


Similarities of clinical practice guidelines in the management of lower pain: Literature review

 <https://doi.org/10.56238/sevned2024.016-025>

Josilene de Souza da Conceição Kaminski¹, Aline dos Santos Moreira de Carvalho² and Paloma Martins Mendonça³

ABSTRACT

Introduction: Clinical practice guidelines aim to assist reasoning and clinical decision-making, improve the effectiveness and efficiency of health care and standardize conduct, including care for patients with low back pain. Considering that evidence-based practice is necessary and that healthcare decisions integrate scientific evidence, knowledge and early adherence by healthcare professionals to clinical practice guidelines can accelerate recovery and reduce costs associated with low back pain. There is no informational material that is easy to read and interpret that encompasses the similarities of important national and international guidelines in the management of low back pain. **Objective:** To unify the similarities in the practice guidelines of low back pain clinics, involving diagnosis and request for imaging exams, to later prepare informative material for health professionals on this topic. **Methods:** This is a literature review, with a bibliographic survey carried out in electronic databases: National Library of Medicine (Medicine–PubMed), Medical Literature Analysis and Retrieval System (Medline), Latin American and Caribbean Literature in Health Sciences (Lilacs), Scientific Electronic Library Online (SciELO) and Google Scholar. **Results:** Ten guidelines were part of this study. Recommendations for taking anamnesis and physical examination were found in all guidelines. Diagnostic screening aims to identify patients with specific conditions as the cause of low back pain, in addition to the possibility of the presence of red and yellow flags. All guidelines discussed recommend that imaging should be avoided unless there is clinical suspicion of red flag pathology, or severe or progressive neurological deficit, such as radiculopathy, neurogenic claudication, or if imaging is likely to guide additional management. **Conclusion:** Clinical practice guidelines for low back pain present well-established similarities in the management of low back pain. Most have common information regarding anamnesis, physical and neurological examinations and request for imaging exams. All guidelines in this study agree that imaging exams should be avoided. The preparation of the informative material will be presented in a future article, which will assist health professionals in better managing low back pain.

Keywords: Clinical Practice Guidelines, Backache, Lower Back Pain, Diagnosis, Image Exams.

¹ PhD student in Health Sciences at Universidade Columbia Del Paraguay/Instituto IDEIA Brasil
Contributed with the study conception, methodology, data acquisition, analysis and interpretation, and writing approved the final version

ORCID: <https://orcid.org/0000-0003-3831620>

E-mail: josilenesouzaconceicao@gmail.com

² PhD student in Educational Sciences at Universidade Columbia Del Paraguay/Instituto IDEIA–Brasil
Contributed with the study conception, methodology, data acquisition, analysis and interpretation, and writing approved the final version

ORCID: <https://orcid.org/0000-0001-9969566>

E-mail: Bioaline2017@yahoo.com

³ Collaborating Researcher at the Medical and Forensic Entomology Laboratory (IOC/Fiocruz). Teacher at the Universidad Columbia Del Paraguay/Instituto IDEIA–Brasil

Contributed with the methodology data interpretation, and discussion of results approved the final version

ORCID: <https://orcid.org/0000-0003-3182-0477>

E-mail: prof.paloma.martins@gmail.com



INTRODUCTION

Clinical Practice Guidelines (CPD) are documents produced by expert groups and healthcare institutions that provide scientific evidence-based recommendations for healthcare professionals on the management of different health conditions (NICE, 2020). They constitute a useful tool for health professionals to update current recommendations and have more information to support their clinical practice (LAW; MACDERMID, 2008).

In recent years, several CPDs have emerged to improve the effectiveness and efficiency of health care (DAHAN; BORKAN; BROWN; REIS et al., 2007; FREEMAN, 2010) and to standardize behaviors that assist reasoning and clinical decision-making. Currently, there is a strong growth in research that addresses guidelines for the management of low back pain, including recommendations regarding diagnosis (CECIN, 2008; CHOU; QASEEM; OWENS; SHEKELLE, 2011; CHOU; QASEEM; SNOW; CASEY et al., 2007; KREINER; MATZ; BONO; CHO et al., 2020) and radiological examinations (BARBOSA, 2008; HUTCHINS; PECKHAM; SHAH; PARSONS et al., 2021; PANGARKAR; KANG; SANDBRINK; BEVEVINO et al., 2019).

Low back pain is the second most prevalent reason for consultations with the family doctor (GONZALEZ MAZA; MOSCOSO LÓPEZ; RAMÍREZ ELIZALDE; ABDO ANDRADE, 2010), and is the second most cited chronic disease in the National Household Sample Survey (PNAD) of the Brazilian Institute of Geography and Statistics (IBGE) (INSTITUTO BRASILEIRO DE GEOGRAFIA E, 2010). Furthermore, according to a recent survey by the Ministry of Labor and Social Security, which analyzed the ranking of the five most prevalent sick pay requests, it identified that complications related to the lumbar spine were present in three of the five conditions, being even more prevalent than those aid due to coronavirus infections (FERNANDES; SCHETTINI; SANTOS; COSTANZI5, 2020).

Direct costs for the treatment of low back pain are increasing rapidly in the Brazilian hospital service, and are probably driven by the increase in the number of surgical procedures that almost doubled in the six-year period (2013 to 2018) (MENDONÇA; OLIVEIRA; FONSECA; OLIVEIRA, 2021).Surgical intervention is based on imaging tests, which should be requested in accordance with current evidence for the management of this symptom. However, the increase in the number and financial costs of surgeries over the years is at odds with current evidence for the treatment of this condition.

It has become essential to implement new policies aimed at changes in the management of low back pain, in order to avoid unnecessary surgeries and their high costs, following current clinical recommendations (LEMMERS; VAN LANKVELD; WESTERT; VAN DER WEES et al., 2019; OSTERMAN; SUND; SEITSALO; KESKIMÄKI, 2003). When recommending effective evidence-based interventions and discourage interventions without scientific support, CPDs seek to optimize



the quality of care, reducing waste and potential harm associated with ineffective or unsafe interventions (O'CONNELL; WARD, 2018).

Considering that evidence-based practice is essential and that health decision-making integrates scientific evidence, early adherence to CPD can accelerate recovery and reduce costs associated with low back pain (FRITZ; CLELAND; BRENNAN, 2007). However, many health professionals have not adhered to these guidelines (DE SOUZA; LADEIRA; COSTA; 2017), requesting imaging exams outside these recommendations (JENKINS; DOWNIE; MAHER; MOLONEY et al., 2018; KAMPER; LOGAN; COPSEY; THOMPSON et al., 2020) causing an increase in the financial and social burden, as patients need to undergo several exams, referrals and even additional surgeries with questionable effectiveness (CHOU; RANGER; PEIRIS; CICUTTINI et al., 2018; JENKINS; DOWNIE; MAHER; MOLONEY et al., 2018).

The publication of a CPD does not guarantee that clinical practice will change, as multiple barriers prevent change in clinical practice (FISCHER; LANGE; KLOSE; GREINER et al., 2016; SLADE; KENT; PATEL; BUCKNALL et al., 2016), including the knowledge and understanding of health professionals, including doctors, about the guideline, the willingness to accept some recommendations (often in the face of deeply held beliefs, clinical experience, preferences and acquired interests), among other factors (FIGG - LATHAM; RAJENDRAN, 2017; FISCHER; LANGE; KLOSE; GREINER et al., 2016; SLADE; KENT; PATEL; BUCKNALL et al., 2016).

Changing clinical practice is a complex process and there is insufficient evidence to support any specific strategy (MESNER; FOSTER; FRENCH, 2016; SUMAN; DIKKERS; SCHAAFSMA; VAN TULDER et al., 2016), however, addressing the similarities of important clinical practice guidelines in the management of low back pain (diagnosis and imaging exams), would make it easier for health professionals who deal with this health condition. In view of the above, this study aims to unify the similarities of the Clinical Practice Guidelines for low back pain, involving the diagnosis and request for imaging exams, to subsequently, prepare informative material for health professionals on this topic. This informative material will enable better resolution of low back pain, as the clinical practice of health professionals will be based on the best scientific evidence.

METHODS

SEARCH STRATEGY

The bibliographic survey was carried out in electronic databases: National Library of Medicine (Medicine–PubMed), Medical Literature Analysis and Retrieval System (Medline), Latin American and Caribbean Literature in Health Sciences (Lilacs), Scientific Electronic Library Online (SciELO) and Google Scholar. The descriptors used were: combination of terms in Portuguese such as “clinical practice guidelines” and “lumbar pain”, “low back pain” and “clinical guidelines”, and in



English, such as “low back pain practice guidelines”, alone and combined with “and diagnosis”. The searches were refined for the period from 2005 to 2023. Some databases allowed the “full text” filter. There was a restriction on the publication language; guidelines in English, Portuguese and Spanish were accepted. After searching the databases, an exploratory and later systematic analysis of the abstracts was carried out according to the inclusion and exclusion criteria, mentioned below.

The National Guideline Clearinghouse (www.guideline.gov; keyword “low back pain” and the National Institute for Health and Clinical Excellence (NICE) (www.nice.org.uk; keyword: “low back pain”) were also searched. Two authors (J.S.C.K. and P.M.M) independently selected the titles and abstracts of the research. There was no disagreement, and a third author was unnecessary to carry out the judgment.

INCLUSION CRITERIA

National and international guidelines that provided recommendations on the diagnosis and/or radiological examinations of low back pain and aimed at any audience, but including medical professionals, were considered eligible. Only guidelines available in English, Portuguese and Spanish were included because the author can read these languages.

It sought to include guidelines from several countries and without distinction regarding the population addressed (acute, subacute and chronic low back pain). The focus also involved guidelines whose examinations of spine imaging addressed were plain x-rays, computed tomography and magnetic resonance imaging.

EXCLUSION CRITERIA

Studies were not eligible if they were not part of the inclusion criteria presented above, did not provide information exclusively on low back pain, such as chronic pain, which included low back pain. Guidelines in languages other than Portuguese, English and Spanish, and which did not have complete texts, were excluded. Studies whose imaging exams were myelography, discography and/or positron emission tomography were excluded, as these exams are generally requested by specialists before surgical intervention and, therefore, were not included in this review. Guidelines that were not available in full, or that were paid for, were also excluded.

DATA EXTRACTION AND DATA SYNTHESIS

Two independent authors extracted the following data using a standardized form: recommendations regarding diagnosis (Anamnesis, Physical Examination, Classification of low back pain, red flags, yellow flags, language used, target population) and imaging exams (indications and no indications). We will present the guideline recommendations in table 1.

RESULTS

Electronic searches carried out on April 2, 2023 resulted in 4871 records. Duplicate guidelines were removed and after screening titles and abstracts, 82 full texts were evaluated, according to the previously established inclusion criteria. Of these, 72 full texts were excluded, due to reasons such as not focusing on diagnosis and imaging exams, focusing more on treatment and rehabilitation, or due to other exclusion criteria already mentioned. Finally, 10 clinical practice guidelines were selected:

1. COST ACTION B13 - Chapter 3. European guidelines for the management of acute nonspecific low back pain in primary care (VANTULDER; BECKER; BEKKERING; BREEN *et al.*, 2006);
2. COST ACTION B13 Chapter 4. European guidelines for the management of chronic nonspecific low back pain (AIRAKSINEN; BROX; CEDRASCHI; HILDEBRANDT *et al.*, 2006);
3. American College of Physicians (ACP) e American Pain Society (APS) - Diagnosis and treatment of low back pain: a joint clinical practice guideline (CHOU; QASEEM; SNOW; CASEY *et al.*, 2007) e Diagnostic imaging for low back pain: advice for high-value healthcare (CHOU; QASEEM; OWENS; SHEKELLE, 2011).
4. American College of Physicians and the American Pain Society (Associação Médica Brasileira/ Conselho Federal de Medicina (AMB/CFM) - Diretriz II: Diagnóstico clínico e Diretriz III e IV: Diagnóstico complementar (BARBOSA, 2008; CECIN, 2008);
5. Toward Optimized Practice Low Back Pain (TOP)-Evidence-Informed Primary Care Management of Low Back Pain (TOP, 2015);
6. Agency for Clinical Innovation (ACI) – Management of people with acute low back pain: model of care (INNOVATION, 2016);
7. Malaysian Association for the study of pain. The Malaysian low back pain management guidelines (HUSSEIN; SINGH; MANSOR; KAMIL *et al.*, 2016).
8. National Institute for Health and Care Excellence (NICE Guideline) - Low back pain and sciatica in over 16s: assessment and management (NICE, 2020);
9. North American Spine Society (NASS)-Evidence-Based Guidelines for Multidisciplinary Spine Care: Diagnosis and Treatment of Low Back Pain (NASS, 2020) e Guidelines summary review: an evidence-based clinical guideline for the diagnosis and treatment of low back pain (KREINER; MATZ; BONO; CHO *et al.*, 2020);
10. Veterans Affairs/ Department of Defense (VA/DoD) - Clinical Practice Guideline: Diagnosis and Treatment of Low Back Pain (PANGARKAR; KANG; SANDBRINK; BEVEVINO *et al.*, 2019; VA/DOD, 2022).

Guidelines from the following countries were included: United States (3), Europe (2), Brazil (1), Canada (1), United Kingdom (1), Australia (1) and Malaysia (1).

DIAGNOSTIC RECOMMENDATIONS AND IMAGING EXAMS

Table 1 describes the recommendations regarding diagnosis and imaging that each clinical practice guideline addresses.

Three guidelines (CECIN, 2008; NASS, 2020; NICE, 2020) (30%) provided recommendations regardless of symptom duration. One guideline (TOP, 2015) (10%) provided recommendations for patients with acute, subacute, and chronic low back pain. Three guidelines focused on acute and chronic low back pain (CHOU; QASEEM; SNOW; CASEY et al., 2007; HUSSEIN; SINGH; MANSOR; KAMIL et al., 2016; VA/DOD, 2022) (30%), two on acute low back pain (INNOVATION, 2016; VAN TULDER; BECKER; BEKKERING; BREEN et al., 2006) (13%) and one guideline (10%) focused exclusively on chronic low back pain (AIRAKSINEN; BROX; CEDRASCHI; HILDEBRANDT et al., 2006).

Recommendations for taking anamnesis and physical examination were found in all guidelines, as well as diagnostic screening to identify patients with specific conditions as the cause of low back pain (AIRAKSINEN; BROX; CEDRASCHI; HILDEBRANDT et al., 2006; CECIN, 2008; CHOU; QASEEM; SNOW; CASEY et al., 2007; HUSSEIN; SINGH; MANSOR; KAMIL et al., 2016; INNOVATION, 2016; NASS, 2020; NICE, 2020; TOP, 2015; VA/DOD, 2022; VAN TULDER ; BECKER; BEKKERING; BREEN et al., 2006). Of these, eight guidelines (80%) recommend diagnostic screening to identify patients with radiculopathy (AIRAKSINEN; BROX; CEDRASCHI; HILDEBRANDT et al., 2006; CECIN, 2008; CHOU; QASEEM; SNOW; CASEY et al., 2007; HUSSEIN; SINGH; MANSOR; KAMIL et al., 2016; INNOVATION, 2016; TOP, 2015; VA/DOD, 2022; VAN TULDER; BECKER; BEKKERING; BREEN et al., 2006).

More than half of the guidelines (AIRAKSINEN; BROX; CEDRASCHI; HILDEBRANDT et al., 2006; CECIN, 2008; CHOU; QASEEM; SNOW; CASEY et al., 2007; HUSSEIN; SINGH; MANSOR; KAMIL et al., 2016; INNOVATION, 2016; VAN TULDER; BECKER; BEKKERING; BREEN et al., 2006) (60%) recommend diagnostic screening to classify patients into one of three categories: specific low back pain, nonspecific low back pain or radiculopathy. None of the guidelines in this review recommended classifying only specific and nonspecific low back pain, without distinguishing the group of patients with radiculopathy.

All the guidelines analyzed brought recommendations for the diagnostic screening of red and yellow flags. Tables 1 and 2 describe the red and yellow flags presented by the clinical practice guidelines in this review.

Two guidelines (INNOVATION, 2016; NICE, 2020)(20%) recommend assessing yellow flags using validated prognostic screening tools, such as STarT Back and Orebro.

Patient education through the language to be used and/or avoided during the interview and physical examination was addressed in four guidelines (40%) (AIRAKSINEN; BROX; CEDRASCHI; HILDEBRANDT et al., 2006; INNOVATION, 2016; TOP, 2015; VAN TULDER; BECKER; BEKKERING; BREEN et al., 2006).

Five guidelines (CECIN, 2008; CHOU; QASEEM; SNOW; CASEY et al., 2007; HUSSEIN; SINGH; MANSOR; KAMIL et al., 2016; VA/DOD, 2022; VAN TULDER; BECKER; BEKKERING; BREEN et al., 2006) (50%) discussed neurological examinations to identify radiculopathy, including the straight leg elevation test. However, of these, the European guidelines of this review state that based on the evidence, they cannot provide recommendations either against or in favor of such a test (AIRAKSINEN; BROX; CEDRASCHI; HILDEBRANDT et al., 2006; VAN TULDER; BECKER; BEKKERING; BREEN et al., 2006). Furthermore, for one of the guidelines, neurological assessment must include the assessment of strength, reflexes and sensory symptoms (CHOU; QASEEM; SNOW; CASEY et al., 2007). The Brazilian guideline also included several other tests to be used in physical assessment, including maneuvers such as Valsalva and Romberg, the De Sèze points sign and the “rope bow”, in addition to movements such as flexion and extension of the lumbar spine (CECIN, 2008). The De Sèze tip sign test was also recommended in another guideline (HUSSEIN; SINGH; MANSOR; KAMIL et al., 2016)

Four guidelines (40%) did not make any reference to orthopedic tests in the physical examination of patients with low back pain (INNOVATION, 2016; NASS, 2020; NICE, 2020; TOP, 2015).

Regarding the request for imaging exams, the majority of guidelines in this review (90%) indicate the request for imaging exams, such as magnetic resonance imaging, for example, when the patient presents severe or progressive neurological deficits, signs or symptoms that indicate a severe or specific underlying condition and red flag symptoms (AIRAKSINEN; BROX; CEDRASCHI; HILDEBRANDT et al., 2006; CECIN, 2008; CHOU; QASEEM; SNOW; CASEY et al., 2007; HUSSEIN; SINGH; MANSOR; KAMIL et al., 2016; INNOVATION, 2016; NASS, 2020; TOP, 2015; VA/DOD, 2022; VAN TULDER; BECKER;

BEKKERING; BREEN et al., 2006). The guidelines also brought some other recommendations for the indication of imaging exams, such as in cases of severe and intractable pain syndromes that failed treatment (NASS, 2020; TOP, 2015), low back pain persistent or radiculopathy whose pain persists beyond 4 to 6 weeks (BARBOSA, 2008; TOP, 2015; VAN TULDER; BECKER; BEKKERING; BREEN et al., 2006), as well as in cases of low back pain with or without sciatica, if the outcome is susceptible to change in management (NICE, 2020).



The majority of guidelines also included cases in which there is no indication or routine indication for imaging exams, including acute or chronic low back pain, in cases of absence of red flags (NASS, 2020; TOP, 2015), acute non-specific low back pain (AIRAKSINEN; BROX; CEDRASCHI; HILDEBRANDT et al., 2006; INNOVATION, 2016; VAN TULDER; BECKER; BEKKERING; BREEN et al., 2006) and absence of radiculopathy, neurogenic claudication or clinical warning signs (TOP, 2015).

DISCUSSION

Low back pain is a major public health problem, with a global lifetime prevalence estimate of 70-85% (KEBEDE; ABEBE; WOLDIE; YENIT, 2019). This condition is considered the main global cause of disability and absenteeism at work, causing loss of production, high socioeconomic expenses and premature retirements (HARTVIGSEN; HANCOCK; KONGSTED; LOUW et al., 2018; PETREÇA; SANDRESCHI; RODRIGUES; KOASKI et al. , 2017; RODRIGUES; OLIVEIRA; FERNANDES; TELES et al., 2019).

The appropriate management of low back pain must be outlined by the healthcare professional and must be based on reliable information about diagnosis, management and prognosis, information contained in clinical practice guidelines (AIRAKSINEN; BROX; CEDRASCHI; HILDEBRANDT et al., 2006; VAN TULDER; BECKER; BEKKERING; BREEN et al., 2006).

International guidelines (CHOU; QASEEM; SNOW; CASEY et al., 2007; NASS, 2020; PANGARKAR; KANG; SANDBRINK; BEVEVINO et al., 2019; VA/DOD, 2022) and

national (CECIN, 2008) selected in this review show that for the diagnosis of patients with low back pain, the recommendation is to carry out anamnesis and physical examination, in order to identify warning signs (red flags), assessment of psychosocial factors (yellow flags) and neurological tests to identify radiculopathy.

In the assessment (anamnesis and physical examination), red flags, named in most guidelines as red flags, constitute warning signs that deserve special attention. These signs or symptoms may be due to systemic illnesses other than acute common mechanics low back pain, raising suspicion of a serious underlying condition such as cauda equina syndrome (CES), malignancy/tumor, fracture, trauma, or infection. In cases of suspected red flags, such as cauda equina syndrome, immediate referral to the emergency service is necessary. However, it is important to emphasize that serious red flag conditions such as neoplasia, infection and cauda equina syndromes are extremely rare (CARRAGEE; HANNIBAL, 2004).

“Yellow flags”, represent biopsychosocial factors that should always be evaluated in the management of low back pain, as they can predict the prognosis (PINCUS; BURTON; VOGEL; FIELD, 2002), and are strongly associated with lumbar pain chronification (KOES; VAN TULDER;

LIN; MACEDO et al., 2010). The Toward Optimized Practice Guideline (TOP, 2015), adapted from eight “descending” guidelines published between 2003 and 2010, was the guideline for this review that provided detailed information regarding this assessment and for each yellow flag condition, it provided information on how to act. Eight other guidelines (AIRAKSINEN; BROX; CEDRASCHI; HILDEBRANDT et al., 2006; CECIN, 2008; CHOU; QASEEM; SNOW; CASEY et al., 2007; INNOVATION, 2016; NASS, 2020; NICE, 2020; VA/DOD, 2022; VAN TULDER; BECKER; BEKKERING; BREEN et al., 2006) did not provide recommendations as detailed as these, they only highlighted that yellow flags should be part of the assessment. In only one guideline in this review, it was addressed that the evidence is insufficient to recommend methods to assess psychosocial factors and emotional distress (VA/DOD, 2022).

All guidelines in this review agree that imaging should be avoided, with magnetic resonance imaging being indicated, for example, when the patient presents severe or progressive neurological deficits, such as radiculopathy, neurogenic claudication, signs or symptoms that indicate a condition severe or specific underlying and red flag signs and symptoms (AIRAKSINEN; BROX; CEDRASCHI; HILDEBRANDT et al., 2006; CHOU; QASEEM; SNOW; CASEY et al., 2007; INNOVATION, 2016; TOP, 2015; VA/DOD, 2022; VAN TULDER; BECKER; BEKKERING; BREEN et al., 2006). The guidelines also brought some other recommendations for the indication of imaging exams, such as in cases of severe and intractable pain syndromes that failed treatment (NASS, 2020; TOP, 2015), persistent low back pain or radiculopathy whose pain persists beyond 4 to 6 weeks (BARBOSA, 2008; CECIN, 2008; TOP, 2015; VAN TULDER; BECKER; BEKKERING; BREEN et al., 2006), as well as in cases of low back pain with or without sciatica, if the outcome is likely to alter management (NICE, 2020), if imaging is likely to guide further management (e.g. surgery or direct treatment (e.g., invasive treatments) (CHOU; QASEEM; SNOW; CASEY et al., 2007). Magnetic resonance imaging was still indicated in the case of surgical intervention or therapeutic injection in moderate to severe low back pain (TOP, 2015).

Therefore, imaging exams should not be used routinely as a strategy for the initial management of low back pain, as their results do not normally change the clinical outcome (HALL; AUBREY-BASSLER; THORNE; MAHER, 2021).

A particularity that the NICE guideline makes clear is that its information is intended to be used in the United Kingdom, and that it is the responsibility of healthcare professionals to make decisions regarding the individual (NICE, 2020).

Regarding the orthopedic tests recommended in the physical examination when evaluating low back pain, four of the guidelines (INNOVATION, 2016; NASS, 2020; NICE, 2020; TOP, 2015) did not provide any recommendations on such tests. The AMB/CFM Guideline (CECIN, 2008) details several tests, including movements such as flexion and extension of the lumbar spine,

maneuvers such as Valsalva, Lasègue, Romberg, Sèze points sign, “rope bow” (Macnab) and non-organic signs of psychosomatic low back pain (Wadell's signs). No other guideline was found with such detailed information on how to perform the physical examination as this Brazilian guideline.

A test frequently discussed in the guidelines of this review is the straight/extended leg raise test (CECIN, 2008; CHOU; QASEEM; SNOW; CASEY et al., 2007; HUSSEIN; SINGH; MANSOR; KAMIL et al., 2016; VA /DOD, 2022; VAN TULDER; BECKER; BEKKERING; BREEN et al., 2006), also known as Lasègue (CECIN, 2008). Although it is considered by many authors to be the standard test and is widely used in cases of low back pain (AIRAKSINEN; BROX; CEDRASCHI; HILDEBRANDT et al., 2006), it is important to note that this test presents high variability in diagnostic sensitivity and specificity (VA /DOD, 2022). One of the guidelines states that this test is not sufficient to diagnose radiculopathy, as despite the high sensitivity for nerve root pain, it has low specificity (AIRAKSINEN; BROX; CEDRASCHI; HILDEBRANDT et al., 2006). Unlike the crossed straight leg raise test, that had low sensitivity and high specificity. No single test has high sensitivity and specificity for radiculopathy. Therefore, clinicians and researchers must treat such tests with caution (AIRAKSINEN; BROX; CEDRASCHI; HILDEBRANDT et al., 2006).

A topic covered in some guidelines is the language to be used or avoided when managing patients with low back pain. The ACI guideline provided clear and well-explanatory information about language that promotes beliefs, for example, ‘You have degeneration/arthritis/disc disease’, ‘You have the back of a 70 year old’, ‘It's wear and tear’, ‘You have to be careful/take it easy from now on’, ‘You should avoid bending/lifting’, ‘I wouldn't be surprised if you ended up in a wheelchair’ (INNOVATION, 2016). Another guideline also provided information on terms to avoid, such as instability, disc displacement, vertebra slippage (spondylolisthesis) and hypo-mobility and hypermobility (TOP, 2015). However, the other guidelines present only superficial information about the language to be addressed in the management of low back pain.

It is necessary to pay attention to the language to be used and/or avoided in the assessment of patients with low back pain and provide adequate information to reassure the patient. A full explanation should be provided in terms that the patient understands, for example, ‘back pain is very common’; ‘although back pain is often recurrent, the outlook is generally very good’; ‘hurting does not mean harm’; ‘can arise from various structures, such as muscles, discs, joints or ligaments’ (VAN TULDER; BECKER; BEKKERING; BREEN et al., 2006), in addition to advising patients to remain active and providing information on self-care options, preventing kinesiophobia and catastrophizing (TOP, 2015; VA/DOD, 2022).

FINAL CONSIDERATIONS

Low back pain clinical practice guidelines have several similarities. Most have common



information regarding anamnesis, physical and neurological examinations and request for imaging exams. All guidelines in this study agree that imaging should be avoided, particularly in patients with nonspecific low back pain, unless there is clinical suspicion of red flag pathology, signs or symptoms that indicate a serious underlying pathology, severe or progressive neurological deficit, or whether the image is likely to guide further management.

The history and physical examination must be carried out by a healthcare professional with competent skills. However, competence will depend on adequate training.

More comprehensive studies are needed, such as systematic reviews on this topic, which can determine these similarities with greater precision.

CONFLICT OF INTERESTS

The authors have no conflict of interest.

FINANCING SOURCE

The authors declare that they did not receive funding to carry out this research.



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Table 1. Recommendations of the Clinical Practice Guidelines for the Diagnosis of Low Back Pain

Guideline	Author(s) Year of Publication	Country	Diagnostic Recommendations								
			Anamnesis and Physical Examination: identification of specific diseases	Anamnesis and Physical Examination: identification of radiculopathy	Classification of low back pain into: non-specific, specific and radiculopathy	AV Red Flags	AV Yellow Flags	Language to be addressed and/or avoided in VA	Orthopedic tests recommended in the Physical Examination	Recommendations for Imaging Exams (Radiographs, MRI and CT)	
COST ACTION B13. Europeanguidelines for the management of acute nonspecific low back pain in primary care	VANTULDER et al., 2006	Europe	X	X	X	X	X	X		Straight leg elevation test	SI: *Acute nonspecific low back pain. I: CXR= *Specific underlying pathology suspected (based on 'warning signs') *Suggested as optional in case of persistent low back pain for more than 4 to 6 weeks.
COST ACTION B13. Europeanguidelines for the management of chronic nonspecific low back pain	AIRAKSI NEN et al., 2006	Europe	X	X	X	X	X	X		The following tests are not recommended: CV palpation, segmental range of motion, soft tissue tests and straight leg elevation (Lasègue).	Routine SI: *Acute nonspecific low back pain. *Chronic nonspecific low back pain unless a specific cause is strongly suspected. I: RM= *Radiculopathy symptoms. *Suspicion of discitis or neoplasia. RX: *Assessment of deformity structures.
ACP e APS. Diagnosis and Treatment of Low Back Pain: A Joint Clinical Practice. Diagnostic imaging for low back pain: advice for high-value health care	CHOU et al., 2007 CHOU R, QASEEMA, OWENS DK et al., 2011	USA	X	X	X	X	X	-		Straight leg raise test Crossed Straight Leg Raise Test Neurological examination: assessment of strength, distribution of sensory symptoms and reflexes of the knee (L4 nerve root), hallux and foot dorsiflexion strength (L5 nerve root), plantar flexion of the foot and ankle reflexes (S1 nerve root).	Routine SI: *Nonspecific low back pain. I: *Severe or progressive neurological deficits. *Signs or symptoms that indicate a serious or specific underlying condition.
AMB/CFM. Low back pain and lumbar sciatic pain. Guideline II: Diagnosis clinical.	BARBOSA, 2008; CECIN, 2008	Brazil	X	X	X	X	X	-		Flexion and extension of the CL. Valsalva maneuver, Lasègue and Romberg Sign of the de Sèze points, "string bow" and	I: X-ray: *Chronic common mechanical low back pain for elucidation pathophysiological. CT and MRI: Low back pain and acute sciatica atypical evolution



										and/or unsatisfactory evolution, the causes of which have not been
Guidelines III and IV: complementary diagnosis									Wadell	determined after six weeks of clinical treatment. * RX=Recurrence or persistence of the clinical picture beyond the 4th week of the onset of symptoms. SI: acute common mechanical low back pain, mainly in young adults.
TOP. Evidence-informed primary care management of low back pain.	TOP, 2015	Canada	X	X	-	X	X	X	None addressed	SI: Acute low back pain, no red flags. *In the absence of red flags, radiculopathy or neurogenic claudication or clinical warning signs. I: MRI: * Severe or progressive neurological deficit. *Severe or disabling pain in the back or legs. * Indication of surgical intervention or therapeutic injection in moderate to severe low back pain. *Radicular pain that does not respond to non-interventional therapy. *Red flags. *Radiculopathy (pain in the dominant leg) that persists after 6 weeks of treatment.
ACI. Management of people with acute low back pain: model of care	INNOVATION, 2016	Australia - Oceania	X	X	X	X	X	X	None addressed	SI: Acute nonspecific low back pain (no suspicion of serious pathology or radicular syndromes). I: MRI=*Lumbar and leg pain, with progressive neurological loss. * Tail equina syndrome = enc. immediate

The Malaysian low back pain management guideline	HUSSEIN et al., 2016	Malaysia	X	X	X	X	X	-	Straight leg raise test. Crossed straight leg raise test. Walking with heel and toe. Muscle strength - Flexion and extension of the big toe - - Flexion and extension of the ankle	I= RX= * Acute back pain that persists for more than 2 weeks. *No red flags present. *Spondylolysis or spondylolisthesis is suspected. MRI= *Suspected disc and/or nerve root prolapse or spinal cord compression. CT= *Suspicion of extraspinal pathology. *As an alternative to MRI in the presence of spinal implants
NICE. Low back pain and sciatica in over 16s: assessment and management (NG59).	NICE, 2020	UK	X	Neuropathic pain unrelated to sciatica see the NICE guideline on neuropathic in adults	-	X	X	-	None addressed	I: *Low back pain with or without sciatica, if the result is likely to alter management. Do not routinely offer imaging exams in a non-specialist setting
NASS. Diagnosis & Treatment of Low Back Pain. Guidelines summary review: an evidence-based clinical guideline for the diagnosis and treatment of low back pain.	NASS, 2020 KREINERD.S., et al., 2020.	USA	X	-	-	X	X	-	None addressed	Neither for nor against obtaining imaging tests: *Acute or chronic low back pain, with no red flags. I: * Severe and intractable pain syndromes that failed treatment.
VA/DOD. Clinical Practice Guideline: Diagnosis and Treatment of Low Back Pain	PANGAR KAR et al., 2019. VA/DoD, 2022	USA	X	X	-	X	X	-	Straight leg raise test Crossed straight leg raise test I brought other tests = but they do not recommend against or in favor	Routine SI: *Acute axial low back pain (i.e., localized, non-radiating). I: * Severe or progressive neurological deficits. *Red flag symptoms.
<p>_ = The guideline did not provide any recommendations on this approach. X= The guideline endorsed/provided/confirmed this recommendation regarding this approach. COST=European Cooperation in Science & Technology. ACP e APS: American College of Physicians and American Pain Society. AMB/CFM: Brazilian Medical Association and Federal Council of Medicine. TOP: Toward Optimized Practice. ACI: Agency for Clinical Innovation. NICE: National Institute for Health and Care Excellence. NASS: Diretriz North American Spine Society. VA/DOD: Veterans Affairs/Department of Defense.</p>						<p>AV: Assessment. ROM: Range of movement. MRI: Magnetic resonance imaging. CT: Computed Tomography. RX: X-ray. SI: No indication. I: Indication. CL: Lumbar spine. CV: Spine.</p>				

Chart 1 Red flags addressed by most clinical practice guidelines

	Cancer; history of malignancy	AMB/CFM;NASS;VA/DOD; ACP/APS;NICE;TOP;COSTB13European;ACI Malaysian
	Fracture – Trauma	AMB/CFM;VA/DOD; NICE;TOP;NASS;NSW; COSTB13European;Malaysian
	Infection	AMB/CFM;VA/ DOD;ACP/APS;NICE;TOP;ACI;Malaysian
	Cauda equina syndrome	AMB/CFM;NASS;VA/DOD; ACP/APS;TOP;COSTB13European;ACI; Malaysian

Chart 2 Yellow flags addressed by most clinical practice guidelines

	Inappropriate attitudes and beliefs about back pain : (e.g., belief back pain is harmful or potentially disabling, and/or high expectation of passive treatments rather than active participation, and/or that the activity is harmful.	TOP;ACI;COSTB13 European;Malaysian
	Mental health conditions: attention deficit disorder, hyperactivity, anxiety, depression, somatization, interpersonal stress at home, post-traumatic stress disorder.	AMB/NASS/ ACM/SP/TOP/COSTB13 European/Malaysian
	Work-related factors: low job satisfaction, lack of support from supervisors, unemployment, issues related to dissatisfaction regarding remuneration.	NASS/VADOD/ ACM/SP/TOP/ ACI/ COSTB13European/ Malaysian
	Other psychosocial factors: death, divorce, duration of pain, disability status, problems financial, low mood or negative mood, social withdrawal, lack of social or family support, withdrawal from social life, overprotective family.	VADOD/ACI/COST B13European/ Malaysian