=14) in Scotland plus two private providers. This included 186 individual NHS sites and three private sites who provide services for LBP patients.

To promote involvement and endorsement by the professional governing body of physiotherapy, the Chartered Society of Physiotherapy was represented and contributed to national meetings and throughout the project.

## Project overview





## Dataset

The dataset was developed from relevant clinical guidelines for LBP<sup>3-5,7-8,11-12,14</sup>. The data items contained within the dataset are detailed below.

## Components of the dataset

### DEMOGRAPHICS

### ASSESSMENT INFORMATION

- PREVIOUS HISTORY OF LBP
- PRESENT SYMPTOMS
- FRACTURE AND OSTEOPOROSIS RISK
- RED FLAG SCREENING
- CAUDA EQUINA SYNDROME SCREENING
- YELLOW FLAGS ASSESSMENT
- NEUROLOGICAL TESTING
- DIAGNOSTIC TRIAGE

### PATIENT MANAGEMENT STRATEGIES, INCLUDING:

- PROVISION OF ADVICE
- TREATMENT MODALITIES

### DISCHARGE INFORMATION

- CONTACT NUMBERS
- DISCHARGE REASON AND FURTHER MANAGEMENT
- OUTCOME MEASURES

## National guidelines

National guidelines recommend that the following key elements are assessed and considered during routine assessment of patients with LBP<sup>3-5,7-8,11-12,14</sup>. The following include those that can be indicators of potentially serious pathology:

- **Risk of spinal fracture:** patients with a history of osteoporosis and/or long term steroid use are significantly more at risk of spinal fracture.
- **Red flags:** can highlight the risk of serious spinal pathology.
- **Cauda Equina Syndrome (CES):** is a potentially serious presentation requiring immediate surgical assessment.
- **Yellow flags:** are used to help identify patients who may be at risk of developing chronic pain.
- **Neurological assessment:** is advocated to accurately identify any neurological deficits associated with LBP. This includes assessment of passive straight leg raise (PLSR), reflexes, myotomes, and dermatomes and is advocated in patients with nerve root pain, (low back pain referred to below the knee).
- **Educational resources for patients:** patients should receive written educational material that is consistent and evidence-based. The Back Book<sup>6</sup> is recognised as the gold standard patient publication for acute LBP<sup>7-9</sup>.

Guidelines and recent Scottish Government policy documents also recommend that physiotherapists have direct and equitable access to a range of specialist services<sup>5,8,10-12</sup>.

These include:

- imaging,
- orthopaedic assessment for surgery,
- psychology, and
- pain management services.

## Data collection tool

The validated dataset was converted into a web-based collection tool<sup>13</sup>. This work was undertaken by Glasgow Caledonian University Health Sciences Division. Participants were provided with training in its use and allowed three weeks in which to trial the tool within their own area prior to commencing data collection.

## Data collection periods

Prior to commencing data collection, an effort was made to quantify how many patients with LBP were referred annually to physiotherapy. Initially, ISD was approached but could only provide an estimated annual referral rate to physiotherapy of 12,000. As this estimate was received with a level of scepticism, NHS boards were asked to submit information about the number of LBP patient referrals they had received during the previous twelve months (2007).

The majority of areas reported challenges associated with providing this baseline referral information. The challenges reported related to both access to and reliability of available data.

Associated with this work, two cycles of active data collection took place; cycle one, May–June 2008 and cycle two, January–February 2009.

## Active intervention period

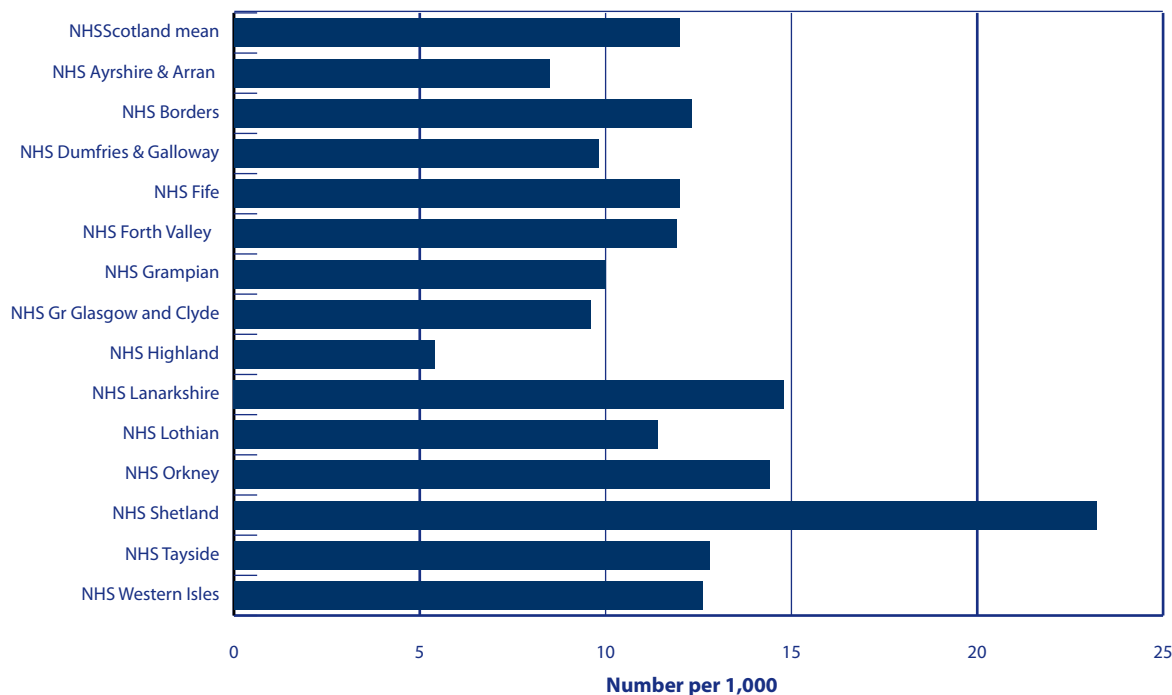
Between the two audit cycles, participating areas were provided with their own results benchmarked against other areas. Each was encouraged to develop and implement an action plan to address issues identified locally. NHS QIS provided resources during this period to support sites develop and implement remedial action plans. A national meeting was also held to allow participants to share issues and learning. Examples of comments received from participating areas about how they had begun to address the action plans are in Appendix 4.

# Results

## Baseline referral numbers; 2007 reported figures

Based on the information provided by participants, the number of LPB referrals reported during 2007, was 55,487 (56,796 including the two private provider sites). This equated to a mean referral rate of 12 per 1,000 of the population although there was wide variation observed across Scotland, 6-23/1000.

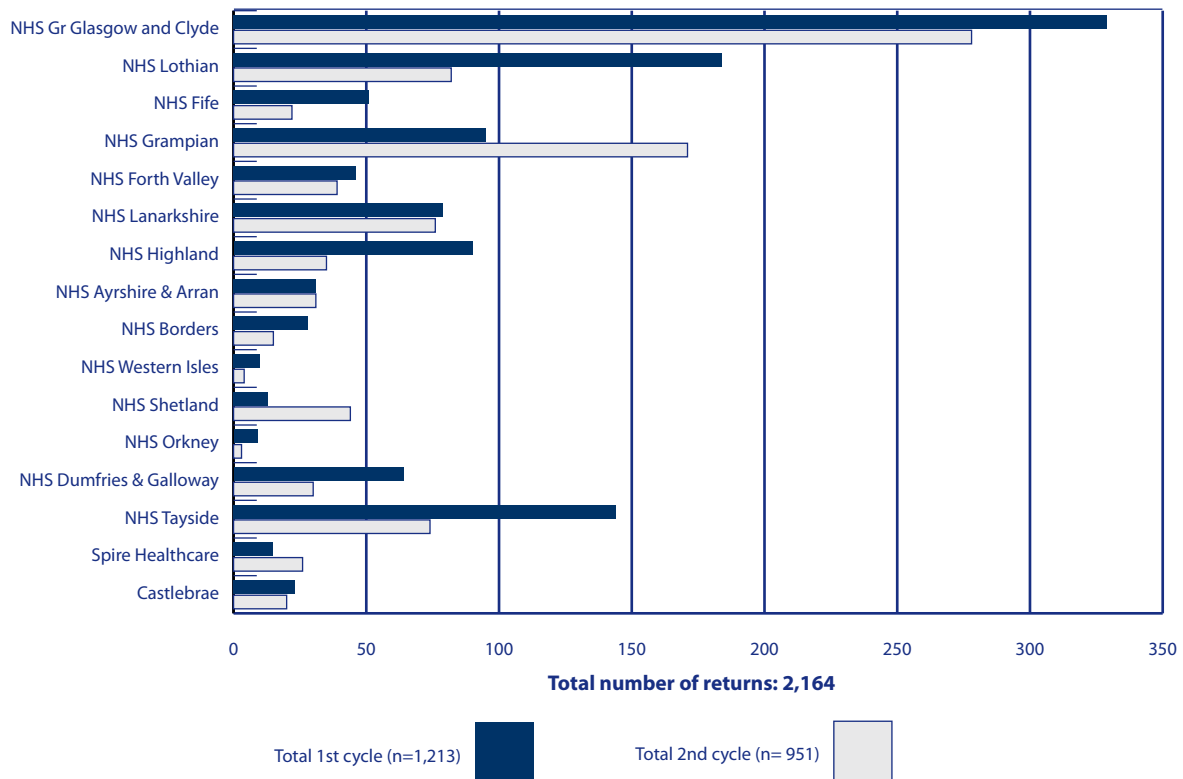
Figure 1 Number per 1,000 of LBP patients referred to physiotherapy services by NHS board 2006-2007



## Results from the two audit cycles

Data were collected on all LBP patients discharged from physiotherapy during the time periods identified previously. It needs to be considered that discharge numbers do not equate exactly to referral numbers. It is well documented that there are a proportion of patients (between 5-10%) who although referred, are not seen by the physiotherapy service for a variety of reasons. However, this figure, could be considered as a good proxy measure in the absence of any other reliable data.

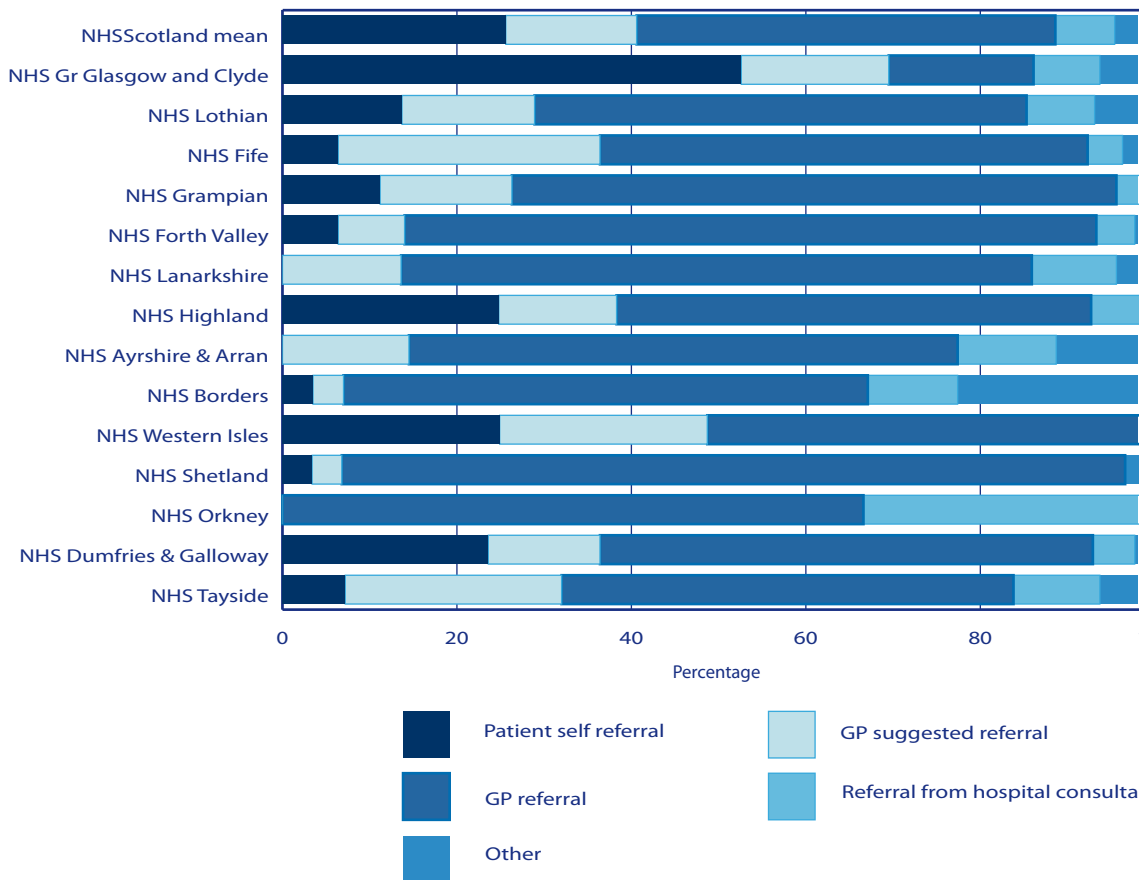
Figure 2 Number of returns per area, results from first and second cycles



## Source of referral

Combined data from both audit cycles indicated that most LBP referrals to NHS physiotherapy were made by GPs (48% [n=1,038]) with 25.6% (n=554) being patient self referrals and 15% (n=325) GP suggested referrals. GP suggested referrals are classified as referrals made by patients themselves after having been advised to do so by their GP. This differs from 'true' self referrals due to the fact that they required a 'prompt' from another healthcare professional rather than initiating the referral themselves. The source of referral varied considerably across Scotland.

Figure 3 Source of referral



## Overall compliance with national guidelines

The results established that physiotherapy services throughout Scotland were able to demonstrate levels of compliance with national validated guidelines. Improvement was noted over the two cycles and, after the second cycle demonstrated that:

- 95.8% (n= 2,074) of patients were managed using diagnostic triage,
- 89.6% (n=1,938) of patients were encouraged to self manage,
- 84.9% (n=138) of patients had the prognosis of this episode of LBP explained, and
- 87.1% (n=1,884) of patients were given advice to remain active.

Certain physiotherapy modalities are not advocated for LBP due to a lack of supporting evidence. These particularly relate to: traction, interferential therapy and short wave diathermy. On average over two audit cycles, gratifyingly, less than 1% received such modalities:

- 0.8% (n=18) of patients received traction,
- 0.8% (n=18) of patients received interferential therapy, and
- 1% (n=22) of patients received short wave diathermy.

# Compliance with national guidelines

## Documentation of the risk of spinal fracture

Despite increasing over two cycles, few services could demonstrate compliance greater than 75%. This equates to more than one patient in four not being fully assessed for being at risk of spinal fracture.

Figure 4 Documentation of the risk of spinal fracture: steroids

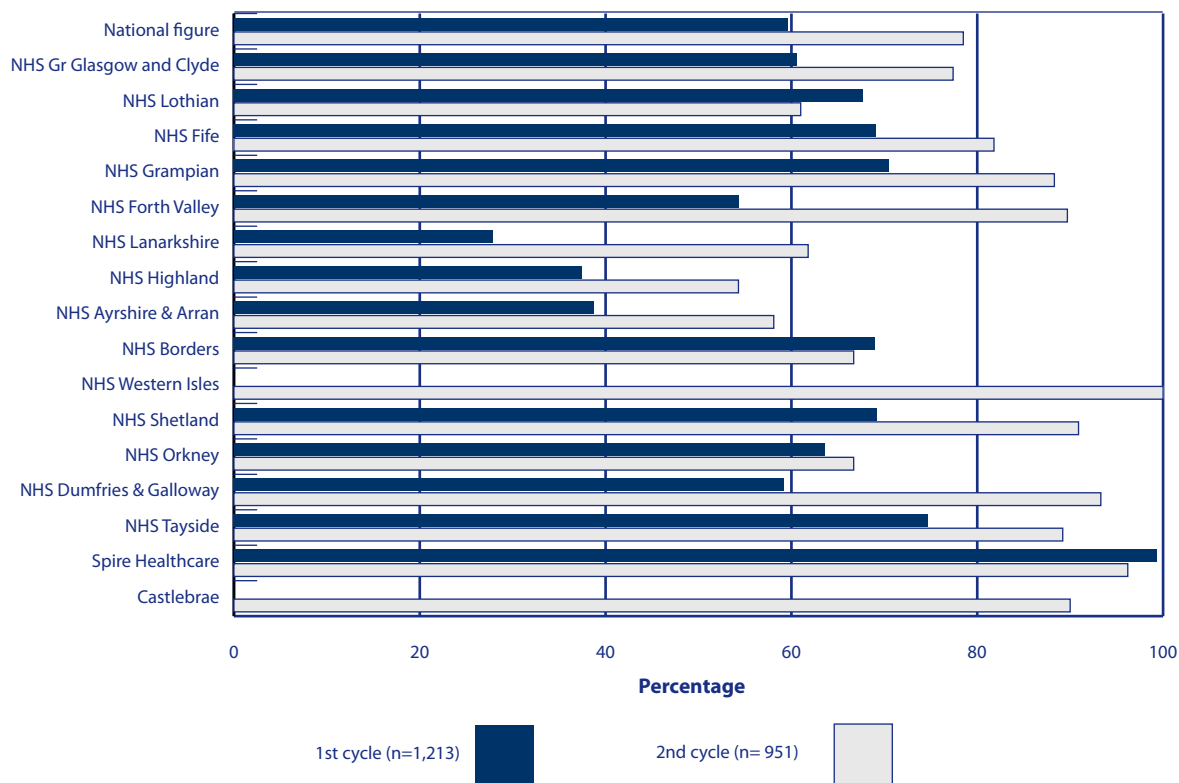
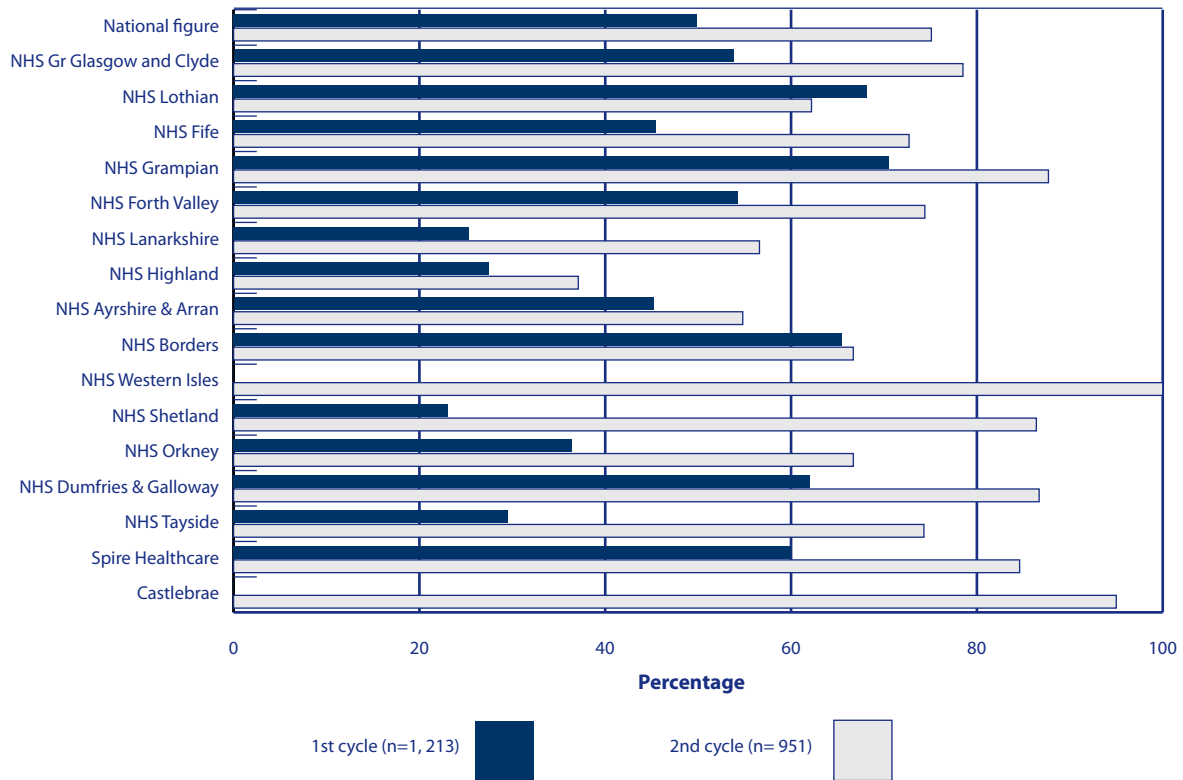




Figure 5 Documentation of the risk of spinal fracture: osteoporosis

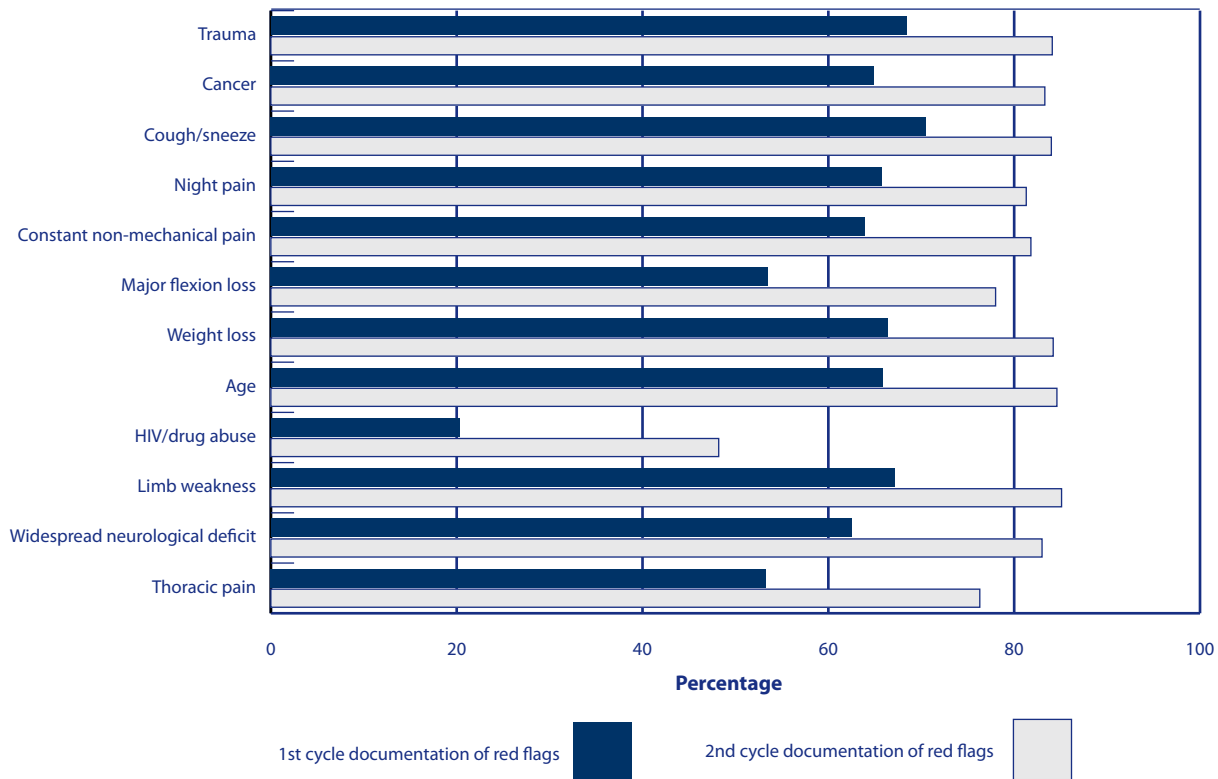


## Documentation of red flag assessment

Overall, with the exception of HIV/drug abuse, there was an increase in the documentation of red flags.

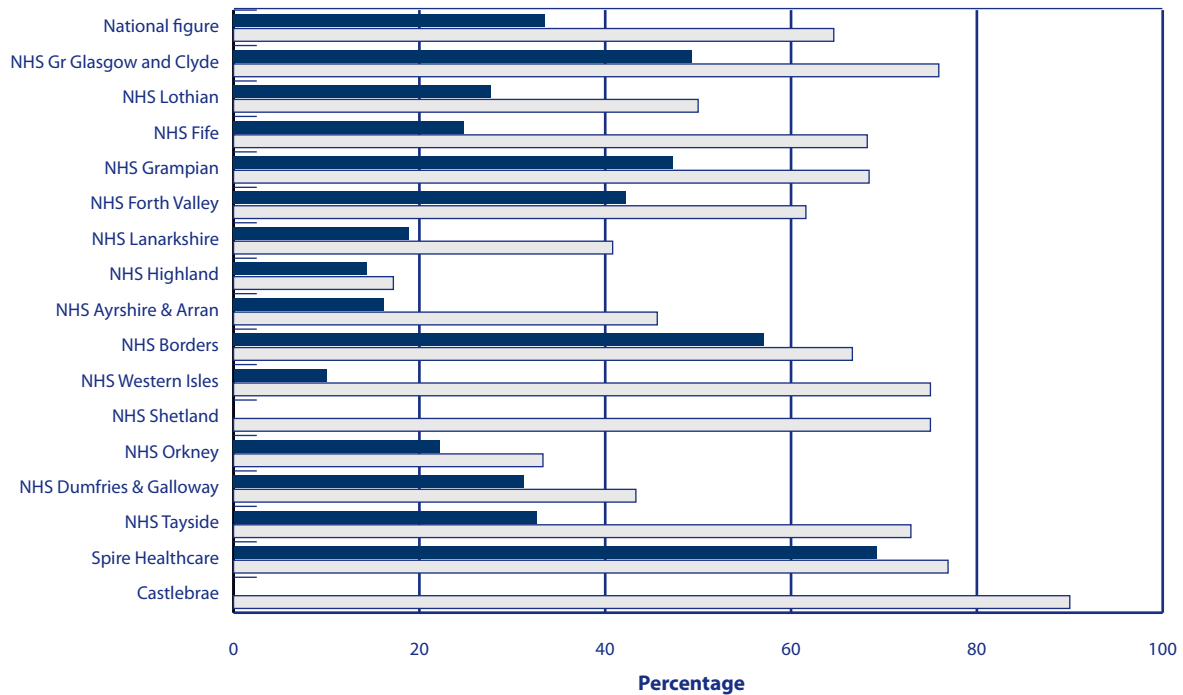
Even after two cycles of audit there remained wide variation in compliance of documented evidence of ALL red flag questions. This was less than 80% in 15 of 16 areas. Nationally this figure equates to two in five patients not being fully assessed for red flags.

Figure 6 Documentation of red flag assessment



“Increased clinical reasoning skills when assessing LBP patients- especially in presence of yellow/red flag questions”

Figure 7 Compliance with recording of ALL red flags on assessment (figures do not include the HIV/drug abuse question)

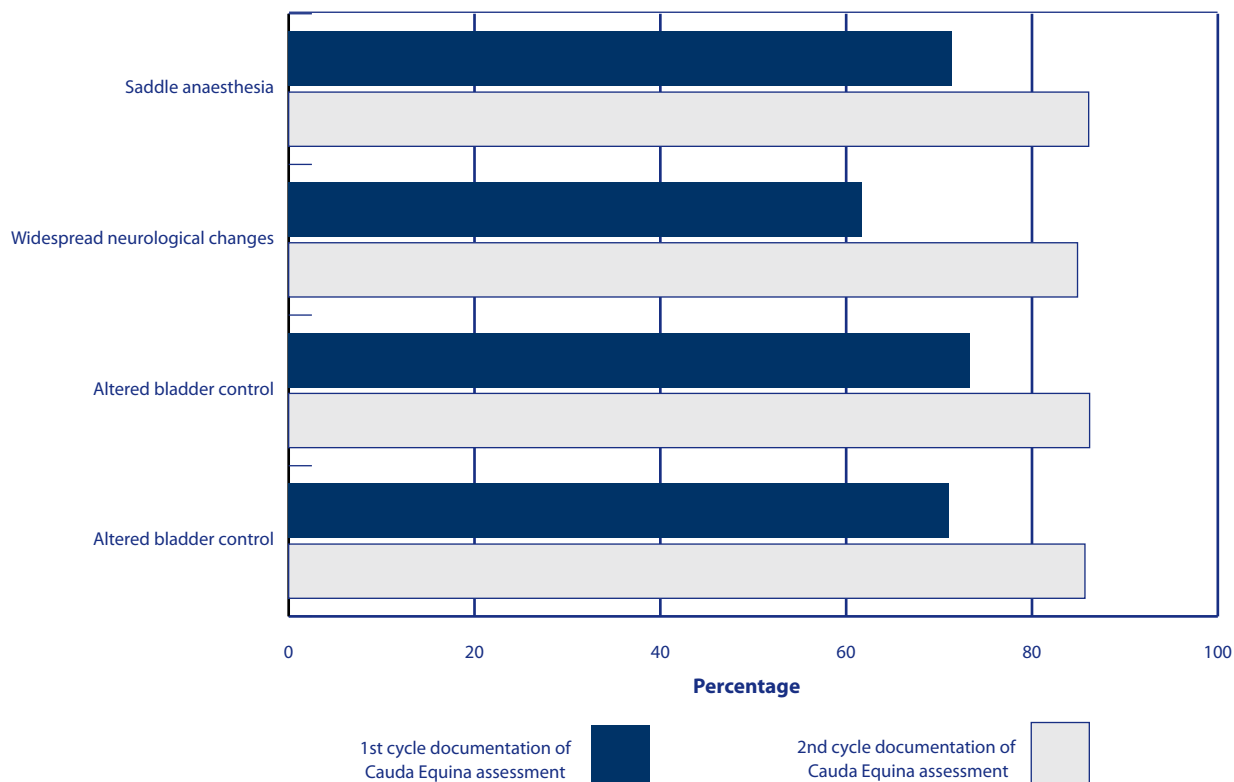


“I am much more careful about asking red/yellow flags questions, thus keeping an eye on the broader picture”

## Documentation of Cauda Equina assessment

Overall, after the course of both cycles, documentation of all individual factors associated with the assessment of CES increased.

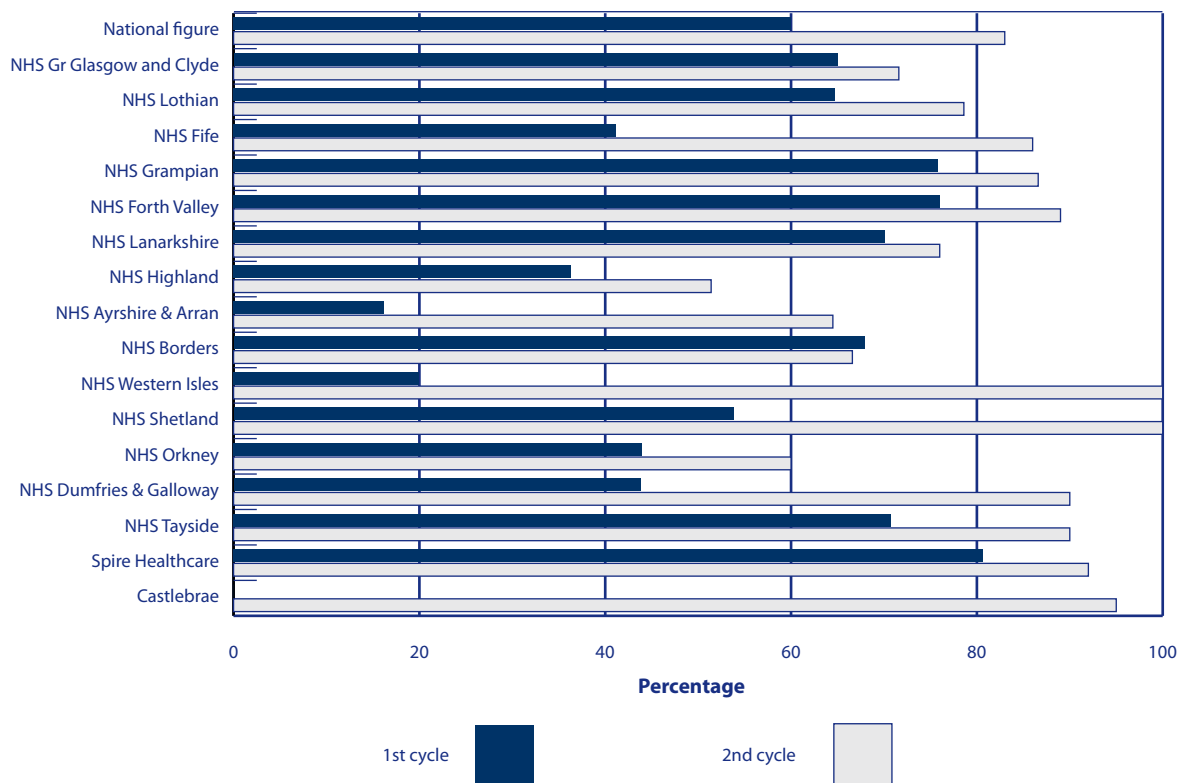
Figure 8 Documentation of Cauda Equina assessment



Even after two cycles of audit, there remained wide variation across Scotland in the compliance with documented evidence of ALL Cauda Equina questions. Compliance was less than 80% in 7 of 16 areas. Nationally this figure equates to one in five patients not being fully assessed for CES.

“ I think it is great that for once physiotherapists are sharing good practice, especially in relation to red flag and cauda equina information. This can only benefit patient care in the long term, however we have to careful not to assume that one assessment fits all! ”

Figure 9 Documentation of ALL Cauda Equina questions on assessment

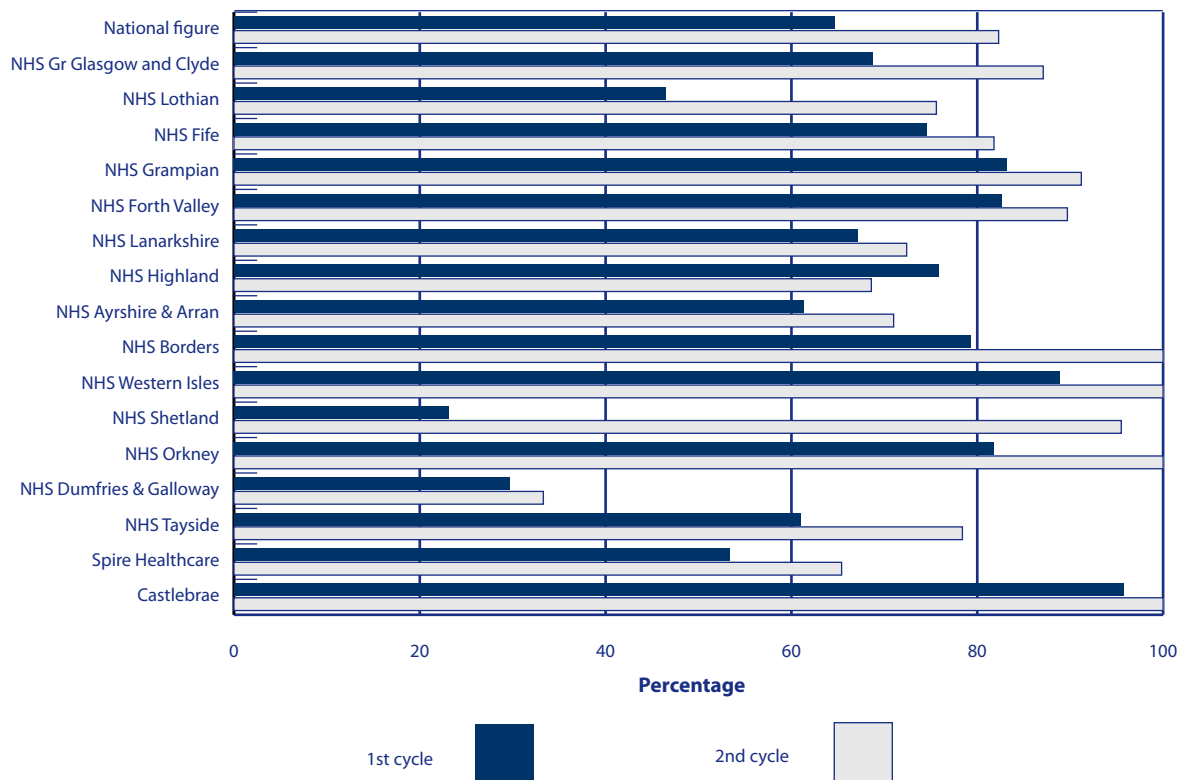


“ All staff should now be screening red and yellow flags as a matter of course and recognising the importance of these - this can only be better for staff and the patients. Staff now have a formal way of documneting this. Inappropriate use of electrotherapy has now stopped.”

## Documentation of yellow flag assessment

Documentation of yellow flags increased in 16 of 17 areas over the two cycles. Nationally this equates to one in five patients not being fully assessed for yellow flags.

Figure 10 Documentation of yellow flags

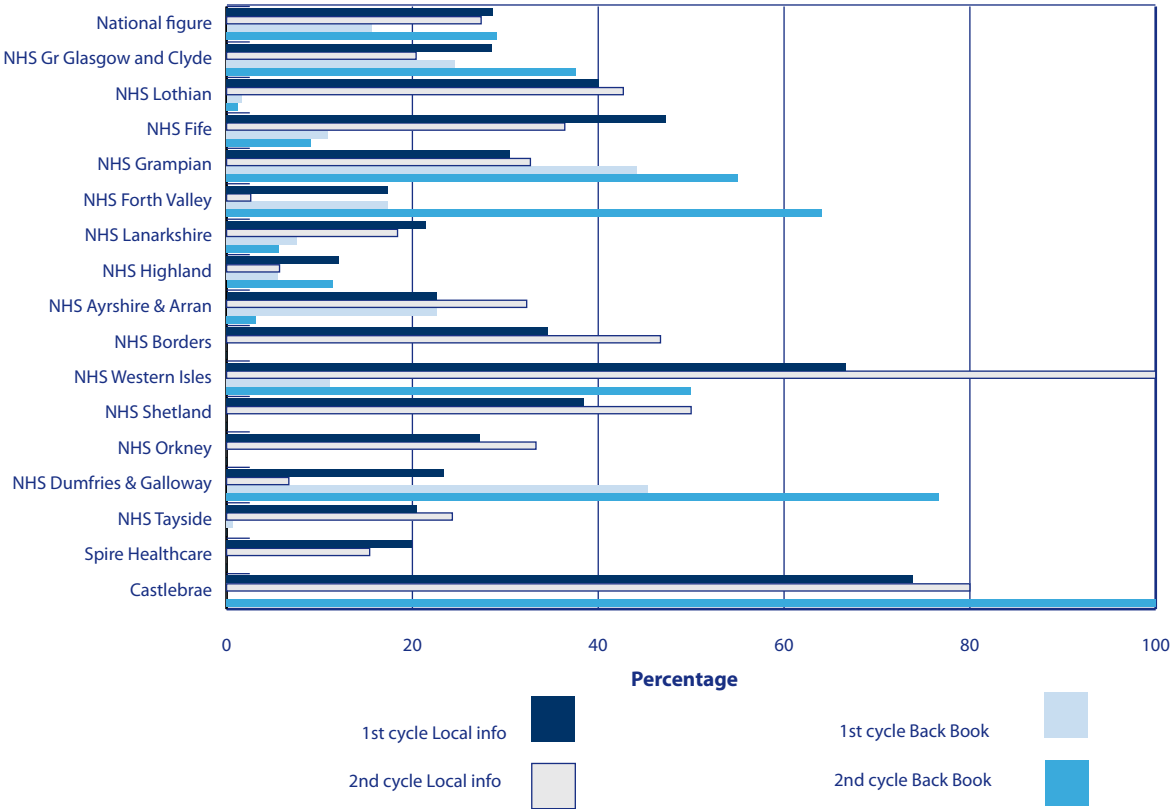


“Much more aware of the importance of recording that yellow flag assessments have been carried out. Even if yellow flags are not an obvious problem at the start it is worth nothing this”

# Supply of written patient educational material

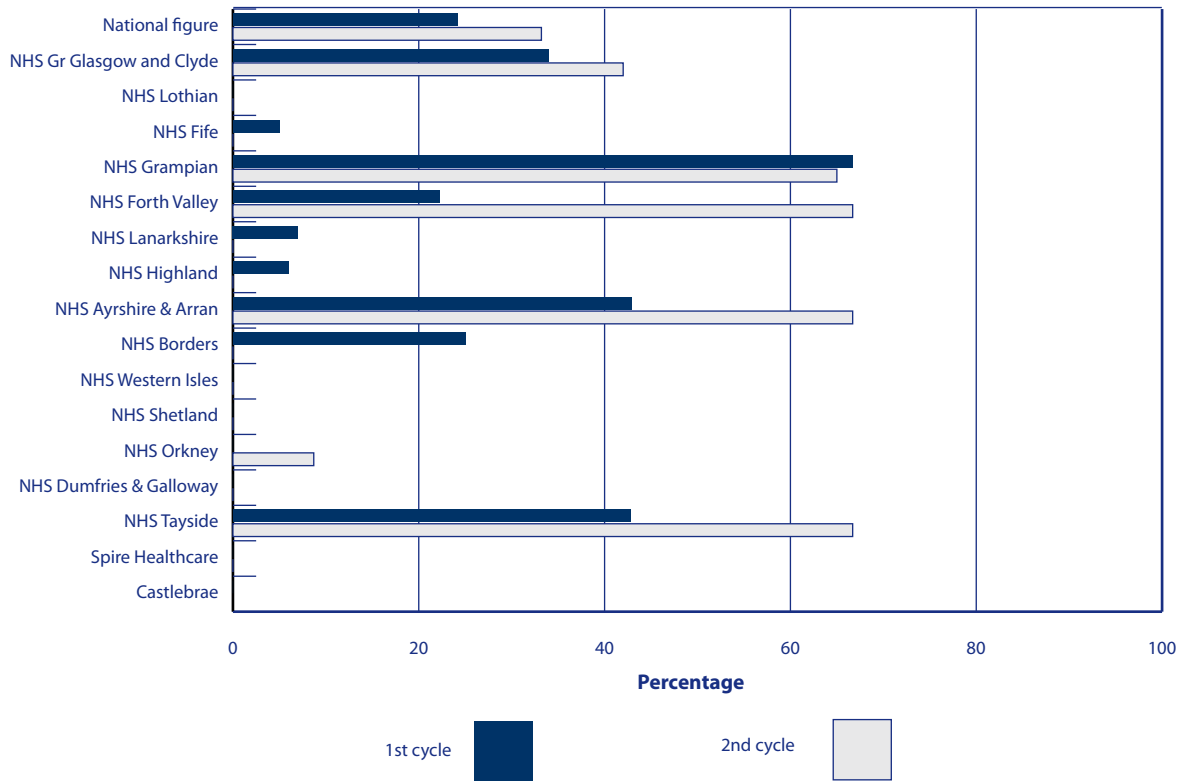
Although there was a minimal increase in the number of patients supplied with locally produced material about their back pain, this equates to one in four patients being supplied with written education.

Figure 11 Provision of written patient information



Nationally there was a 10% increase in the provision of the Back Book for acute back pain patients (23% to 33%). Even after two cycles less than one in five acute LBP patients were being provided with the Back Book<sup>6</sup>.

Figure 12 Percentage of acute LBP patients provided with the Back Book

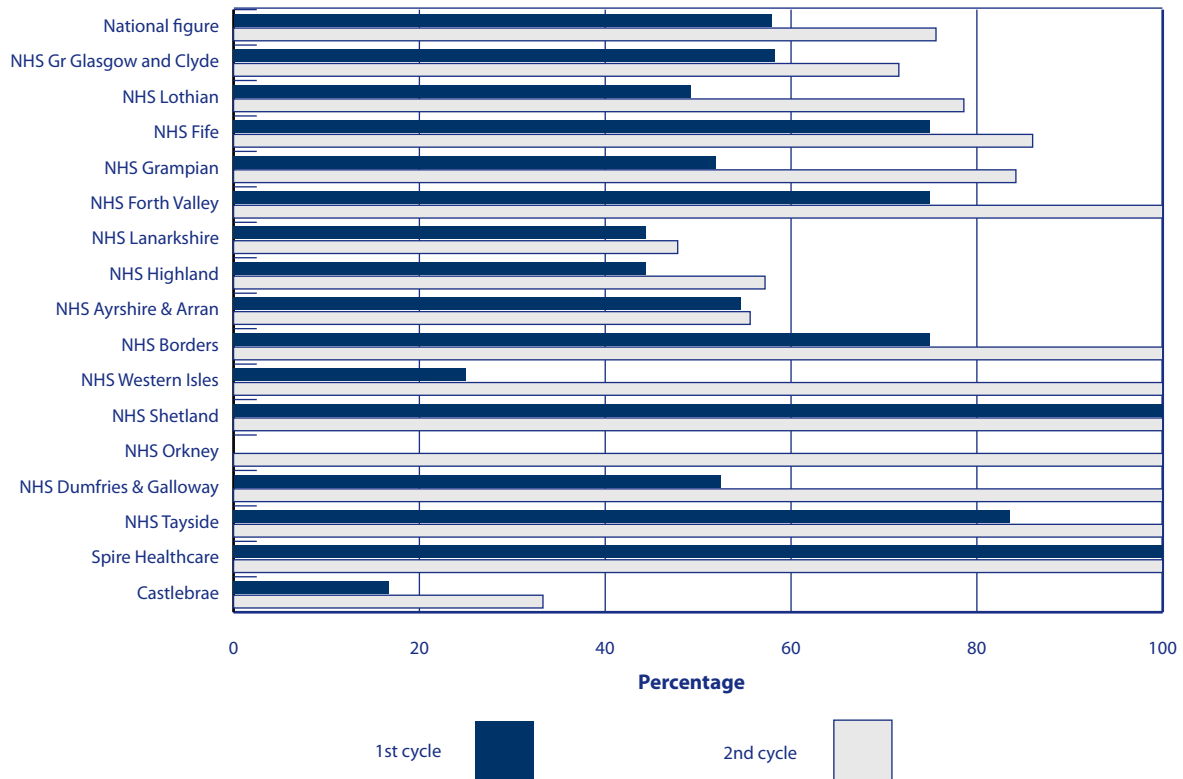




## Documented full neurological assessment for nerve root pain

There was increased documentation of a full neurological assessment being carried out on patients with NRP. However, even after two cycles of audit, variation remained across Scotland in the compliance with documented evidence of a full neurological assessment being carried out.

Figure 13 Documented full neurological assessment for NRP



## Access to specialist services

Questioning identified significant variation in physiotherapy access to specialist services. No NHS board reported direct physiotherapy access to all specialist services. Differences were also experienced within NHS boards and particularly related to where services were sited ie primary or acute care. Two NHS boards reported no direct physiotherapy access to any of the identified specialist services.

Detailed results can be found in Appendix 2 of this summary report and in the full project report at: <http://www.nhshealthquality.org/nhsqis/4057.html>

## Key conclusions

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In terms of the physiotherapy management of patients with LBP, after two cycles of audit, across Scotland:

- Documented assessment of factors associated with risk of spinal fracture (long term steroid use and history of osteoporosis) increased from 60.5% and 53.8% to 77.4% and 78.5% respectively
- Documented assessment of all factors listed for red flags (excluding HIV) increased from 33% to 64%
- Documented assessment of all factors listed for identification of Cauda Equina increased from 59% to 83%
- Documented assessment of yellow flags increased from 64.6% to 82.3%
- Documented assessment of a full neurological assessment for NRP increased from 57.9% to 75.6%
- Overall throughout Scotland, despite increasing over the two cycles, low levels of written patient information were provided
- Documented provision of the Back Book for acute LBP increased from 23% to 33%
- Documentation of a patient generated outcome increased from 66.4% to 79.8%
- There has been considerable interest in this work and its potential impact expressed by a number of organisations/individuals including the Chartered Society of Physiotherapy.

## Additional conclusions

In addition the following were identified:

- Despite demonstrating considerable improvements over the two cycles, these results indicate that further improvements are required if patients across Scotland are to receive consistently applied, high quality physiotherapy treatment,
- Physiotherapy services in all sites have identified plans for continuing to improve and monitor practice in line with validated guidance,
- Inequities in access exist in relation to physiotherapy direct access to specialist services on behalf of patients who are LBP sufferers, and
- The number of low back referrals to physiotherapy has been historically under recorded.

# Recommendations

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All physiotherapy service providers should ensure that:

- Examination and management of all LBP patients follows the best evidence laid out in validated clinical guidelines, including ensuring that:
  - All red flags are assessed and documented (See Appendix 5)
  - All factors associated with CES are assessed and documented (Appendix 6)
  - A full neurological assessment (reflexes, myotomes, dermatomes and PSLR is carried out on patients with NRP (referred pain from the lumbar spine below the knee)
  - Factors associated with high risk of spinal fracture (long term steroid use and history of osteoporosis) are assessed and documented
  - Yellow flags are assessed and documented during initial assessment (Appendix 7)
  - All acute back pain patients should be supplied with consistent written information (Appendix 8 and Appendix 9)
  - The Back Book should be made available to all acute LBP patients
- They undertake regular auditing to monitor the issues as indicated above
- They achieve direct access to specialist services locally.

## Dissemination of results

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In addition to publication and wide distribution of the results, a web-based educational resource has been established:

**[www.sharedlearning.scot.nhs.uk/projects/back-pain-education-for-scotland.aspx](http://www.sharedlearning.scot.nhs.uk/projects/back-pain-education-for-scotland.aspx)**

This is aimed at a multidisciplinary audience of clinicians managing LBP. It contains key aspects of LBP assessment, clinical evidence sources, training resources and self evaluation tools. It also provides details of the national audit, the report of the results and the written patient information developed during the audit.

## Next steps

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- A network of LBP physiotherapy providers has been established throughout Scotland and they will continue to share practice issues, challenges and solutions through the NHS QIS AHP clinical effectiveness networks and the Back Pain Education Scotland shared learning community.
- Local LBP service providers will be encouraged to undertake regular audit using the resources provided and to engage with local governance arrangements.
- Working in partnership with NHS24 and NHS Education for Scotland, provide nationally developed resources for patient information and educational resources for clinicians.
- Working in partnership with the Chartered Society of Physiotherapy, explore the appropriateness of adopting this approach to quality improvement throughout the UK.

## Limitations

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Despite every effort to capture the physiotherapy management of all LBP patients during the data collection period, the study relied on individual physiotherapists collecting and supplying the required data. The difference between the numbers submitted during each cycle must question this.

It also has to be recognised that the audit was carried out in musculoskeletal outpatient physiotherapy departments and therefore these results can only reflect service provision in those locations. Audits should be carried out to measure the physiotherapy management of LBP in domiciliary and extended scope services.

It also has to be considered that evidence of documented practice does not necessarily equate to actual clinical practice. Local service providers are advised that responsibility for ensuring the ongoing quality of LBP service provision should be determined locally.



## Appendix 1: Referral rates

Reported referral rates by area (2007)

Area	Reported number of sites	Reported number of patients with low back pain seen	Reported proportion of patients with low back pain seen per 1000 of population
Castlebrae	1	334	n/a
NHS Ayrshire & Arran	13	3112	8.5
NHS Borders	14	1349	12.3
NHS Dumfries & Galloway	8	1448	9.8
NHS Fife	10	4260	12
NHS Forth Valley	19	3349	11.9
NHS Greater Glasgow and Clyde	43	12257	9.6
NHS Grampian <sup>^</sup>	8	5248	10
NHS Highland	2	1149	5.4
NHS Lanarkshire	24	8238	14.8
NHS Lothian	28	8957	11.4
NHS Orkney	4	281	14.4
NHS Shetland	1	509	23.2
NHS Tayside <sup>^</sup>	11	5000*	12.8
NHS Western Isles	1	330	12.6
Spire Murrayfield	2	975	n/a
<b>Totals</b>	<b>189</b>	<b>56796</b>	<b>Mean = 12</b>
<sup>^</sup> =incomplete * = estimated			

## Appendix 2: National picture

Demographic and clinical profile of LBP patients: a national picture from 2,147 data entries

	Percentage	Number
<b>Gender</b>		
(Missing data=74)		
Male	43.9%	(917)
Female	56.1%	(1,173)
<b>Age group</b>		
(Missing data=17)		
<16	0.7%	(15)
16-20 yrs	2.1%	(46)
21-30 yrs	10.3%	(221)
31-40 yrs	19.1%	(410)
41-50 yrs	24.7%	(530)
51-64 yrs	24.5%	(525)
65-74 yrs	12.4%	(267)
>75 yrs	6.2%	(133)
<b>Initial presentation of symptoms</b>		
(Missing data=13)		
LBP only	46%	(990)
LBP referred to knee	22.4%	(481)
LBP referred below the knee	31.6%	(680)
<b>Onset of symptoms</b>		
(Missing data=15)		
No reported reason	82.7%	(1,777)
Trauma	11.7%	(251)
Occupational	5.6%	(121)
<b>Duration of symptoms</b>		
(Missing data=151)		
< 14 days	9.3%	(188)
15-49 days	22.2%	(446)
7-12 weeks	12.9%	(259)
>3 months	55.6%	(1,120)

Percentage                      Number

## LBP history

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(Missing data=94)

1st onset	31%	(641)
Recurrence	37.4%	(774)
Chronic	19%	(393)
Exacerbation of chronic	12.7%	(262)

## Employment status

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(Missing data=88)

Paid employment	59.7%	(1,240)
Retired	25.1%	(471)
House person	5.3%	(110)
Unemployed due to LBP	2.7%	(57)
Unemployed not due to LBP	5.7%	(118)
Student	3.9%	(80)

## Work time absence due to present episode of LBP

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<=1 week	61.8%	(631)
1-2 weeks	11.1%	(113)
2 weeks – 1 month	10.2%	(104)
> 1 month	16.9%	(173)

## Percentage completing physiotherapy course in:

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(Missing data=33)

< 2 contacts	33.8%	(717)
3-4 contacts	31.3%	(668)
5-8 contacts	27.2%	(578)
>8 contacts	7.7%	(166)
Mean; median; range	4.10; 3; 1-30	

## Discharged from physiotherapy

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(Missing data=45)

More than one option could be chosen for this option therefore total percentage is greater than 100.

Self Care (Including 'On Hold')	82.8%	(1,762)
Did not complete treatment	6.8%	(145)
Referred for further medical review	10.9%	(n=234)
Referred for further other non medical review	8.8%	(n=201)

## Appendix 3: Steering group

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<b>Name</b>	<b>Job title</b>
Gillian Grant	Clinical Specialist Physiotherapist, NHS Grampian
Dr Lesley Holdsworth	Head of Health Services Research & Effectiveness, NHS Quality Improvement Scotland
Beatrice Cant	Programme Manager, NHS Quality Improvement Scotland
Dr Iain Henderson	General Practitioner and Orthopaedic Practitioner
Mick McMenemy	Lead Clinician, Greater Glasgow Back Pain Service
Fraser Ferguson	Project Manager, National Physiotherapy Low Back Pain Audit, NHS Quality Improvement Scotland
Jennifer Graham	Project Officer, NHS Quality Improvement Scotland
David Falconer	Pain Association Scotland
Dr Kay Cooper	Lecturer and researcher, Robert Gordon University
Marina Logan	Team Support Administrator, NHS Quality Improvement Scotland

## Appendix 4: Examples of actions and issues being progressed

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### Improved access

“We are now starting to plan for the introduction of self-referral to musculoskeletal physiotherapy out-patient services.”

### Changing practice

“Incorporating yellow flag questions into self referral triage forms to remind and encourage staff look for these flags as early in an assessment as possible is being introduced”

### New services

“We are now in discussions with the orthopaedic surgeons to allow the introduction of fast tracking of LBP patients from physiotherapy to orthopaedic clinics.”

### Making use of existing resources

“Training sessions have been arranged for staff with an osteoporosis specialist nurse and training with a local oncologist to increase awareness of these issues.”

### Collaborative working

“We don't have access to pain management clinics here, so we are investigating the possibility of buying in training in the form of 'Pain Master Classes' run in conjunction with the Physiotherapy Pain Association North. This would be made available to all clinical staff.”

### Providing a consistent message to patients

“Producing one piece of quality evidence based and consistent back pain advice sheets is a positive step forward.”

A small working group made up of regional representatives and the project team have pulled together existing resources to produce patient information sheets on: Low back pain, low back pain and leg symptoms and chronic pain. [www.nhshealthquality.org/nhsqis/4057.html](http://www.nhshealthquality.org/nhsqis/4057.html)

### Safer assessment

“We feel a standardised assessment tool for red flags and cauda equina would be useful for ALL physiotherapy staff in assessing LBP.”

The audit project team have been working to develop these tools. [www.nhshealthquality.org/nhsqis/4057.html](http://www.nhshealthquality.org/nhsqis/4057.html)

### Educating staff

“It would be more cost effective if there was a nationally developed resource for ongoing LBP education.”

The audit project team have been working with the e-Library to develop standardised nation wide, evidence based web training resources.”

## Appendix 5: Red flag questioning

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RED FLAG SCREENING: The following red flags should be documented on ALL low back pain assessments<sup>3-5, 7-8, 14-15</sup>:

- History of recent trauma
- Past history of cancer
- + ve cough/sneeze
- Severe unremitting night pain
- Constant non-mechanical pain
- Major loss of lumbar flexion
- Unexplained weight loss
- <20 >55 years old
- Prolonged steroid use
- Lower limb weakness
- Thoracic pain
- IV drug abuser/HIV

## Appendix 6: Cauda Equina questioning

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CAUDA EQUINA SYNDROME: The following factors should be documented on ALL low back pain assessments<sup>3-5, 7-8,14</sup>:

- Saddle anaesthesia/paraesthesia
- Widespread neurological symptoms in the lower limbs
- Altered bladder control
- Altered bowel control.

## Appendix 7: Yellow flag questioning

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YELLOW FLAGS: The following aspects should be assessed subjectively. Specifically this should include<sup>7-8,14</sup>:

- Attitudes/beliefs
- Behaviours
- Compensation
- Diagnosis
- Emotions
- Family
- Work



# Appendix 8: Low back pain advice leaflet

## MANAGING YOUR BACK PAIN

### ADVICE FOR PATIENTS



#### THE FACTS

- Most back pain settles with time.
- The spine is very strong.
- Backs are designed to move.
- If you try to keep moving you have a better chance of recovery.
- Bed rest is not a treatment for back pain.
- Back pain can be very severe, and you may need to reduce your activities at first.
- Stress and tension can increase the pain you feel.
- If you do not use your back it will quickly get out of condition.
- If you have to lie down because your back is very painful, you must try to get moving after a day or two.
- X-rays and scans are rarely required for back pain.

#### WHAT CAN I DO TO HELP MYSELF?

This depends on how severe your pain is.

- If you are taking painkillers or anti-inflammatories, take them regularly as prescribed, usually for a day or two but you may need to take them for a little longer. Don't wait for the pain to get out of control before you take them. You may want to speak to a pharmacist or your GP to get advice about which medication is best for you.
- If your pain is very severe, you may need to rest for a few days, but this is not a treatment. You need to get moving as soon as you can.
- Change position regularly. Try not to stay in one position for more than 20-30 minutes.
- Some people find that applying hot (20 minutes) or cold (10-20 minutes) packs helps their pain. If using a cold pack, always place a damp towel over your skin before placing cold pack on.
- Try to stay active, but you may need to reduce or stop some activities at first.
- You should gradually build up your activities and exercises over a few days or weeks. Don't wait for the pain to disappear before you start moving - the sooner you get going, the better you will feel.
- Try to stay at work, if possible.
- General exercise and physical fitness are very important and help you recover. Walking, cycling and swimming (vary the strokes) are good activities to build up gradually.

**TRY TO STAY POSITIVE - THERE IS A LOT YOU CAN DO TO HELP YOURSELF.**

**REMEMBER MOST BACK PAIN SETTLES WITH TIME.**

**[www.workingbacksscotland.scot.nhs.uk](http://www.workingbacksscotland.scot.nhs.uk)  
[www.nhshealthquality.org](http://www.nhshealthquality.org)**

NHS QIS NPLBPA Oct 2008 Review date 2010  
NHS QIS acknowledges Grampian Physiotherapy LBP Working Group

# Appendix 9: Low back pain and leg pain advice leaflet

## MANAGING YOUR BACK PAIN/RELATED LEG PAIN ADVICE FOR PATIENTS



### THE FACTS

- Most back problems resulting in leg pain settle with time.
- The spine is strong.
- Backs are designed to move.
- Bed rest is not a treatment for back/leg problems, but you may need to rest if the pain is very severe.
- It is very common for the pain in the leg to be more severe than the pain in the back.
- Stress and tension can increase the pain you feel.
- The pain can be very severe, and you may need to reduce your activities at first.
- X-rays and scans are rarely required for leg pain

### WHAT CAN I DO TO HELP MYSELF?

- If you are taking painkillers or anti-inflammatories, take them regularly, as prescribed.
- Don't wait for the pain to get out of control. You may want to speak to a pharmacist or your GP to get advice about which medication is best for you.
- You may need to rest if the pain is very severe, but try to move about a little, as the pain allows.
- If you are resting, try to find a position that eases the leg pain.
- Bed rest is not a treatment, but you may have to lie down if the pain is severe. Try to get up for short periods as soon as your pain allows and gradually increase the time you are up for. You should be up and about by two weeks at the latest, even if you still have some pain. If you cannot manage this then you should consult your doctor.
- Try to stay as active as the pain allows, but respect the pain in your leg. Don't try to beat the pain by continuing with an activity which makes it worse. Instead, change position for a period of time and see if that helps.
- Gradually increase your activity level, as you feel able. Slowly start to introduce normal activities, aiming to do a little more as each week passes.
- Gentle walking and swimming are good activities to start with.

### WARNING SIGNS

If you have severe pain which is getting worse over several weeks, or if you are unwell with back pain, you should consult your doctor.

The following symptoms are very rare, but if you suddenly develop any of them, you should consult your doctor straightaway.

- Difficulty passing or controlling urine.
- Numbness around your back passage or genitals.
- Numbness, pins and needles, or weakness in both legs.
- Unsteadiness on your feet.

[www.workingbacksscotland.scot.nhs.uk](http://www.workingbacksscotland.scot.nhs.uk)  
[www.nhshealthquality.org](http://www.nhshealthquality.org)

NHS QIS NPLBPA Oct 2008 Review date 2010  
NHS QIS acknowledges Grampian Physiotherapy LBP Working Group

## Appendix 10: Key references and links

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- 1 Nic Lochlainn E, Abbotts J, Craig J, Downie S, Eastgate J, Kohli H, et al. Service delivery organisation for acute low back pain. 2008. Available from [www.nhshealthquality.org/nhsqis/2936.html](http://www.nhshealthquality.org/nhsqis/2936.html).
- 2 Health and Safety Executive. 2003/4 Labour Force Survey Business. 2005. Available from [www.hse.gov.uk/statistics](http://www.hse.gov.uk/statistics).
- 3 Chartered Society of Physiotherapy (CSP). Clinical Guidelines for the Physiotherapy Management of Persistent Low Back Pain (LBP): Part 1 Exercise. 2006.
- 4 Chartered Society of Physiotherapy (CSP). Clinical Guidelines for the Physiotherapy Management of Persistent Low Back Pain (LBP): Part 2 Manual Therapy. 2006.
- 5 Royal College of General Practitioners (RCGP). Clinical Guidelines for the management of Acute Low Back Pain. 1999.
- 6 The Stationery Office. The Back Book. 2nd edition. 2002.
- 7 New Zealand Guidelines Group (NZGG). New Zealand Acute Low Back Pain Guide: incorporating the guide to assessing psychosocial yellow flags in acute low back pain. October 2004. Available from [www.nzgg.org.nz/guidelines/0072/albp\\_guide\\_col.pdf](http://www.nzgg.org.nz/guidelines/0072/albp_guide_col.pdf).
- 8 Prodigy Guidance. Back pain – lower. Version 1.0.0. 2005. Available from [www.prodigy.nhs.uk/guidance.asp?gt=Back pain - lower](http://www.prodigy.nhs.uk/guidance.asp?gt=Back%20pain%20-%20lower).
- 9 Burton AK, Waddell G, Tillotson KM, Summerton N. Information and advice to patients with back pain can have a positive effect: a randomised controlled trial of a noveleducational booklet in primary care. *Spine*. 2004;24(23):2484–91.
- 10 Scottish Government. Better Health, Better Care: An Action Plan. 2007. Available from <http://www.scotland.gov.uk/Publications/2007/12/11103453/0>.
- 11 Airaksinen O, Brox JI, Cedraschi C, et al. (2004) European guidelines for the management of chronic non-specific low back pain. European Commission, Research Directorate General. Available from <http://www.backpaineurope.org>.
- 12 Burton AK, Balagué F, Cardon G, et al. European guidelines for prevention in low back pain. European Commission, Research Directorate General. 2004. Available from [www.backpaineurope.org](http://www.backpaineurope.org).
- 13 Snap 9 Professional Snap Surveys. Greener House, 66-68 Haymarket, London, UK.
- 14 van Tulder M, Becker A, Bekkering T, et al. European Guidelines for the Management of Acute Non-Specific Low back pain in Primary Care. European Commission, Research Directorate General. 2004. Available from [www.backpaineurope.org](http://www.backpaineurope.org).
- 15 Greenhaugh S, Selje J. Red Flags. A Guide to Identifying Serious Spinal Pathology of the Spine. Edinburgh: Elsevier; 2006.

### Additional web resources

[www.nhshealthquality.org/nhsqis/4057.html](http://www.nhshealthquality.org/nhsqis/4057.html).

[www.sharedlearning.scot.nhs.uk/projects/back-pain-education-for-scotland.aspx](http://www.sharedlearning.scot.nhs.uk/projects/back-pain-education-for-scotland.aspx).





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