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Sex and gender considerations in low back pain clinical practice guidelines: a scoping review

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ABSTRACT

Objective The purpose of this scoping review is to determine if and how sex and gender have been incorporated into low back pain (LBP) clinical practice guidelines (CPG), and if sex and gender terms have been used properly.

Methods CPGs were searched on MEDLINE, Embase, NICE, TRIP and PEDro from 2010 to 2020. The inclusion criteria were English language, CGPs within physiotherapy scope of practice and for adult population with LBP of any type or duration. Three pairs of independent reviewers screened titles, abstracts and full texts. Guidelines were searched for sex/gender-related terms and recommendations were extracted. The AGREE II (Appraisal of Guidelines for Research and Evaluation II) was used to evaluate the quality of the CPGs.

Results Thirty-six CPGs were included, of which 15 were test-positive for sex or gender terms. Only 33% (n=5) of CPGs incorporated sex or gender into diagnostic or management recommendations. Sixty percent of guidelines (n=9) only referenced sex or gender in relation to epidemiology, risk factors or prognostic data, and made no specific recommendations. Overall, there was no observable relationship between guideline quality and likeliness of integrating sex or gender terms. The majority of guidelines used sex and gender terms interchangeably, and no guidelines defined sex or gender.

Conclusion CPGs did not consistently consider sex and gender differences in assessment, diagnosis or treatment of LBP. When it was considered, sex and gender terms were used interchangeably, and considerations were primarily regarding pregnancy. Researchers should consider the importance of including sex-based and/or gender-based recommendations into future LBP CPGs.

What is already known?

- Back pain is one of the most common conditions seen by family doctors and physiotherapists.
- Low back pain is highly prevalent with up to 80% of people experiencing at least one back pain episode in their lifetime.
- There are known sex and gender differences in the epidemiology, diagnosis and treatment of low back pain.

What are the new findings?

- Clinical practice guidelines (CPGs) do not consistently consider sex and gender differences in the assessment, diagnosis or treatment of low back pain.
- When sex or gender terms are considered, the terms are used interchangeably without regard to their strict definitions.
- When CPGs did consider sex or gender, the considerations primarily related to pregnancy, which is a subterm of sex, as it does not refer to sex but rather a transient period that is specific to one sex.

INTRODUCTION

Low back pain (LBP) is defined as pain located in the area between the posterior lower margins of the 12th ribs and the gluteal folds, and may occur with associated lower limb pain/neurological involvement.[1 2] LBP can be classified as acute (less than 6 weeks), subacute (6 to 12 weeks) or chronic (greater than 12 weeks).[2] The origin of LBP is multifactorial, and is divided into non-specific LBP (NSLBP), specific, and serious pathologies.[3]

According to the 2017 Global Burden of Diseases, Injuries and Risk Factors Study, LBP was ranked number one for years lived with disability in 1990, 2007 and 2017, with increasing rates of occurrence for all ages.[4]

LBP research indicates significant differences between genders regarding prevalence, degree of disability and number of comorbidities; which are all higher in individuals who identify as women.[5] Despite known differences, research studies that focus on LBP inconsistently report or fail to integrate sex or gender differences into their design, analysis and conclusions,[6] and it is common to observe sex and gender terms used interchangeably. This practice can not only lead to misinterpretation of results, but also impact how evidence is applied.

In 2009, the Government of Canada made changes to the Health Portfolio in order to acknowledge the differing needs of men and

women in relation to health, and defined sex and gender as independent descriptors.[7] Sex was defined as a set of biological attributes in humans and animals that is most often associated with physical and physiological features of an individual (ie, reproductive/sexual anatomy).[7] Sex was categorised as female or male, accounting that there are many variations in the biological attributes that are sex, and how the attributes may be expressed.[7] Gender was referred to as the socially constructed role, behaviour, expression or identity of an individual (ie, girls, boys, women, men, gender diverse) and influences how people perceive themselves and others.[7] Gender is often seen as binary (girl/woman and boy/man) but there is great diversity in how individuals experience and express gender.[7] The 2016 Sex and Gender Equity in Research (SAGER) guidelines were designed for both authors and peer reviewers, with the intention of standardising sex and gender reporting in research.[8] In 2017 Tannenbaum *et al*[6] examined how sex and gender were integrated into Canadian clinical practice guidelines (CPGs) for non-communicable disease. Tannenbaum *et al*[6] found that only 35% of guidelines made sex or gender specific recommendations, and only 25% of the studies used sex and gender terms correctly.[6] Currently there are no reviews that specifically examine sex and gender considerations in LBP CPGs.

Objectives

The primary objective of this scoping review was to systematically examine if and how sex and gender was incorporated into LBP CPGs for adult populations, as it related to diagnosis, epidemiology, prognosis, risk factors and interventions. The secondary objective was to determine how sex and gender concepts have been used. The final objective was to determine if sex and gender representation was considered in the development of the guideline committee. A scoping review approach, which aims to provide a broad overview of a topic in order to identify key concepts and gaps in the literature, was deemed most appropriate due to the lack of known research on the topic of sex and gender in relation to LBP.[9]

METHODS

The methodological framework for conducting scoping reviews, that was established by Arksey and O'Malley,[10] and enhanced by Levac and colleagues,[11] was used. The first five steps were followed, however, the sixth and final step, consulting with key stakeholders, was not performed, as a result of time constraints.[11] This scoping review also followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) extension for reporting guidelines for scoping reviews.[12] The protocol for this scoping review was registered with OSF prior to title and abstract screening, in order to maintain transparency and reduce bias[13] (10.17605/OSF.IO/7S9BD).

Inclusion criteria

All CPGs issued by a multinational committee, within the scope of physiotherapy (PT), with an adult population (18 years or older) focusing on primary LBP, were eligible for inclusion. LBP conditions that primarily related to cancer, fracture, infection, inflammatory diseases or other serious pathologies were excluded. All durations of LBP were eligible for inclusion. The methods were based off of the protocol by Oliveira *et al*,[14] but due to the high volume of guidelines, and recognising that sex and gender were unlikely to be considered prior to 2009, the inclusion criteria was adjusted after registration.[13] After full-text screen, a limit of the past 10 years was applied and only the most recent version of a CPG was included, unless different topics were addressed. Only guidelines that were published in English were eligible.

Outcomes

The primary outcome was how sex and gender had been incorporated into healthcare recommendations within CPGs. Recommendations pertaining to diagnosis, epidemiology, prognosis, risk factors and interventions were considered. The secondary outcome addressed whether or not sex and gender concepts had been used as per the definitions that were previously outlined by the Government of Canada.[7] Additionally, we examined whether diversity of sex and gender were considered in the development of the guideline research committee.

Search strategy

A search for CPGs was conducted on MEDLINE via Ovid (1946 to March 8 2020), Embase (1974 to March 9 2020), National Institute for Health and Clinical Excellence (NICE) (1999 to March 9 2020), Turning Research into Practice Medical Database (TRIP) (1997 to March 17 2020) and Physiotherapy Evidence Database (PEDro) (1999 to March 9 2020). There were no date limits applied. The following key terms were used in the search: low back pain and clinical practice guideline. A McMaster University (Ontario, Canada) Health Sciences Librarian was consulted to refine the search strategy. A comprehensive outline of the search strategy and the specific terms that were used can be found in online supplemental appendix A. This study excluded grey literature due to resource constraints. A manual search for CPGs included in the reference lists of the included studies was performed.

All eligible studies were imported to Covidence[15] for removal of duplicates and screening. A pilot screen was completed by all reviewers for the first 10 titles/abstracts and full texts to ensure consistency. Three pairs of investigators (TR and HH, TC and MK and SR and CT) independently screened titles/abstracts and full texts. Any disagreements were discussed between the pair of reviewers, and if a consensus was not reached, a third-party investigator (LM) was consulted.

Data extraction and analysis

The same calibration process, using the first three studies, was performed for data extraction procedures. Data extraction and quality assessment was completed by the same pair of reviewers that were previously referenced. Any discrepancies were handled in the same way that was previously mentioned.

Based on the methodology of Tannenbaum *et al*,[6] the included CPGs were first screened electronically for keywords: sex, gender, women, men, woman, man, boy, girl and pregnan*. A guideline was categorised as text-positive if it included any keywords in the main text. In this review, pregnancy was considered to be a subterm related to sex, recognising that it is a transient period of time in a female's life, rather than a sex-specific term.

Text-positive guidelines were grouped into four categories based on how sex and gender differences were incorporated into the guidelines. Category 1 was recommended evidence-based sex-related or gender-related diagnostic approach,[6] Category 2 referred to a sex-related or gender-related management approach,[6] Category 3 'made reference to sex or gender within epidemiological data, risk factors or prognostic data, but did not make suggestions for diagnosis or clinical management',[6] and Category 4 'mentioned sex or gender keywords superficially'.[6] In this review, the term superficial was used to describe the use of sex or gender terms without additional context or consideration as it relates to the literature or guideline recommendations. Further analysis considered the correct use of 'sex' and 'gender' terms, as defined by the Government of Canada.[7] If the correct use could not be determined, guidelines were rated as 'unclear'. Lastly, investigators examined whether the authors considered sex and gender representation in the development of each guideline committee.

Methodological quality assessment

The Appraisal of Guidelines for Research and Evaluation II (AGREE II)[16] tool was used to assess the quality of the CPGs.[16] A calibration of the first three CPG's was completed prior to completing the quality assessment in pairs. A threshold of 60% was used to evaluate the overall quality for the final score of each domain of the AGREE II.[16 17] When ≥5 domains had a score of greater than 60%, the guideline was defined as high quality.[17] When three or four of the domains had a score of greater than 60% and when less than or equal to two domains scored greater than 60%, the guidelines were defined as average quality and low quality, respectively.[17] The total score of each guideline and the domains were calculated. The median scores were used to examine any superficial relationships between the quality of the guideline and the likeliness of integrating sex or gender terms.

RESULTS

The electronic searches conducted from 2010 to March 2020 identified 14 117 studies (see figure 1 for PRISMA flow diagram). We identified 235 CPGs, from which, 199 were excluded. Reasons for exclusion included: being published before 2010 (n=22), wrong study design (n=80), not accessible in English (n=34), wrong patient population (n=5), not within the scope of physiotherapy (n=10), outdated version of CPG (n=6) or inaccessible (n=42) (online supplemental appendix B). Thirty-six CPGs were included in the review.[18–53]

Study characteristics

Most of the guidelines were from the USA (31%),[23 26–30 38 39 43 45 48] Canada (11%)[19 20 49 52] and North America (8%).[25 34 35] The majority of CPGs (42%) made recommendations in relation to a combination of NSLBP and specific LBP,[18–20 23 24 29 33 37 39 43 47 48 50–52] or NSLBP (39%) alone.[21 22 25 27 28 30 36 42 44–46 49 53] Four CPGs (11%) focussed on specific LBP,[26 32 34 35] two (5%) focussed on LBP prevention[40 41] and one CPG (3%) focussed on a combination of NSLBP, specific LBP and pathological LBP.[31]

The majority of the guidelines (53%) made reference to all durations of LBP.[18 19 21 22 24 25 27 29–31 33 38 39 42 43 49–51 53] Five CPGs (14%) made recommendations based on a combination of acute, subacute or chronic LBP,[20 45 47 48 52] four (11%) referred strictly to chronic,[26 28 37 44] two (5%) were in relation to acute LBP[23 46] and the remaining six CPGs (17%) did not specify duration.[32 34–36 40 41] There were two CPGs that focussed on diagnosis,[30 39] nine focussed on management[19 24 28 32 43 44 47 52 53] and four CPGs focussed on prevention.[21 36 40 41] The majority of the CPGs provided information on both diagnosis and management of LBP.[18 20 22 23 25–27 29 31 33–35 37 38 42 45 46 48–51]

Inclusion of sex/gender terms

There were n=15 (42%) text-positive CPGs for sex and gender terms[18 20 23 27 29 30 37 38 41 42 44 46 48 49 53] and n=21 (58%) text-negative CPGs[19 21 22 24–26 28 31–36 39 40 43 45 47 50–52] when pregnancy-related terms were included. Table 1 depicts the categories for text-positive guidelines, and the AGREE II[16] score for each text-positive and text-negative guideline. Category 1 and/or Category 2 guidelines which related to diagnosis and management, respectively, made up 33% of the text-positive guidelines. There were two CPGs that were identified as both Category 1 and Category 2,[23 48] and three guidelines that were identified as only Category 2.[44 53] Nine CPGs were identified as Category 3 (60%)[20 27 29 30 37 38 41 42 46] making reference to sex or gender terms in relation to epidemiology, prognosis or risk factors. There was only one Category 4 guideline, which superficially mentioned sex or gender terms[49] without providing further context.

When pregnancy-related terms were excluded from the results, the lack of sex and gender integration was more pronounced (online supplemental appendix C). No guidelines made reference to sex or gender considerations in relation to LBP diagnosis, and only one guideline considered gender differences in management.[23] Eight guidelines made reference to sex or gender terms in relation to epidemiology, prognosis or risk

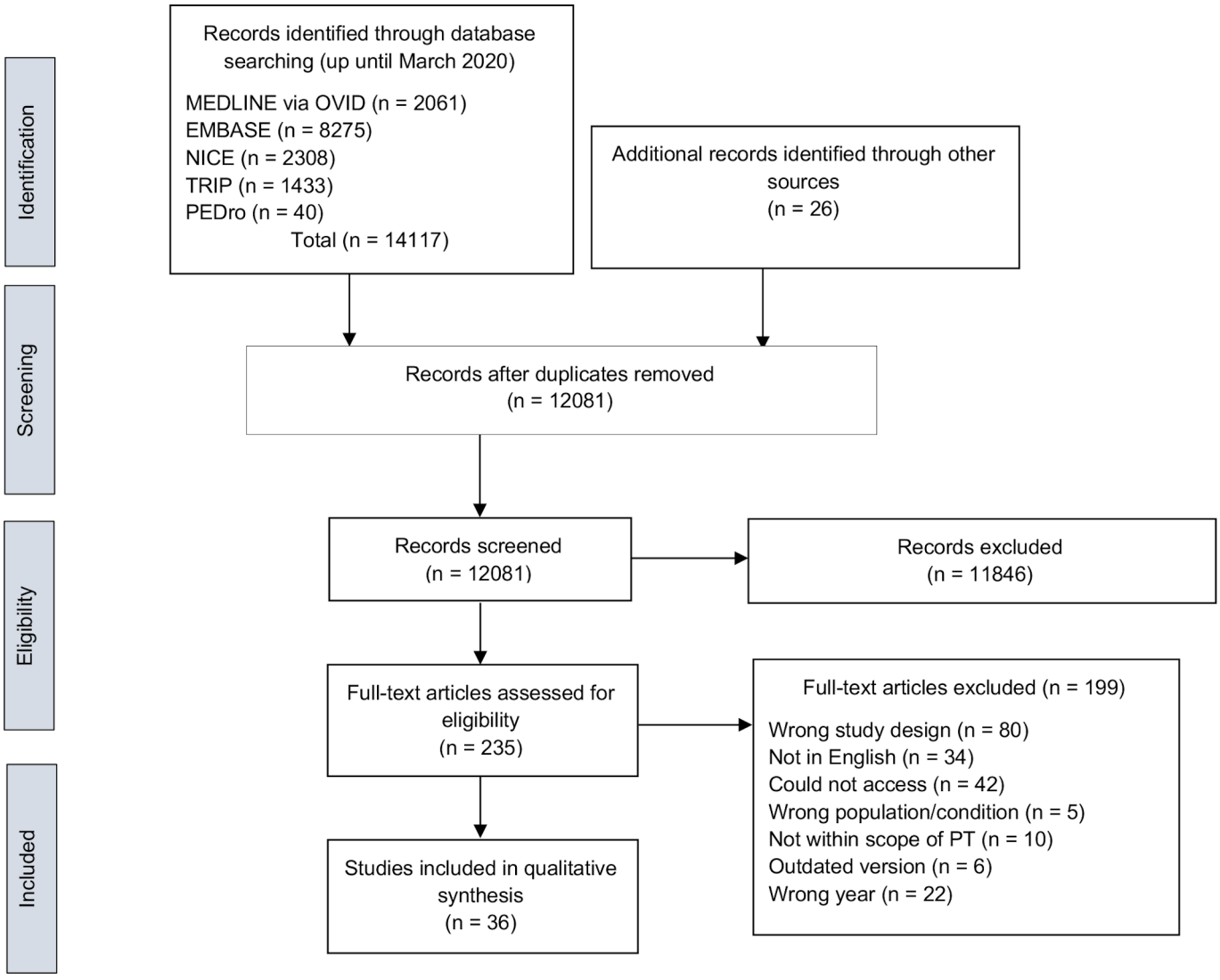

Figure 1 PRISMA flow diagram

factors.[20 27 29 30 37 41 42 46] These results further depict the lack of sex or gender considerations beyond pregnancy.

Sex/gender keywords

Examples of paraphrased quotes retrieved from all of the text-positive CPGs were depicted in table 2. The quotes were organised by their respective categories (1 to 4), based off of the methodology by Tannenbaum *et al*.[6] Within Category 1 there were two guidelines that provided recommendations for contraindications against imaging techniques for pregnancy.[23 48] One of the guidelines gave an additional Category 1 recommendation with regards to clinical examination.[48] For example, flexion and extension movements were contraindicated during clinical exams of patients who were pregnant.[48] Within Category 2, there were five studies that gave specific management recommendations in regard to pregnancy considerations.[18 23 44 48 53] Pregnancy-specific recommendations included rehabilitation strategies, contraindications to electrotherapy, precautions to acupuncture and precautions or contraindications for certain medications.[18 23 44 48 53] There was only one guideline within Category 2 that provided a management recommendation that was not specific to pregnancy.[23] The recommendation made reference to avoiding trunk extension/flexion exercises in women at risk for osteoporosis.[23] The majority of the Category 1 and Category 2 recommendations were for specific considerations in pregnancy.

Category 3 CPGs were most prevalent (n=9) and integrated sex and gender terms most frequently.[20 27 29 30 37 38 41 42 46] Category 3 CPGs integrated sex or gender terms into epidemiology, risk factors and care-seeking behaviours.[20 27 29 30 37 38 41 42 46] CPGs reported that women tend to have a higher prevalence of LBP and are more likely to seek care for LBP[20 27 37 42] One pregnancy-specific reference was made within Category 3, stating that two-thirds of pregnant women experience LBP.[38] Category 3 was the only category that referenced male sex or gender, stating that men, more often than women, experience LBP as a result of manual material

Table 1 Sex and gender text-positive clinical practice guidelines and text-negative clinical practice guidelines with the corresponding AGREE II score

Author	Organisation and country	Title	OA*	Quality†
Category 1 and 2‡				
Chiodo *et al* 2010[23]	University of Michigan Health System (USA)	Acute low back pain: guidelines for clinical care (with consumer summary)	4.5	Low
Thorson *et al* 2018[48]	Institute for Clinical Systems Improvement (USA)	Low back pain, adult acute and subacute	5.5	Average
Category 2§				
Arvin *et al* 2016[18]	National Institute for Health and Care Excellence (UK)	Low back pain and sciatica in over 16s: assessment and management - NICE guideline	5.5	High
Rached *et al* 2013[44]	Brazilian Association of Physical Medicine and Rehabilitation (Brazil)	Chronic non-specific low back pain: rehabilitation	3.5	Average
Zhao *et al* 2016[53]	Institute of Acupuncture and Moxibustion (China)	Clinical practice guidelines of using acupuncture for low back pain	2.5	Low
Category 3¶				
Bussières *et al* 2018[20]	Canadian Chiropractic Guideline Initiative (Canada)	Spinal manipulative therapy and other conservative treatments for low back pain: a guideline from the Canadian Chiropractic Guideline Initiative (with consumer summary)	6	High
Delitto *et al* 2012[27]	American Physical Therapy Association (USA)	Low back pain clinical practice guidelines linked to the international classification of functioning, disability and health from the orthopaedic section of the American Physical Therapy Association (with consumer summary)	4.5	Low
Hegmann *et al* 2016[29]	American College of Occupational and Environmental Medicine (USA)	Low back disorders	4.5	Low
Hegmann *et al* 2019[30]	American College of Occupational and Environmental Medicine (USA)	Diagnostic tests for low back disorders	5	Average
Lee *et al* 2013[37]	British Pain Society (UK)	Low back and radicular pain: a pathway for care developed by the British Pain Society.	3.5	Low
Pangarkar *et al* 2019[38]	US Department of Veteran Affairs / US Department of Defence (USA)	VA/DoD clinical practice guideline: diagnosis and treatment of low back pain	4	Average
Petit *et al* 2016[41]	French Society of Occupational Medicine (France)	French good practice guidelines for management of the risk of low back pain among workers exposed to manual material handling: hierarchical strategy of risk assessment of work situations	2.5	Low
Picelli *et al* 2016[42]	The Italian Conference on Pain in Neurorehabilitation (Italy)	Headache, low back pain, other nociceptive and mixed pain conditions in neurorehabilitation. Evidence and recommendations from the Italian Consensus Conference on Pain in Neurorehabilitation	4	Average
Staal *et al* 2013[46]	Royal Dutch Society for Physical Therapy (Netherlands)	KNGF clinical practice guideline for physical therapy in patients with low back pain	3	Average
Category 4**				
LBP working group toward optimised practice 2017	LBP working group toward optimised practice (Canada)	Evidence-informed primary care management of low back pain	3.5	Low
Text-negative guidelines††				
Brosseau *et al* 2012[19]	Ottawa Methods Group (Canada)	Ottawa panel evidence-based clinical practice guidelines on therapeutic massage for low back pain	4	Low

Continued

Table 1 Continued

Author	Organisation and country	Title	OA*	Quality†
Cheng *et al* 2012[21]	Guideline Development Working Group (Hong Kong)	Evidence-based guideline on prevention and management of low back pain in working population in primary care	4	Low
Chenot *et al* 2017[22]	National Programme for Disease Management Guidelines (Germany)	Clinical practice guideline: non-specific low back pain	3	Low
Chou *et al* 2018[24]	Global Spine Care Initiative (Global)	The Global Spine Care Initiative: applying evidence-based guidelines on the non-invasive management of back and neck pain to low-income and middle-income communities	4	Low
Chutkan *et al* 2020[25]	North American Spine Society (North America)	Evidence-based clinical guidelines for multidisciplinary spine care: diagnosis and treatment of low back pain	5	Average
Deer *et al* 2019[26]	Lumbar Spinal Stenosis Consensus Group (USA)	The MIST guidelines: the lumbar spinal stenosis consensus group guidelines for minimally invasive spine treatment	3	Low
Globe *et al* 2016[28]	Council on Chiropractic Guidelines and Practice Parameters (USA)	Clinical practice guideline: chiropractic care for low back pain	5.5	High
Hussein *et al* 2016[31]	Malaysian Association for the Study of Pain, Spine Society Malaysia (Malaysia)	The Malaysian low back pain management guidelines	2.5	Low
Jun *et al* 2017[32]	Korean Institute of Oriental Medicine (Korea)	Korean medicine clinical practice guideline for lumbar herniated intervertebral disc in adults: an evidence-based approach	4	Low
Kassolik *et al* 2017[33]	Polish Society of Physiotherapy, the Polish Society of Family Medicine and the College of Family Physicians (Poland)	Recommendations of the polish society of physiotherapy, the Polish society of family medicine and the college of family physicians in Poland in the field of physiotherapy of back pain syndromes in primary healthcare	4	Average
Kreiner *et al* 2013[35]	North American Spine Society (North America)	An evidence-based clinical guideline for the diagnosis and treatment of degenerative lumbar spinal stenosis (update)	4	Low
Kreiner *et al* 2014[34]	North American Spine Society (North America)	An evidence-based clinical guideline for the diagnosis and treatment of lumbar disc herniation with radiculopathy	4	Low
Kuijer *et al* 2014[36]	Dutch Government Occupational Health and Safety (Netherlands)	An evidence-based multidisciplinary practice guideline to reduce the workload due to lifting for preventing work-related low back pain	4.5	Average
Patel *et al* 2016[39]	American College of Radiology (ACR) (USA)	ACR appropriateness criteria low back pain	4	Average
Petit *et al* 2016[40]	French Society of Occupational Medicine (France)	Pre-employment examination for low back risk in workers exposed to manual handling of loads: French guidelines	3	Low
Qaseem *et al* 2017[43]	American College of Physicians (USA)	Non-invasive treatments for acute, subacute and chronic low back pain: a clinical practice guideline from the American College of Physicians	5	Average
Sparks *et al* 2017[45]	Kaiser Foundation Health Plan of Washington (USA)	Non-specific back pain guideline	3.5	Low
Stochkendahl *et al* 2017[47]	Danish Health Authority (Denmark)	National clinical guidelines for non-surgical treatment of patients with recent onset low back pain or lumbar radiculopathy	4.5	Average
Valdecañas 2017[50]	Philippine Academy of Rehabilitation Medicine (Philippines)	Clinical practice guidelines on the diagnosis and management of low back pain	4	Low

Continued

Table 1 Continued

Author	Organisation and country	Title	OA*	Quality†
Van Wambeke *et al* 2017[51]	Belgian Healthcare Knowledge Centre (Belgium)	Low back pain and radicular pain: assessment and management	6	High
Wong *et al* 2017[52]	Ontario Protocol for Traffic Injury Management (OPTIMa) Collaboration (Canada)	Clinical practice guidelines for the non-invasive management of low back pain: a systematic review by the Ontario Protocol for Traffic Injury Management Collaboration	3.5	Low

*Overall assessment score.
†High quality was defined when 5 or more domains scored >60%, average quality when 3 or 4 domains scored > 60% and low quality when ≤ 2 domains scored >60%.
‡Recommended evidence-based sex-related or gender-related diagnostic or management approach.
§Recommended evidence-based sex-related or gender-related management approach.
¶Made reference to sex or gender within epidemiological data, risk factors or prognostic data, but did not make suggestions for diagnosis or clinical management.
**Mentioned sex or gender keywords superficially.
††Did not mention sex or gender terms in text.
AGREE II, Appraisal of Guidelines for Research and Evaluation II; DoD, Department of Defence; LBP, low back pain; VA, Veteran Affairs.

handling.[41] Men also have a higher risk of developing ankylosing spondylitis and spondylolysis.[29 30 46] The only CPG that was considered Category 4, referenced pregnancy within the exclusion criteria.[49]

Appropriateness of sex/gender use

None of the identified text-positive CPGs provided a definition of sex or gender within the guideline,[18 20 23 27 30 37 38 41 42 44 46 48 49 53] and only three CPGs[30 42 46] had appropriate use of the terms according to the Government of Canada.[7] Two CPGs did not contain enough information to determine if the terms were used properly.[27 41] The remaining 10 CPGs had inappropriate use of sex and gender terms, for example, using gender terms when relating to biological attributes.[18 20 23 29 37 38 44 48 49 53] Only one CPG considered sex and gender representation in the formation of the guideline committee.[39]

Methodological quality assessment

The total score for each domain of the AGREE II[16] as well as the final overall quality was determined for each guideline (online supplemental appendix D). Of the 36 evaluated guidelines, 4[18 19 28 51] were high quality (11%), 12[25 30 33 36 38 39 42–44 46–48] were average quality (33%) and 20[19 21–24 26 27 29 31 32 34 35 37 40 41 45 49 50 52 53] were low quality (56%). Only two guidelines[20 51] reached an acceptable (≥60%) score in all six AGREE II[16] domains. The remaining CPGs had at least one domain with a low score (<60%). Of all domains, Domain 4 ('Clarity of Presentation') had the highest mean quality score 79% and Domain 5 ('Applicability') had the lowest mean quality score 22%. The overall median AGREE II[16] score of all CPGs, as well as text-positive CPGs, was 4 with an IQR of 1. There was no observable relationship between the quality of the guideline and likeliness of integrating sex or gender terms. There were five guidelines[22 29 30 37 47] for which the referenced methodology or appendices were not in English, thus the scores may not be a true representation of their methodological quality.[16]

DISCUSSION

Major findings

Overall, the CPGs identified in this scoping review had poor integration of sex and gender considerations, and the majority of CPGs did not mention sex or gender terms. When sex or gender terms were mentioned, they were primarily in relation to epidemiology, risk factors or prognostic data. There were few CPGs that integrated any sex or gender differences into their recommendations regarding diagnosis or treatment of LBP. The majority of the time, recommendations were for specific considerations in pregnancy.[18 23 44 48 53] The majority of guidelines used inappropriate terms when referring to either sex or gender. Often, sex and gender terms were used interchangeably, and there was very limited separation between the use of the biological sex terms and social gender terms. Only one guideline committee acknowledged if diversity of sex and gender was considered in the development of the committee.[39] No CPG provided a definition of sex or gender within the guideline.

The findings of this review had both consistencies and inconsistencies to a similar study conducted by Tannenbaum *et al*.[6] Tannenbaum *et al*[6] found that 67% of the included CPGs were text-positive for sex or gender terms. Thirty-five per cent of text-positive CPGs fell under Category 1 and Category 2 recommendations (reported screening, diagnosis or management considerations specific to sex or gender), and the majority of CPGs (41%) made reference to sex or gender considerations in epidemiological or risk factors. It is clear that this scoping review had a much lower text-positive response than Tannenbaum *et al*,[6] with only 42% of CPGs being text-positive. The inconstancies found between the number of text-positive guidelines may be due to differences in study methodology. Tannenbaum *et al*[6] only included Canadian studies, whereas this review was expanded to international guidelines. Research funders in Canada, such as the Canadian Institute of Health Research (CIHR), are a

Table 2 Summary of the use of sex and gender terms in relation to the respective category

Author / national body	Paraphrased quote from guideline
Category 1: Recommends evidence-based sex-related or gender-related diagnostic approach	
Chiodo *et al* 2010[23] University of Michigan Health System (USA)	IMAGING: X-rays, CT scans and bone scans are contraindicated during pregnancy. Consultation with a radiologist is strongly advised when considering MRI scanning during pregnancy.
Thorson *et al* 2018[48]	CLINICAL EXAM: The physical examination is similar to non-pregnant patients with low back pain, although lumbar flexion will be limited as the pregnancy progresses.
Institute for Clinical Systems Improvement (USA)	IMAGING: Lumbar radiographs are routinely avoided during pregnancy due to concern for fetal health. MRI is the test of choice for severe pregnancy-related low back pain.
Category 2: Recommends evidence-based sex-related or gender-related management approach	
Arvin *et al* 2016[18]	RADIOFREQUENCY DENERVATION: The Guideline Development Group (GDG) agreed that this recommendation (indications for referral for appropriateness of radiofrequency denervation) would equally apply for pregnant women and this should be considered on a case by case basis.
National Institute for Health and Care Excellence (UK)	MEDICATION: The Guideline Development Group (GDG) agreed that British National Formulary (BNF) guidance should be followed for all pharmacological recommendations, including considerations for pregnant women, and therefore did not consider that separate recommendations were required for pregnant women.
Chiodo *et al* 2010[23]	REHABILITATION: In older women or persons at risk for osteoporosis, trunk extension exercises are preventive, while trunk flexion exercises may increase the risk of osteoporotic fractures. Pregnant women with back pain may want to discuss with their obstetrical care provider different positions, strategies and methods of pain relief. This may include anaesthesia consultation (for labour and delivery) or referral to hospital or community based prophylactic back classes specifically designed for pregnancy.
University of Michigan Health System (USA)	MEDICATION: Medications are limited and should be appropriate for a pregnant woman.
Rached *et al* 2013[44]	ULTRASOUND: Therapeutic ultrasound is contraindicated in areas, such as in the eyeball, pregnant uterus, plastic endoprosthesis components, methacrylate and the heart.
Brazilian Association of Physical Medicine and Rehabilitation (Brazil)	ELECTROTHERAPY: Percutaneous electrical nerve stimulation (acupuncture and electrical stimulation) is contraindicated in pacemaker users, individuals with epilepsy, heart problems, cognitive impairments and during the first 3 months of pregnancy, especially in the lumbar and abdominal areas.
Thorson *et al* 2018[48] Institute for Clinical Systems Improvement (USA)	EPIDURAL STERIOD INJECTIONS: Pregnancy is a contraindication due to the use of fluoroscopy.
Zhao *et al* 2016[53] Institute of Acupuncture and Moxibustion (China)	COMPLEMENTARY MED: Acupotomy is applied very cautiously for women during menstruation or pregnancy. Moxibustion should be applied very cautiously for pregnant patients or patients with sensory impairment.
Category 3: Referred to sex or gender within epidemiology data, risk factors or prognostic data, but did not make recommendations	
Bussières *et al* 2018[20] Canadian Chiropractic Guideline Initiative (Canada)	CARE SEEKING BEHAVIOURS: Most people with low-back pain consult a health provider for this issue. It is more common for women to seek care along with individuals with previous low back pain, poor general health and more disabling or more painful episodes.
Delitto *et al* 2012[27]	EPIDEMIOLOGY: Low back pain (LBP) prevalence appears to vary based on factors like sex, age, education and occupation; with women having a higher prevalence than men.
American Physical Therapy Association (USA)	RISK FACTORS: Risk factors for LBP that relate to the individual include genetics, gender, age, body build, strength and flexibility. Women may have almost three times the risk of back pain as men.
Hegmann *et al* 2016[29]	RISK FACTORS: The factors that predict unresponsiveness to epidural glucocorticosteroid injections include potential sex differences. Male gender is at higher risk for ankylosing spondylitis.

Continued

Table 2 Continued

Author / national body	Paraphrased quote from guideline
American College of Occupational and Environmental Medicine (USA)	Risk factors for spondylolysis include increasing age and male gender. Risk factors for degenerative spondylolisthesis include age and female gender.
Hegmann *et al* 2019 [30] American College of Occupational and Environmental Medicine (USA)	RISK FACTORS: Epidemiological studies suggest the risk factors for degenerative back conditions include ageing, male sex, obesity, heredity and systemic arthrosis. Risk factors for spondylolysis include increasing age and being of male sex. Risk factors for degenerative spondylolisthesis include age and being of female sex.
Lee *et al* 2013[37] British Pain Society (UK)	EPIDEMIOLOGY: The number of people suffering with chronic pain in England varies between 14% of the youngest men and 59% of the oldest women (mean 31% men, 37% women).
Pangarkar *et al* 2019[38] US Department of Veteran Affairs / US Department of Defence (USA)	EPIDEMIOLOGY: More than two-thirds of pregnant women experience LBP and symptoms typically increase with advancing pregnancy.
Petit *et al* 2016[40] French Society of Occupational Medicine (France)	EPIDEMIOLOGY: Half of male unskilled workers and one-third of female unskilled workers are exposed to manual material handling.
Picelli *et al* 2016[42] The Italian Conference on Pain in Neurorehabilitation (Italy)	RISK FACTOR: Demographic risk factors for the onset and the clinical course of LBP include age, gender, body mass index (BMI) and educational level. A stronger correlation between LBP and a high BMI (>30) has been reported in women than in men.
Staal *et al* 2013[46] Royal Dutch Society for Physical Therapy (Netherlands)	RED FLAGS: (Ankylosing spondylitis) Onset of low back pain before age 20 years, male sex, iridocyclitis, history of unexplained peripheral arthritis or inflammatory bowel disease, pain mostly nocturnal, morning stiffness >1 hour, less pain when lying down or exercising, good response to non-steroidal anti-inflammatory drugs, elevated erythrocyte sedimentation rate
Category 4: Mentioned sex or gender keywords superficially	
LBP working group toward optimised practice 2017 LBP working group toward optimised practice (Canada)	EXCLUSION CRITERIA: Pregnant women

driving force behind sex and gender integration in Canadian research.[54] Canadian guidelines may be more likely to integrate sex and gender considerations into research, compared with other countries, as a result of the CIHR.

Tannenbaum *et al*[6] excluded studies that had key words specific to pregnancy, whereas this review included pregnancy as a sex term in order to be more inclusive. The majority of Category 1 and Category 2 recommendations in this review were related to pregnancy. When pregnancy terms were omitted, there were no guidelines that made reference to diagnosis, and only one guideline that referred to management. Sex and gender considerations need to go beyond pregnancy, teratogenicity or breastfeeding, and consider more complex interactions such as specific and non-specific LBP. Future studies should integrate sex and gender terms in relation to all age milestones, rather than solely focussing on transient periods, such us pregnancy. This approach to sex and gender integration would make recommendations applicable to a broader population.

Strengths and limitations

This scoping review used rigorous methodology to ensure low risk of bias and quality of reporting. The methodological framework for scoping reviews by Arksey and O'Malley,[10] and Levac *et al*[11] was used. The PRISMA guidelines for reporting were also followed.[12] The study protocol was registered with OSF prior to title and abstract screening to ensure transparency of the process and reduce potential bias.[13] A comprehensive search strategy was used, which was developed in partnership with a librarian. In addition, the AGREE II[16] was used to evaluate the quality of the included CPGs.[16]

Restricting the language to English only was a limitation of this review. This review only considered CPGs and excluded primary literature. It is possible that our results do not represent the current state of sex-based and gender-based primary research pertaining to LBP. Another limitation was limiting the inclusion criteria to the past 10 years. Earlier CPGs that integrated sex and gender terms may have been excluded by this narrow timeline. A 10-year cut-off was chosen because government bodies and experts began recognising the importance of sex and gender considerations in the literature after 2009.[8 54] We recognised that these changes would take a year or more to integrate into research, therefore, before 2010, it was unlikely that CPGs integrated sex or gender terms.

CONCLUSION

This review provided insight on the current use of sex and gender terms in CPGs related to LBP. Integration of sex and gender considerations has the potential to guide future clinical practice and research, specifically regarding differences in the diagnosis, prognosis and management of LBP. This review is intended to be eye-opening for LBP researchers regarding the fact that sex and gender are not being integrated in current CPGs. The use of guides, such as the SAGER guidelines, should become a priority in the future.[8] This review highlights that there are known sex and gender differences in management, epidemiology, risk factors and care-seeking behaviours in LBP, which should be considered during physiotherapy practice. Future research should consider examining both the inclusion and appropriateness of the use of a larger spectrum of gender specific terms (ie, non-binary), as current knowledge on this area of gender integration and research regarding LBP is limited. Clinicians should educate themselves on the differences between sex/gender and be cautious when using LBP recommendations from current CPGs.

Correction notice This article has been corrected since it first published. The provenance and peer review statement has been included.

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REFERENCES

1 Dionne CE, Dunn KM, Croft PR, *et al*. A consensus approach toward the standardization of back pain definitions for use in prevalence studies. *Spine* 2008;33:95–103.
2 Burton AK, Balagué F, Cardon G, *et al*. Chapter 2. European guidelines for prevention in low back pain : November 2004. *Eur Spine J* 2006;15 Suppl 2:s136–68.
3 Hartvigsen J, Hancock MJ, Kongsted A, *et al*. What low back pain is and why we need to pay attention. *Lancet* 2018;391:2356–67.
4 James SL, Abate D, Abate KH, *et al*. Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990-2017: a systematic analysis for the global burden of disease study 2017. *Lancet* 2018;392:1789–858.
5 Fehrmann E, Kotulla S, Fischer L, *et al*. The impact of age and gender on the ICF-based assessment of chronic low back pain. *Disabil Rehabil* 2019;41:1190–9.
6 Tannenbaum C, Clow B, Haworth-Brockman M, *et al*. Sex and gender considerations in Canadian clinical practice guidelines: a systematic review. *CMAJ Open* 2017;5:E66–73.
7 Government of Canada. Health Portfolio sex and gender-based analysis policy. in: Gov. can, 2017. Available: https://www.canada.ca/en/health-canada/corporate/transparency/corporate-management-reporting/heath-portfolio-sex-gender-based-analysis-policy.html
8 Heidari S, Babor TF, De Castro P, *et al*. Sex and gender equity in research: rationale for the SAGER guidelines and recommended use. *Res Integr Peer Rev* 2016;1:2.
9 Daudt HML, van Mossel C, Scott SJ. Enhancing the scoping study methodology: a large, inter-professional team's experience with Arksey and O'Malley's framework. *BMC Med Res Methodol* 2013;13:48.
10 Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *Int J Soc Res Methodol* 2005;8:19–32.
11 Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. *Implement Sci* 2010;5:69.
12 Tricco AC, Lillie E, Zarin W, *et al*. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Ann Intern Med* 2018;169:467.
13 Rathbone T, Cimek T, Riazi S. Protocol for sex and gender considerations in low back pain clinical practice guidelines: a scoping review 2020 https://doi.org/10.17605/OSF.IO/7S9BD
14 Oliveira CB, Maher CG, Pinto RZ, *et al*. Clinical practice guidelines for the management of non-specific low back pain in primary care: an updated overview. *Eur Spine J* 2018;27:2791–803.
15 Veritas Health Innovation. *Covidence systematic review software*. Melbourne, Australia.
16 Brouwers MC, Kho ME, Browman GP, *et al*. Agree II: advancing Guideline development, reporting and evaluation in health care. *Can Med Assoc J* 2010;182:E839–42.
17 Doniselli FM, Zanardo M, Manfrè L, *et al*. A critical appraisal of the quality of low back pain practice guidelines using the agree II tool and comparison with previous evaluations: a EuroAIM initiative. *Eur Spine J* 2018;27:2781–90.
18 Arvin B, Bernstein I, Blowey S. *Low back pain and sciatica in over 16s: assessment and management - NICE guideline*, 2016.
19 Brosseau L, Wells GA, Poitras S, *et al*. Ottawa panel evidence-based clinical practice guidelines on therapeutic massage for low back pain. *J Bodyw Mov Ther* 2012;16:424–55.
20 Bussières AE, Stewart G, Al-Zoubi F, *et al*. Spinal manipulative therapy and other conservative treatments for low back pain: a guideline from the Canadian chiropractic guideline initiative. *J Manipulative Physiol Ther* 2018;41:265–93.
21 Cheng L, KKS L, Lam WK. Evidence-Based guideline on prevention and management of low back pain in working population in primary care. *Xianggang Uankeyixueyuan Yuekan Hong Kong Pract* 2012;34:106–15.
22 Chenot J, Greitemann B, Kladny B. Non-Specific low back pain. *Dtsch Arzteblatt Int* 2017;114:883–90.
23 Chiodo AE, Alvarez DJ, Graziano GP. *Acute low back pain: guidelines for clinical care [with consumer summary]*, 2010.
24 Chou R, Côté P, Randhawa K, *et al*. The global spine care initiative: applying evidence-based guidelines on the non-invasive management of back and neck pain to low- and middle-income communities. *Eur Spine J* 2018;27:851–60.
25 Chutkan NB, Lipson AC, Lisi AJ. Evidence-Based clinical guidelines for multidisciplinary spine care: diagnosis and treatment of low back pain 2020.
26 Deer TR, Grider JS, Pope JE, *et al*. The mist guidelines: the lumbar spinal stenosis consensus group guidelines for minimally invasive spine treatment. *Pain Pract* 2019;19:250–74.
27 Delitto A, George SZ, Dillen LV. Low back pain clinical practice guidelines linked to the International Classification of Functioning, Disability, and Health from the Orthopaedic Section of the American Physical Therapy Association [with consumer summary]. *J Orthop Sports Phys Ther* 2012;42:A1–57.
28 Globe G, Farabaugh RJ, Hawk C, *et al*. Clinical practice guideline: chiropractic care for low back pain. *J Manipulative Physiol Ther* 2016;39:1–22.
29 Hegmann KT, Travis R, Belcourt R. *Low back disorders*, 2016.
30 Hegmann KT, Travis R, Belcourt RM, *et al*. Diagnostic tests for low back disorders. *J Occup Environ Med* 2019;61:e155–68.
31 Hussein AMM, Singh D, Mansor M. *The Malaysian low back pain management guidelines*, 2016.
32 Jun JH, Cha Y, Lee JA, *et al*. Korean medicine clinical practice guideline for lumbar herniated intervertebral disc in adults: an evidence based approach. *Eur J Integr Med* 2017;9:18–26.

33 Kassolik K, Rajkowska-Labon E, Tomasik T, *et al*. Recommendations of the Polish Society of physiotherapy, the Polish Society of family medicine and the College of family physicians in Poland in the field of physiotherapy of back pain syndromes in primary health care. *Fmpcr* 2017;3:323–34.
34 Kreiner DS, Hwang SW, Easa JE, *et al*. An evidence-based clinical guideline for the diagnosis and treatment of lumbar disc herniation with radiculopathy. *Spine J* 2014;14:180–91.
35 Kreiner DS, Shaffer WO, Baisden JL, *et al*. An evidence-based clinical guideline for the diagnosis and treatment of degenerative lumbar spinal stenosis (update). *Spine J* 2013;13:734–43.
36 Kuijer PPF, Verbeek JH, Visser B, *et al*. An evidence-based multidisciplinary practice guideline to reduce the workload due to lifting for preventing work-related low back pain. *Ann Occup Environ Med* 2014;26:16.
37 Lee J, Gupta S, Price C, *et al*. Low back and radicular pain: a pathway for care developed by the British pain Society. *Br J Anaesth* 2013;111:112–20.
38 Pangarkar SS, Kang DG, Sandbrink F, *et al*. VA/DoD clinical practice guideline: diagnosis and treatment of low back pain. *J Gen Intern Med* 2019;34:2620–9.
39 Patel ND, Broderick DF, Burns J, *et al*. ACR Appropriateness Criteria Low Back Pain. *J Am Coll Radiol* 2016;13:1069–78.
40 Petit A, Rousseau S, Huez JF, *et al*. Pre-Employment examination for low back risk in workers exposed to manual handling of loads: French guidelines. *Int Arch Occup Environ Health* 2016;89:1–6.
41 Petit A, Mairiaux P, Desarmenien A, *et al*. French good practice guidelines for management of the risk of low back pain among workers exposed to manual material handling: hierarchical strategy of risk assessment of work situations. *Work* 2016;53:845–50.
42 Picelli A, Buzzi MG, Cisari C, *et al*. Headache, low back pain, other nociceptive and mixed pain conditions in neurorehabilitation. Evidence and recommendations from the Italian consensus conference on pain in neurorehabilitation. *Eur J Phys Rehabil Med* 2016;52:867–80.
43 Qaseem A, Wilt TJ, McLean RM, *et al*. Noninvasive treatments for acute, subacute, and chronic low back pain: a clinical practice guideline from the American College of physicians. *Ann Intern Med* 2017;166:514–30.
44 Rached R, da RCDP, Alfieri FM. Lombalgia inespecífica crônica: reabilitação. *Rev Assoc Médica Bras* 2013;59:536–53.
45 Sparks A, Cohen A, Adjao S. *Back pain. Kais perm clin Guidel*, 2017.
46 Staal J, Hendriks E, Heijmans M. *KNGF clinical practice guideline for physical therapy in patients with low back pain*, 2013.
47 Stochkendahl MJ, Kjaer P, Hartvigsen J, *et al*. National clinical guidelines for non-surgical treatment of patients with recent onset low back pain or lumbar radiculopathy. *Eur Spine J* 2018;27:60–75.
48 Thorson D, Campbell R, Massey M. *Low back pain, adult acute and subacute. insT clin Syst Improv*, 2018.
49 Toward Optimized Practice (TOP) Low Back Pain Working Group. *Evidence-Informed primary care management of low back pain: clinical practice guideline. toward optimized practice*, 2017.
50 Valdecañas C, Ephraim D. *Clinical practice guidelines on the diagnosis and management of low back pain*, 2017.
51 Van Wambeke P, Desomer A, Ailliet L. Clinical guideline on low back pain and radicular pain. *Tijdschr Voor Geneeskd* 2017;73:1182–95.
52 Wong JJ, Côté P, Sutton DA, *et al*. Clinical practice guidelines for the noninvasive management of low back pain: a systematic review by the Ontario protocol for traffic injury management (optima) collaboration. *Eur J Pain* 2017;21:201–16.
53 Zhao H, LIU B-yan, LIU Z-shun, *et al*. Clinical practice guidelines of using acupuncture for low back pain. *World J Acupunct Moxibustion* 2016;26:1–13.
54 Government of Canada CI of HR. Sex, gender and health research. in: can. insT. health Res 2019. [Epub ahead of print: 4 Jul 2020] https://cihr-irsc.gc.ca/e/50833.html

Appendix A – Database Search Strategies

OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present

Last searched: March 8, 2020

1. exp Low Back Pain/
2. low back pain.mp.
3. Non-specific low back pain.mp.
4. low back*.mp.
5. low* back pain.mp.
6. backache*.mp.
7. exp Back Pain/
8. back pain*.mp.
9. lumbar pain*.mp.
10. exp Sciatica/
11. sciatica.mp.
12. lumbar spinal stenosis.mp.
13. exp Spinal Stenosis/
14. lumbar degenerative disc disease.mp.
15. exp Intervertebral Disc Degeneration/
16. intervertebral disc degeneration.mp.
17. lumbar DDD.mp.
18. non specific low back pain.mp.
19. NSLBP.mp.

20. lumbar fracture.mp.

21. exp Spinal Fractures/

22. lumbar #.mp.

23. exp Spondylitis, Ankylosing/

24. exp Spondylolisthesis/

25. exp Spondylarthritis/

26. exp Spondylitis/

27. spondyl*.mp.

28. exp Sacrococcygeal Region/

29. sacrococcygeal region.mp.

30. exp Sciatic Neuropathy/

31. sciatic*.mp.

32. low back-ache.mp.

33. low back ache.mp.

34. lumbago.mp.

35. exp Intervertebral Disc Displacement/

36. intervertebral disc displacement.mp.

37. dorsalgia.mp.

38. exp Spinal Diseases/

39. spinal disease*.mp.

40. exp Lumbar Vertebrae/

41. lumbar vertebrae.mp.

42. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41
43. best practice guideline*.mp.
44. exp Practice Guidelines as Topic/
45. clinical practice guideline*.mp.
46. practice guideline*.mp.
47. clinical guideline*.mp.
48. 43 or 44 or 45 or 46 or 47
49. 42 and 48

EMBASE

Last searched March 9, 2020

1. low back pain.mp.
2. exp low back pain/
3. non specific low back pain.mp.
4. non-specific low back pain.mp.
5. low back*.mp.
6. low* back pain.mp.
7. exp backache/
8. backache*.mp.
9. back pain.mp.
10. back pain*.mp.

11. lumbar pain*.mp.
12. sciatica.mp.
13. exp sciatica/
14. lumbar spinal stenosis.mp.
15. exp lumbar spinal stenosis/
16. lumbar vertebral canal stenosis.mp.
17. lumbar degenerative disc disease.mp.
18. lumbar degenerative disk disease.mp.
19. intervertebral disc degeneration.mp.
20. exp intervertebral disk degeneration/
21. lumbar DDD.mp.
22. NSLBP.mp.
23. lumbar fracture.mp.
24. exp spine fracture/
25. lumbar#.mp.
26. exp ankylosing spondylitis/
27. exp spondylolisthesis/
28. exp spondylarthritis/
29. exp spondylitis/
30. spondyl*.mp.
31. exp sacrococcygeal region/
32. sacrococcygeal region.mp.
33. exp sacrococcygeal region/

34. exp sciatic neuropathy/
35. sciatic*.mp.
36. low back-ache.mp.
37. low back ache.mp.
38. lumbago.mp.
39. exp intervertebral disk hernia/
40. intervertebral disc displacement.mp.
41. dorsalgia.mp.
42. exp spine disease/
43. spinal disease.mp.
44. exp lumbar vertebra/
45. lumbar vertebra*.mp.
46. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39
47. exp practice guideline/
48. clinical practice guideline*.mp.
49. best practice guideline*.mp.
50. clinical guideline*.mp.
51. 41 or 42 or 43 or 44
52. 40 and 45

NICE

Last Searched: March 9, 2020

1. Low back pain

Filter: Guidance and policy

TRIP

Last Searched: March 17, 2020

1. Low back pain

Filter: Guidelines

PEDro

Last Searched: March 9, 2020

1. Pain

Filter: Body Part (lumbar spine, sacro-iliac joint, pelvis); Method (practice guideline)

Appendix B – Excluded studies with reasons for exclusion

Excluded studies with reasons for exclusions

Reference	Reason for Exclusion
Abenhaim L, Rossignol M, Valat JP, Nordin M, Avouac B, Blotman F, et al. The role of activity in the therapeutic management of back pain. Report of the International Paris Task Force on Back Pain. Spine. 2000;25(4 Suppl):1S-33S.	Wrong year
Adorian DE, Boureau F, Budowski M, Dietemann JL, Guillaumat M, Langlade A, et al. [Diagnostic and therapeutic management of common lumbago and sciatica of less than 3 months of duration. Recommendations of the ANAES. Agence Nationale d'Accreditation et d'Evaluation en Sante]. Journal de radiologie. 2000;81(11):1665–6.	Not accessible in English
Agency for health care policy and research. Acute low back problems in adults: assessment and treatment. Acute Low Back Problems Guideline Panel. Agency for Health Care Policy and Research. American family physician. 1995;51(2):469–84.	Can't access
Airaksinen O, Brox JI, Cedraschi C, Hildebrandt J, Klaber-Moffett J, Kovacs F, et al. Chapter 4: European guidelines for the management of chronic nonspecific low back pain. European Spine Journal. 2006;15(SUPPL. 2):S192–300.	Wrong year
Andersson GB. Diagnostic considerations in patients with back pain. Physical medicine and rehabilitation clinics of North America. 1998;9(2):309–22.	Wrong study design
Ashton J, Butler M, Bridge M, Griffiths R, Hawtin J, Kendall N, et al. New Zealand acute low back pain guide, incorporating the guide to assessing psychosocial yellow flags in acute low back pain, October 2004 edition. 2004; Available from: https://www.acc.co.nz/assets/provider/acc1038-lower-back-pain-guide.pdf	Wrong year
Authority VW. Guidelines for the management of employees with compensable low back pain [Internet]. Melbourne : The Authority; 1996. Available from: https://trove.nla.gov.au/version/44947925	Can't access
Bach SM, Holten KB. Guideline update: what's the best approach to acute low back pain?. The Journal of family practice. 2009;58(12):E1.	Can't access

Back Pain in the Workplace: Management of Disability in Nonspecific Conditions : A Report of the Task Force on Pain in the Workplace of the International Association for the. Seattle: Intl Assn for the Study of Pain; 1995. 75 p.	Can't access
Beaumont B, Paice E. Back pain. Occasional paper (Royal College of General Practitioners). 1992;(58):36–8.	Wrong study design
Becker A, Chenot JF, Niebling W, Kochen MM. Guidelines for back pain - Evidence-based guidelines from the German Society of General Practice and Family Medicine. Zeitschrift fur Orthopadie und Ihre Grenzgebiete. 2004;142(6):716–9.	Not accessible in English
Becker A, Hofmann W, Henze S, Dittmar F. Low back pain - Guideline update 2017. Medizinische Monatsschrift fur Pharmazeuten. 2018;41(7):260–7.	Can't access
Becker E, Timner K, Horn S, Hussla B, Irle H, Knorr I, et al. Guidelines for the sociomedical assessment of performance in patients suffering from discopathy or associated diseases. Gesundheitswesen. 2003;65(1):19–39.	Not accessible in English
Bekkering GE, Hendriks HJM, Koes BW, Oostendorp RAB, Ostelo RWJG, Thomassen JMC, et al. Dutch physiotherapy guidelines for low back pain. Physiotherapy. 2003;89(2):82–96.	Wrong year
Belgian health care knowledge centre. KCE guideline on the treatment of low back pain and commentary on the role of opioid analgesics. Tijdschrift voor Geneeskunde. 2018;74(4):222–4.	Can't access
Bigos S, Bowyer O, Braen G, Brown K, Deyo R, Haldeman S, et al. Acute low back problems in adults: assessment and treatment. Agency for Health Care Policy and Research. Clinical practice guideline Quick reference guide for clinicians. 1994;(14):iii–25.	Wrong study design
Bigos SJ, Davis GE. Scientific application of sports medicine principles for acute low back problems. The Agency for Health Care Policy and Research Low Back Guideline Panel (AHCPR, Guideline #14). The Journal of orthopaedic and sports physical therapy. 1996;24(4):192–207.	Wrong study design
Bogduk N. International Spine Intervention Society Practice Guidelines for spinal diagnostic and treatment procedures. 2004;	Can't access
Borenstein DG. A clinician's approach to acute low back pain. American Journal of Medicine. 1997;102(1 A):16S-22S.	Wrong study design

Borkan J, Reis S, Werner S, Ribak J, Porath A. [Guidelines for treating low back pain in primary care. The Israeli Low Back Pain Guideline Group]. Harefuah. 1996;130(3):145–224.	Can't access
Boswell MV, Shah RV, Everett CR, Sehgal N, McKenzie Brown AM, Abdi S, et al. Interventional techniques in the management of chronic spinal pain: evidence-based practice guidelines. Pain physician. 2005;8(1):1–47.	Not within the scope of PT[a]
Boswell MV, Trescot AM, Datta S, Schultz DM, Hansen HC, Abdi S, et al. Interventional techniques: evidence-based practice guidelines in the management of chronic spinal pain. Pain physician. 2007;10(1):7–111.	Not within the scope of PT
Bradley WGJ. Low back pain. AJNR American journal of neuroradiology. 2007;28(5):990–2.	Outdated version of CPG[b]
Braillon A. Noninvasive treatments for acute, subacute, and chronic low back pain. Annals of Internal Medicine. 2017;167(11):831–2.	Wrong study design
Brighton SW. The management of acute low back pain in adults: A guide for the primary care physician. South African Family Practice. 2012;54(5):398–403.	Wrong study design
Brighton SW. The management of acute low back pain in adults: A guide for the primary care physician, part II. South African Family Practice. 2013;55(1):26–32.	Wrong study design
Bronfort G, Haas M, Evans R, Kawchuk G, Dagenais S. Evidence-informed management of chronic low back pain with spinal manipulation and mobilization. Spine Journal. 2008;8(1):213–25.	Wrong study design
Bronfort G, Haas M, Evans R, Leininger B, Triano J. Effectiveness of manual therapies: the UK evidence report. Chiropractic & osteopathy. 2010;18(101245797):3.	Wrong study design
Brosseau L, Tugwell P, Wells GA, Robinson VA, Graham ID, Shea BJ, et al. Philadelphia Panel evidence-based clinical practice guidelines on selected rehabilitation interventions for low back pain. Physical Therapy 2001 Oct;81(10):1641-1674. 2001;	Wrong year
Browne W. Management of acute low back pain. The New Zealand medical journal. 1996;109(1028):323–4.	Wrong study design

Burns AD. Guidelines address treatment of suspected spinal injuries. Athletic Therapy Today. 2001;6(3):49.	Can't access
Burton AK, Balague F, Cardon G, Eriksen HR, Henrotin Y, Lahad A, et al. Chapter 2. European guidelines for prevention in low back pain : November 2004. European spine journal : official publication of the European Spine Society, the European Spinal Deformity Society, and the European Section of the Cervical Spine Research Society. 2006;15 Suppl 2(9301980, b9y):S136-68.	Wrong year
Burton AK, Waddell G. Clinical guidelines in the management of low back pain. Bailliere's clinical rheumatology. 1998;12(1):17–35.	Wrong study design
Canadian Task Force on Preventive Care. Use of back belts to prevent occupational low-back pain: Recommendation statement from the Canadian Task Force on Preventive Health Care. CMAJ. 2003;169(3):213–4.	Wrong year
Chenot JF, Becker A, Niebling W, Kochen MM, Hildebrandt J, Pfingsten M, et al. Guidelines on low back pain: What level of diagnostic and which therapies are useful? Zeitschrift fur Allgemeinmedizin. 2003;79(3):112–6.	Not accessible in English
Chenot JF, Becker A, Niebling W, Kochen MM. A new DEGAM guideline: Low back pain. Zeitschrift fur Allgemeinmedizin. 2004;80(8):351–2.	Not accessible in English
Chenot JF, Becker A, Niebling W, Kochen MM. DEGAM guidelines on low back pain: What level of diagnostic and which therapies are useful? Zeitschrift fur Allgemeinmedizin. 2004;80(8):353–7.	Not accessible in English
Chenot JF, Becker A. The national disease management guideline for low back pain: A summary for family medicine. Zeitschrift fur Allgemeinmedizin. 2011;87(6):260–7.	Not accessible in English
Chenot JF, Becker A. Update of the national disease management guideline for low back pain. Zeitschrift fur Allgemeinmedizin. 2017;93(6):250–4.	Not accessible in English
Chinese Association of Orthopedic Surgeons, Editorial Committee of the "Evidence-based guideline for the management of acute thoracolumbar injury" of Chinese Association of Orthopedic Surgeons. [Evidence-based guideline for the management of acute thoracolumbar injury]. Zhonghua wai ke za zhi [Chinese journal of surgery]. 2019;57(3):161–5.	Not accessible in English

Chinese Association of Orthopedic Surgeons, Editorial Committee of the "Evidence-based guideline for the management of early onset scoliosis" of Chinese Association of Orthopedic Surgeons. [Evidence-based guideline for the management of early onset scoliosis]. Zhonghua wai ke za zhi [Chinese journal of surgery]. 2019;57(3):166–9.	Not accessible in English
Chou R, Loeser JD, Owens DK, Rosenquist RW, Atlas SJ, Baisden J, et al. Interventional therapies, surgery, and interdisciplinary rehabilitation for low back pain: an evidence-based clinical practice guideline from the American Pain Society. Spine. 2009;34(10):1066–77.	Wrong year
Chou R, Qaseem A, Snow V, Casey D, Cross JTJ, Shekelle P, et al. Diagnosis and treatment of low back pain: a joint clinical practice guideline from the American College of Physicians and the American Pain Society. Annals of internal medicine. 2007;147(7):478–91.	Wrong year
Clinical Guideline Subcommittee on Low Back Pain, American Osteopathic Association. American Osteopathic Association guidelines for osteopathic manipulative treatment (OMT) for patients with low back pain. The Journal of the American Osteopathic Association. 2010;110(11):653–66.	Not within the scope of PT
Clinical Standards Advisory Group. Back Pain: Report of a CSAG Committee on Back Pain. H.M. Stationery Office; 1995. 89 p.	Can't access
Committee of the German Society for the Study of Pain, German society of rheumatology. Differential pain therapy for backache. Guidelines for classification and therapy for backache. Reported from the Committee of the German Society for the Study of Pain and the German Society of Rheumatology Consensus Conference: Dresden, February 1992. Fortschritte der Medizin Supplement : die Kongressinformation fur die Praxis. 1992;136:1–15.	Not accessible in English
Cutforth G, Peter A, Taenzer P. The Alberta Health Technology Assessment (HTA) Ambassador Program: The Development of a Contextually Relevant, Multidisciplinary Clinical Practice Guideline for Non-specific Low Back Pain: A Review. Physiotherapy Canada Physiotherapie Canada. 2011;63(3):278–86.	Wrong study design
Davis PC, Wippold FJ 2nd, Brunberg JA, Cornelius RS, De La Paz RL, Dormont PD, et al. ACR Appropriateness Criteria on low back pain. Journal of the American College of Radiology : JACR. 2009;6(6):401–7.	Wrong study design
Delcambre B, Jeantet M, Laversin S, Auberge T, Crenn O, Forestier R, et al. Diagnosis, management and follow-up of patients with chronic low back pain: Recommendations for the practice - December 2000. Pratiques Medicales et Therapeutiques. 2001;(17):18–23.	Wrong year

Demetrious J. Guidelines in the evaluation and management of low back pain. North Carolina medical journal. 2008;69(2):175.	Wrong study design
Deng Z, Su J, Cai L, Ping A, Jin W, Wei R, et al. Evidence-based treatment for acute spinal cord injury. Neural Regeneration Research. 2011;6(23):1791–5.	Can't access
Deyo RA, Jarvik JG, Chou R. Low back pain in primary care. BMJ (Online). 2014;349((Chou) Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University, Portland, OR, United States):g4266.	Wrong study design
Elleuch M, El Maghraoui A, Griene B, Nejmi M, Ndongo S, Serrie A. [Formalized consensus: clinical practice recommendations for the management of acute low back pain of the African patient]. The Pan African medical journal. 2015;22(101517926):240.	Not accessible in English
Eric Gonza. The Diagnosis and Treatment of Low Back Pain. 2001;	Wrong year
Estrade JL. Dutch clinical practice guideline for patients with low back pain. Kinesitherapie. 2015;15(159):36–40.	Can't access
Evidence-informed primary care management of low back pain. Accelerating Change Transformation Team (ACTT) [Internet]. 2015; Available from: https://actt.albertadoctors.org/CPGs/Lists/CPGDocumentList/LBP-guideline.pdf#search=Low%20back%20pain	Can't access
Flanagan M. NICE guidance on the management of persistent low back pain and nurses' role. Nursing times. 2009;105(29):23.	Wrong study design
Friedrich M. Evidence and consensus based Austrian guidelines for the management of acute and chronic unspecific low back pain. Wiener Klinische Wochenschrift. 2007;119(5–6):189–97.	Not accessible in English
Grazio S, Curkovic B, Vlak T, Kes VB, Jelic M, Buljan D, et al. [Diagnosis and conservative treatment of low back pain: review and guidelines of the Croatian Vertebrologic Society]. Acta medica Croatica : casopis Hravatske akademije medicinskih znanosti. 2012;66(4):259–94.	Not accessible in English
Greenstein JS, Kleiner DM. Guidelines for the pre-hospital management of the spine-injured athlete. Journal of Sports Chiropractic and Rehabilitation. 2000;14(4):105–10.	Can't access

Guevara-Lopez U, Covarrubias-Gomez A, Elias-Dib J, Reyes-Sanchez A, Rodriguez-Reyna TS, Consensus Group of Practice Parameters to Manage Low Back Pain. Practice guidelines for the management of low back pain. Consensus Group of Practice Parameters to Manage Low Back Pain. Cirugia y cirujanos. 2011;79(3):264–302.	Not accessible in English
Guidelines for the Management of Back-Injured Employees. 1993;	Can't access
Gulich M, Engel EM, Rose S, Klosterhuis H, Jackel WH. [Development of a guideline for rehabilitation of patients with low back pain-- phase 2: analysis of data of the classification of therapeutic procedures]. Die Rehabilitation. 2003;42(2):109–17.	Not accessible in English
Haldeman S, Johnson CD, Chou R, Nordin M, Cote P, Hurwitz EL, et al. The Global Spine Care Initiative: care pathway for people with spine-related concerns. European Spine Journal. 2018;27(Supplement 6):901–14.	Wrong study design
Harris GR, Susman JL. Managing musculoskeletal complaints with rehabilitation therapy: summary of the Philadelphia Panel evidence-based clinical practice guidelines on musculoskeletal rehabilitation interventions. The Journal of family practice. 2002;51(12):1042–6.	Wrong patient population
Hauk L. Low Back Pain: American College of Physicians Practice Guideline on Noninvasive Treatments. American family physician. 2017;96(6):407–8.	Wrong study design
Hoffman EG, Jain D, Radcliff K, Fischer CR, Hilibrand AS, Razi AE. Management of Adult Lumbar Spine Problems for General Orthopaedic Surgeons: A Practical Guide. Instructional course lectures. 2020;69(ifc, 7507149):597–606.	Wrong study design
Hoffmann R, Kandziora F, Korge A, Schnake K, Kothe R. Spine Trauma Treatment: Recommendations of the German Society for Orthopaedics and Trauma (DGOU). Global Spine Journal. 2018;8(2_suppl):4S.	Wrong study design
Holland JP. Development of a clinical practice guideline for acute low back pain. Current Opinion in Orthopaedics. 1995;6(5):63–9.	Can't access
Horsley L. ACP guidelines for the diagnosis and treatment of low back pain. American Family Physician. 2008;77(11):1607–15.	Wrong study design
Hough PA, Van Rooyen FC, Bredenkamp E, Brough K, Ferreira M, Myburgh H, et al. Guidelines prescribed by general practitioners to patients with acute low back pain regarding "return to work." South African Family Practice. 2006;48(10):15.	Wrong study design

Houra K, Perovic D, Kvesic D, Rados I, Kovac D, Kapural L. First guidelines of Croatian interest group in diagnosing and treating lower back and radicular pain using minimally invasive diagnostic and therapeutic procedures. Lijecnicki vjesnik. 2013;135(7–8):187–95.	Not accessible in English
Houwert GJ. CBO guideline for diagnosis and treatment of acute and chronic a specific low back pain [6]. Nederlands Tijdschrift voor Geneeskunde. 2004;148(23):1171.	Can't access
Interspinous distraction procedures for lumbar spinal stenosis causing neurogenic claudication - guidance (IPG365). 2010; Available from: https://www.nice.org.uk/guidance/ipg365	Not within the scope of PT
Itz CJ, Willems PC, Zeilstra DJ, Huygen FJPM. [Multidisciplinary practice guideline 'Invasive treatment of spine related low back pain']. Nederlands tijdschrift voor geneeskunde. 2013;157(32):A6030.	Not accessible in English
Jackson A, Hettinga DM, Mead J, Mercer C. Using consensus methods in developing clinical guidelines for exercise in managing persistent low back pain. Physiotherapy. 2009;95(4):302–11.	Wrong year
Jimenez-Avila JM, Rubio-Flores EN, Gonzalez-Cisneros AC, Guzman-Pantoja JE, Gutierrez-Roman EA. Directrices en la aplicacion de la guia de practica clinica en la lumbalgia, Guidelines on the application of the clinical practice guideline on low back pain. Cirugia y cirujanos. 2019;86(1):24–32.	Not accessible in English
Johanning E. Evaluation and management of occupational low back disorders. American Journal of Industrial Medicine. 2000;37(1):94–111.	Wrong study design
Jonckheer P, Demoulin C, Desomer A, Van Wambeke P. Low back and radicular pain: Which management in 2018 ? Revue Medicale de Liege. 2018;73(3):114–8.	Can't access
JOSPT perspectives for patients. Low back pain: how does your physical therapist treat low back pain?. The Journal of orthopaedic and sports physical therapy. 2012;42(4):381.	Wrong study design
Katz JN, Gall V. Agency for Health Care Policy and Research clinical practice guideline for acute low back pain. Arthritis care and research : the official journal of the Arthritis Health Professions Association. 1995;8(3):134–6.	Wrong study design
Kim YB, Lee SG, Park CW, Kim DJ, Park YK, Sung NJ, et al. Korean guideline development for the evaluation of permanent impairment of the spine: proposal by the Korean Academy of Medical Sciences Committee. Journal of Korean medical science. 2009;24 Suppl 2(ah4, 8703518):S307-13.	Wrong patient population

Koes BW, Sanders RJ, Tuut MK. The Dutch Institute for Healthcare Improvement's (CBO) guideline for the diagnosis and treatment of aspecific acute and chronic low-back complaints. Nederlands Tijdschrift voor Geneeskunde. 2004;148(7):310–4.	Not accessible in English
Koes BW. Evidence-based management of acute low back pain. Lancet. 2007;370(9599):1595–6.	Wrong study design
Koyuncu H. Treatment guidelines in back pain. Turkiye Fiziksel Tip ve Rehabilitasyon Dergisi. 2007;53(SUPPL. 2):41–6.	Can't access
Kreutzkamp B. National care guideline on low back pain. Medizinische Monatsschrift fur Pharmazeuten [Internet]. 2011;34(5). Available from: http://www.justscience.de/en/drugbase/medizinische-monatsschrift-fuer-pharmazeuten/artikel/print.html?tx_crondavdbmmp_pi[uid]=1703&cHash=ef36b39e71	Can't access
Kuehn BM. Medical groups release new guidelines for treatment of low back pain. JAMA. 2007;298(19):2253.	Wrong study design
Labour Standards Bureau. Guidelines on worksite prevention of low back pain. Labour Standards Bureau Notification No. 547. Japan Industrial Safety and Health Association. Industrial health. 1997;35(2):143–72.	Wrong study design
Ladeira CE. Evidence based practice guidelines for management of low back pain: physical therapy implications. Revista brasileira de fisioterapia (Sao Carlos (Sao Paulo, Brazil)). 2011;15(3):190–9.	Wrong study design
Laerum E, Dullerud R, Kirkesola G, Mengshoel AM, Nygaard OP, Skouen JS, et al. The Norwegian back pain network -- the communication unit. Acute low back pain: interdisciplinary clinical guidelines. 2002; Available from: http://www.sohs.com.sg/pdf/Norway_Acute_Low_Back.pdf	Wrong year
Laerum E, Storheim K, Brox JI. [New clinical guidelines for low back pain]. Tidsskrift for den Norske laegeforening : tidsskrift for praktisk medicin, ny raekke. 2007;127(20):2706.	Not accessible in English
Laerum E. [Guidelines concerning low back pain]. Tidsskrift for den Norske laegeforening : tidsskrift for praktisk medicin, ny raekke. 2002;122(8):832.	Can't access
Lahad A, Sarig-Bahat H, Israeli L. B.P. Guideline Work Group. [Israeli guidelines for prevention of low back pain]. Harefuah. 2007;146(4):253–320.	Not accessible in English

Lai L. NICE should reconsider its recommendation to withdraw acupuncture from its 2016 guidelines on low back pain and sciatica. European Journal of Integrative Medicine. 2016;8(4):329–31.	Wrong study design
Latka D, Miekisiak G, Jarmuzek P, Lachowski M, Kaczmarczyk J. Treatment of lumbar disc herniation with radiculopathy. Clinical practice guidelines endorsed by The Polish Society of Spinal Surgery. Neurologia i neurochirurgia polska. 2016;50(2):101–8.	Wrong study design
Latorre Marques E, Kovacs F, Gil Del Real Ma T, Alonso P, Urrutia G. The Spanish version of the COST B13 guide: Clinical practice guidelines for non-specific low back pain based on scientific evidence. DOLOR. 2008;23(1):7–17.	Not accessible in English
Lehman Jr. RA, Kang DG, Bellabarba C. A new classification for complex lumbosacral injuries. Spine Journal. 2012;12(7):612–28.	Wrong study design
Lentle BC, Brown JP, Khan A, Leslie WD, Levesque J, Lyons DJ, et al. Recognizing and reporting vertebral fractures: reducing the risk of future osteoporotic fractures. Canadian Association of Radiologists journal = Journal l'Association canadienne des radiologistes. 2007;58(1):27–36.	Wrong patient population
Licciardone JC, Gatchel RJ Nonpharmacologic therapies for low back pain. Annals of Internal Medicine. 2017;167(8):606.	Wrong study design
Lie H. Clinical management of low back pain in primary health care. Tidsskrift for den Norske laegeforening. 1999;119(15):2215–8.	Not accessible in English
Lin I, Mak DB, Coffin J, O'Sullivan P. Primary care management of non-specific low back pain: key messages from recent clinical guidelines. The Medical journal of Australia. 2018;209(5):235.	Wrong study design
Loerum E. Guidelines for acute low back pain. Tidsskrift for den Norske Laegeforening. 2002;122(8):832.	Not accessible in English
Lohman JJHM, Vreugdenhil-Vader CM. Standards of the Dutch general practitioners' Society on low back pain and lumbosacral radicular syndrome. Pharmaceutisch Weekblad. 1996;131(23):642–7.	Can't access

Lonnberg F, Manniche C. Evidence-based treatment of low back pain 2002. Ugeskrift for Laeger. 2002;164(23):3080–1.	Not accessible in English
Low Back Pain. American College of Radiology [Internet]. 2015; Available from: https://acsearch.acr.org/docs/69483/Narrative/	Outdated CPG
MacPherson H. NICE for Some Interventions, But Not So NICE for Others: Questionable Guidance on Acupuncture for Osteoarthritis and Low-Back Pain. Journal of alternative and complementary medicine (New York, NY). 2017;23(4):247–8.	Wrong study design
Major-Helsloot M, Crous L, Grimmer-Somers K, Louw Q. Management of low back pain at primary care level in South Africa: Up to standards? Physiotherapy (United Kingdom). 2015;101(SUPPL. 1):eS934–5.	Wrong study design
Malmivaara A, Kotilainen E, Laasonen E, Poussa M, Rasmussen M, Kunnamo I. Treatment recommendations for diseases of lower back. Treatment Recommendation Group of Back Disorders Consensus Meeting. October 14-16, 1996, Finland. Duodecim; laaketieteellinen aikakauskirja. 1998;114(19):2004–15.	Can't access
Manchikanti L, Abdi S, Atluri S, Benyamin RM, Boswell MV, Buenaventura RM, et al. An update of comprehensive evidence-based guidelines for interventional techniques in chronic spinal pain. Part II: guidance and recommendations. Pain physician. 2013;16(2 Suppl):S49-283.	Not within the scope of PT
Manchikanti L, Boswell MV, Singh V, Benyamin RM, Fellows B, Abdi S, et al. Comprehensive evidence-based guidelines for interventional techniques in the management of chronic spinal pain. Pain physician. 2009;12(4):699–802.	Wrong year
Manchikanti L, Singh V, Helm S 2nd, Schultz DM, Datta S, Hirsch JA, et al. An introduction to an evidence-based approach to interventional techniques in the management of chronic spinal pain. Pain physician. 2009;12(4):E1-33.	Wrong year
Manchikanti L, Staats PS, Singh V, Schultz DM, Vilims BD, Jasper JF, et al. Evidence-based practice guidelines for interventional techniques in the management of chronic spinal pain. Pain Physician. 2003;6(1):3–81.	Not within the scope of PT
Mao JJ, Davis RT, Coeytaux R, Hullender-Rubin L, Kong J-T, MacPherson H, et al. Acupuncture for Chronic Low Back Pain: Recommendations to Medicare/Medicaid from the Society for Acupuncture Research. Journal of alternative and complementary medicine (New York, NY). 2019;25(4):367–9.	Wrong study design

Marker-Hermann E, Kiltz U, Braun J. [Treatment of chronic back pain: current standards]. Der Internist. 2014;55(12):1410–8.	Not accessible in English
Maschke M, Uberall MA. Evidence-based treatment of chronic low back pain. Aktuelle Neurologie. 2013;40(2):90–5.	Not accessible in English
Materson RS. The AHCPR practice guidelines for low back pain. Bulletin on the rheumatic diseases. 1996;45(2):6–8.	Wrong year
May S, Donelson R. Evidence-informed management of chronic low back pain with the McKenzie method. Spine Journal. 2008;8(1):134–41.	Wrong study design
Mayer JM, Haldeman S, Tricco AC, Dagenais S. Management of chronic low back pain in active individuals. Current sports medicine reports. 2010;9(1):60–6.	Wrong study design
Mayor S. NICE recommends early intensive management of persistent low back pain. BMJ (Clinical research ed). 2009;338(8900488, bmj, 101090866):b2115.	Wrong study design
Mazanec DJ, Drucker Y, Segal AM. Lumbar canal stenosis: Nonoperative approaches to treatment. Journal of Clinical Rheumatology. 1997;3(2):89–94.	Wrong study design
Mazel JA. Marked similarity between the Dutch Institute for Healthcare Improvement's guideline "Aspecific low back complaints" and the Dutch College of General Practitioners' guideline "Low back pain." Nederlands Tijdschrift voor Geneeskunde. 2004;148(7):304–5.	Wrong study design
Medeiros JM. Clinical guidelines for the management of acute low back pain: An update. Journal of Manual and Manipulative Therapy. 1998;6(3):116.	Can't access
Melcher C, Wegener B, Kanz KG, Mutschler WE, Jansson V, Birkenmaier C. Management of acute back pain. Global Spine Journal. 2012;2(Supplement 1).	Can't access
Mercer C. Clinical guidelines for the physiotherapy management of persistent low back pain (LBP). 2006;	Can't access
Metzger RL. Evidence-based practice guidelines for the diagnosis and treatment of lumbar spinal conditions. The Nurse practitioner. 2016;41(12):30–7.	Wrong study design

Negrini S, Giovannoni S, Minozzi S, Barneschi G, Bonaiuti D, Bussotti A, et al. Diagnostic therapeutic flow-charts for low back pain patients: the Italian clinical guidelines. Europa medicophysica. 2006;42(2):151–70.	Wrong year
Negrini S, Monticone M, Chirchiglia S, Fabiani L, Gattinoni F, Giorgianni R, et al. Experience in Italy in the development and application of clinical guidelines for low back pain. Europa medicophysica. 2004;40(1):45–53.	Wrong study design
Nielens H, Zundert J, Mairiaux P, Gailly J, Van den Hecke N, Mazina D, et al. Chronic low back pain. Good clinical practice (GCP). 2006;	Outdated CPG
Nordin M, Randhawa K, Torres P, Yu H, Haldeman S, Brady O, et al. The Global Spine Care Initiative: a systematic review for the assessment of spine-related complaints in populations with limited resources and in low- and middle-income communities. European spine journal : official publication of the European Spine Society, the European Spinal Deformity Society, and the European Section of the Cervical Spine Research Society. 2018;27(Suppl 6):816–27.	Wrong study design
Nordin M, Welser S, Campello MA, Pietrek M. Self-care techniques for acute episodes of low back pain. Best Practice and Research: Clinical Rheumatology. 2002;16(1):89–104.	Wrong study design
NSW Agency for Clinical Innovation. Management of people with acute low back pain model of care. NSW Health. 2016.	Wrong study design
O'Sullivan K, O'Keeffe M, O'Sullivan P. NICE low back pain guidelines: opportunities and obstacles to change practice. British journal of sports medicine. 2017;51(22):1632–3.	Wrong study design
Oland G, Skjelbred O, Vik O, Karlsen M. [Guidelines concerning acute low back pain]. Tidsskrift for den Norske laegeforening : tidsskrift for praktisk medicin, ny raekke. 2002;122(11):1144.	Not retrievable in English
Oliveira CB, Maher CG, Pinto RZ, Traeger AC, Lin C-WC, Chenot J-F, et al. Clinical practice guidelines for the management of non-specific low back pain in primary care: an updated overview. European spine journal : official publication of the European Spine Society, the European Spinal Deformity Society, and the European Section of the Cervical Spine Research Society. 2018;27(11):2791–803.	Wrong study design
Oostendorp RAB, Huijbregts PA. Low back pain: the time to become invested in clinical practice guidelines is now. Physiotherapy Canada Physiotherapie Canada. 2011;63(2):131–9.	Wrong study design

Oostendorp RAB, Scholten-Peeters GGM., Swinkels RAHM, Bekkering GE, Heijmans MWFGJ, Huijbregts PA, et al. Evidence-Based Practice in Physical and Manual Therapy: Development and Content of Dutch National Practice Guidelines for Patients with Non-Specific Low Back Pain. Journal of Manual and Manipulative Therapy. 2004;12(1):21–31.	Wrong study design
Paganoni S. Evidence-Based Physiatry: Clinical Practice Guideline: Noninvasive Treatments for Low Back Pain. American journal of physical medicine & rehabilitation. 2018;97(10):763.	Wrong study design
Parfenov VA, Yakhno NN, Davydov OS, Kukushkin ML, Churyukanov MV, Golovacheva VA, et al. Chronic nonspecific (musculoskeletal) low back pain. Guidelines of the Russian Society for the Study of Pain (RSSP). Nevrologiya, Neiropsikhiatriya, Psikhosomatika. 2019;11((Yakupov) Kazan State Medical University, Ministry of Health of Russia, 49 Butlerov St., Kazan 420012, Russian Federation):7–16.	Not accessible in English
Petit A, Fassier JB, Rousseau S, Mairiaux P, Roquelaure Y. French good practice guidelines for medical and occupational surveillance of the low back pain risk among workers exposed to manual handling of loads. Annals of occupational and environmental medicine. 2015;27(101609244):18.	Wrong study design
Petit A, Rozenberg S, Fassier JB, Rousseau S, Mairiaux P, Roquelaure Y. Pre-return-to-work medical consultation for low back pain workers. Good practice recommendations based on systematic review and expert consensus. Annals of physical and rehabilitation medicine. 2015;58(5):298–304.	Not within the scope of PT
Philadelphia panel. Development of evidence-based clinical practice guidelines: The results of the Philadelphia panel. Physiotherapy Theory and Practice. 2001;17(4):213–4.	Wrong study design
Phillips JA, Forrester B, Brown KC. Low back pain: prevention and management. AAOHN journal : official journal of the American Association of Occupational Health Nurses. 1996;44(1):40–3.	Wrong study design
Pillastrini P, Gardenghi I, Bonetti F, Capra F, Guccione A, Mugnai R, et al. An updated overview of clinical guidelines for chronic low back pain management in primary care. Joint Bone Spine. 2012;79(2):176–85.	Wrong study design
Plantin A. Low back pain: Diagnosis and treatment based on the APTA guidelines. Kinesitherapie. 2016;16(172):30–9.	Can't access
Pohjolainen T, Leinonen V, Frantén J, Haanpää M, Jousimaa J, Karppinen J, et al. [Update on Current Care Guideline: Low back pain]. Duodecim. 2015;131(1):92–4.	Not accessible in English

Poitras S, Rossignol M, Dionne C, Tousignant M, Truchon M, Arsenault B, et al. An interdisciplinary clinical practice model for the management of low-back pain in primary care: The CLIP project. BMC Musculoskeletal Disorders. 2008;9((Neveu) Constance Lethbridge Rehabilitation Centre, Montreal, QC, Canada):54.	Wrong year
Pongratz V.D., Spath M. What helps to ease back pain? Guidelines for symptomatic treatment. MMW-Fortschritte der Medizin. 2001;143(18):26–9.	Can't access
Rauck RL, Gargiulo CA, Ruoff GE, Schnitzer TJ, Trapp RG. Chronic low back pain: new perspectives and treatment guidelines for primary care: Part I. Managed care interface. 1998;11(2):72–82.	Can't access
Rauck RL, Gargiulo CA, Ruoff GE, Schnitzer TJ, Trapp RG. Chronic low back pain: new perspectives and treatment guidelines for primary care: Part II. Managed care interface. 1998;11(3):71–5.	Can't access
Reis S, Lahad A. [Clinical guidelines for diagnosis and treatment of acute low back pain]. Harefuah. 2007;146(8):631–44.	Can't access
Reis S, Lahad A. [Clinical guidelines for diagnosis and treatment of chronic low back pain]. Harefuah. 2008;147(8–9):735–48.	Can't access
Reith W, Nabhan A, Kelm J, Naumann N, Ahlhelm F. [Differential diagnosis of back pain]. Der Radiologe. 2006;46(6):443–53.	Not accessible in English
Resnick DK, Choudhri TF, Dailey AT, Groff MW, Khoo L, Matz PG, et al. Guidelines for the performance of fusion procedures for degenerative disease of the lumbar spine. Part 2: assessment of functional outcome. Journal of neurosurgery Spine. 2005;2(6):639–46.	Not within the scope of PT
Resnick DK, Groff MC. Evidence-based guidelines in lumbar spine surgery. Progress in neurological surgery. 2006;19(0076033):123–34.	Not within the scope of PT
Resnick DK, Malone DG, Ryken TC. Guidelines for the use of discography for the diagnosis of painful degenerative lumbar disc disease. Neurosurgical focus. 2002;13(2):E12.	Not within the scope of PT
Rossignol M, Poitras S, Dionne C, Tousignant M, Truchon M, Arsenault B, et al. An interdisciplinary guideline development process: the Clinic on Low-back pain in Interdisciplinary Practice (CLIP) low-back pain guidelines. Implementation science : IS. 2007;2(101258411):36.	Wrong study design

Rousing R, Jensen RK, Fruensgaard S, Strom J, Brogger HA, Degn JDM, et al. Danish national clinical guidelines for surgical and nonsurgical treatment of patients with lumbar spinal stenosis. European spine journal : official publication of the European Spine Society, the European Spinal Deformity Society, and the European Section of the Cervical Spine Research Society. 2019;28(6):1386–96.	Wrong study design
Rudwaleit M, Marker-Hermann E. [Management of nonspecific low back pain. The new national guidelines 2011]. Zeitschrift fur Rheumatologie. 2012;71(6):485–9.	Not accessible in English
Sanders SH, Rucker KS, Anderson KO, Harden RN, Jackson KW, Vicente PJ, et al. Clinical practice guidelines for chronic non-malignant pain syndrome patients. Journal of back and musculoskeletal rehabilitation. 1995;5(2):115–20.	Wrong patient population
Savigny P, Kuntze S, Watson P, Underwood M, Ritchie G, Cotterell M, et al. Low back pain: early management of persistent non-specific low back pain: full guideline. 2009; Available from: http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0005442/pdf/PubMedHealth_PMH0005442.pdf	Wrong study design
Savigny P, Watson P, Underwood M, Guideline Development Group. Early management of persistent non-specific low back pain: summary of NICE guidance. BMJ (Clinical research ed). 2009;338(8900488, bmj, 101090866):b1805.	Wrong study design
Schaafstra A, Bons S, Borg M, Spinnewijn W, Koes B, Ostelo R, et al. Standard of the Dutch College of General Practitioners on lumbosacral radicular syndrome (first revision). Huisarts en Wetenschap. 2005;48(4):171–8.	Not accessible in English
Schers H, Braspenning J, Drijver R, Wensing M, Grol R. Low back pain in general practice: reported management and reasons for not adhering to the guidelines in The Netherlands. The British journal of general practice : the journal of the Royal College of General Practitioners. 2000;50(457):640–4.	Wrong study design
Sixta S, Moore FO, Ditillo MF, Fox AD, Garcia AJ, Holena D, et al. Screening for thoracolumbar spinal injuries in blunt trauma: An eastern association for the surgery of trauma practice management guideline. Journal of Trauma and Acute Care Surgery. 2012;73(5 SUPPL.4):S326–32.	Wrong patient population
Snook SH. Self-care guidelines for the management of nonspecific low back pain. Journal of Occupational Rehabilitation. 2004;14(4):243–53.	Wrong study design

Somerville S. Guideline: In low back pain, nonpharmacologic treatments are recommended. Annals of Internal Medicine. 2017;166(12):JC62.	Wrong study design
Spitzer WO. Scientific approach to the assessment and management of activity-related spinal disorders. A monograph for clinicians. Report of the Quebec Task Force on Spinal Disorders. Spine. 1987;12(7 Suppl):S1-59.	Can't access
Staal JB, Hlobil H, Van Tulder MW, Waddell G, Burton AK, Koes BW, et al. Occupational health guidelines for the management of low back pain: an international comparison. Occup Environ Med. 2003;60(9):618–26.	Wrong study design
Stahlman GC, Hanley Jr. EN. Surgical management of spinal fractures: Guidelines for evaluation, patient selection, and surgical timing. Neurosurgery Quarterly. 1999;9(1):73–86.	Can't access
State of Florida Agency for Health Care Administration. Florida medical practice guidelines for low back pain or injury. 1996;	Can't access
Steven ID, Fraser RD. Clinical practice guidelines. Particular reference to the management of pain in the lumbosacral spine. Spine. 1996;21(13):1593–6.	Wrong study design
Steven ID, Fraser RD. Spine update clinical practice guidelines. Particular reference to the management of pain in the lumbosacral spine. Spine. 1996;21(13):1593–6.	Wrong study design
Steven ID. The management of work caused lumbosacral injury. Development and content of professionally agreed guidelines. Australian family physician. 1995;24(4):600–8.	Can't access
Stevenson K, Hay E. An integrated care pathway for the management of low back pain. Physiotherapy. 2004;90(2):91–6.	Wrong study design
Stockwell S. New Clinical Guideline for Low Back Pain Says Try Nondrug Therapies First. The American journal of nursing. 2017;117(5):16.	Wrong study design
Susman J. AHCPR guideline on acute low back problems. American family physician. 1995;51(2):334–40.	Wrong year
Taenzer P, Findlay T, Harstall C. Using the Alberta primary care low back pain guideline in practice. Pain Research and Management. 15(2):75.	Wrong study design
Texas Workers' Compensation Commission. Texas Spine Treatment Guidelines. 1994;	Can't access

The Diagnosis and Treatment of Low Back Pain Work Group Department of Veterans Affairs Department of Defense. VA/DoD clinical practice guideline for diagnosis and treatment of low back pain (version 2.0). 2017; Available from: https://www.healthquality.va.gov/guidelines/Pain/lbp/	Outdated version of CPG
The Korean Society for Meridian and Acupoint. Clinical guideline on acupuncture treatment for low back pain. 2013;	Can't access
The State of Florida Agency for Health Care Administration Florida Department of Health. Universe of Florida patients with low back pain or injury - Medical practice guidelines. Journal of Back and Musculoskeletal Rehabilitation. 1999;12(1):35–65.	Wrong year
Thomeczek C, Lampert U, Brune K, Hasenbring M, Kramer J, Niebling W, et al. The guidelines-clearing procedures for acute back pain. Zeitschrift fur Orthopadie und Ihre Grenzgebiete. 2003;141(1):11–7.	Can't access
Thompson H. Clinical practice guideline series update. The Journal of neuroscience nursing : journal of the American Association of Neuroscience Nurses. 2012;44(2):111.	Wrong study design
Timm KE. Therapeutic exercise guidelines for rehabilitating lumbar spine injuries in athletes. Athletic Therapy Today. 1999;4(2):17–21.	Wrong study design
Van Der Bijl G, Lems WF, Netelenbos JC, Koes BW, Tuut MK, Mazel JA, et al. CBO guideline for diagnosis and treatment of acute and chronic aspecific low back pain [5]. Nederlands Tijdschrift voor Geneeskunde. 2004;148(17):858–60.	Can't access
Van Tulder M, Becker A, Bekkering T, Breen A, Carter T, Gil del Real MT, et al. European guidelines for the management of acute nonspecific low back pain in primary care [with consumer summary]. 2004; Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3454540/pdf/586_2006_Article_1071.pdf	Outdated version of CPG
Van Tulder M, Becker A, Bekkering T, Breen A, Del Real MTG, Hutchinson A, et al. Chapter 3: European guidelines for the management of acute nonspecific low back pain in primary care. European Spine Journal. 2006;15(SUPPL. 2):S169–91.	Wrong year
Van Tulder M, Kovacs F, Muller G, Airaksinen O, Balague F, Broos L, et al. European guidelines for the management of low back pain. Acta Orthopaedica Scandinavica, Supplement. 2002;73(305):20–5.	Wrong study design
Van Wambeke P, Desomer A, Jonckheer P, Depreitere B. The Belgian national guideline on low back pain and radicular pain: key roles for rehabilitation, assessment of rehabilitation potential and the PRM specialist. European journal of physical and rehabilitation medicine. 2019;((Depreitere) Department of Neurosurgery, University Hospitals Leuven, Leuven, Belgium).	Wrong study design

Vogel S. NICE clinical guidelines. Low back pain: The early management of persistent non-specific back pain. International Journal of Osteopathic Medicine. 2009;12(4):113–4.	Wrong study design
Waddell G, Burton AK. Occupational health guidelines for the management of low back pain at work: evidence review. Occup Med (Lond). 2001;51(2):124–35.	Can't access
Waddell G, McIntosh A, Hutchinson A, Lewis M. Clinical Guidelines for the Management of Acute Low Back Pain. 1999;	Wrong study design
Watters WC 3rd, Baisden J, Gilbert TJ, Kreiner S, Resnick DK, Bono CM, et al. Degenerative lumbar spinal stenosis: an evidence-based clinical guideline for the diagnosis and treatment of degenerative lumbar spinal stenosis. The spine journal : official journal of the North American Spine Society. 2008;8(2):305–10.	Outdated version of CPG
WCB British Columbia. The Diagnosis and Treatment of Low Back Pain. 1995;	Wrong year
Webster BS, Courtney TK, Huang YH, Matz S, Christiani DC. Physicians' initial management of acute low back pain versus evidence-based guidelines. Influence of sciatica. Journal of general internal medicine : official journal of the Society for Research and Education in Primary Care Internal Medicine. 2005;20(12):1132–5.	Wrong study design
Weiss HR, Negrini S, Rigo M, Kotwicki T, Hawes MC, Grivas TB, et al. Indications for conservative management of scoliosis (SOSORT guidelines). Studies in health technology and informatics. 2008;135((Weiss, Negrini, Rigo, Kotwicki, Hawes, Grivas, Maruyama, Landauer) Asklepios Katharina Schroth Spinal Deformities Rehabilitation Centre, Bad Sobernheim, Germany.):164–70.	Wrong year
Wilson N, Pope C, Roberts L, Crouch R. Governing healthcare: finding meaning in a clinical practice guideline for the management of non-specific low back pain. Social science & medicine (1982). 2014;102(ut9, 8303205):138–45.	Wrong study design
Winer CE, Booth GC, Henke P, Jones LE, Lee LA, Niall PD. Guide to the assessment of percentage "impairment" of the back, neck and pelvis. Australasian College of Rehabilitation Medicine. The Medical journal of Australia. 1992;157(6):412–4.	Can't access
Wise J. NICE recommends exercise and not acupuncture for low back pain. BMJ (Clinical research ed). 2016;352(8900488, bmj, 101090866):i1765.	Wrong study design

[a]Physiotherapy
[b]Clinical practice guideline

Appendix C – Sex and gender terms when pregnan* was excluded

Summary of the use of sex and gender terms in relation to the respective category excluding pregnan* as a term

Author / National Body	Paraphrased quote from guideline
Category 2: Recommends evidence-based sex- or gender-related management approach	
Chiodo et al. 2010 University of Michigan Health System (USA)	REHABILITATION: In older women or persons at risk for osteoporosis, trunk extension exercises are preventive, while trunk flexion exercises may increase the risk of osteoporotic fractures.
Category 3: Referred to sex or gender within epidemiology data, risk factors or prognostic data, but did not make recommendations	
Bussieres et al. 2018 Canadian Chiropractic Guideline Initiative (Canada)	CARE SEEKING BEHAVIOURS: Most people with low-back pain consult a health provider for this issue. It is more common for women to seek care along with individuals with previous low back pain, poor general health, and more disabling or more painful episodes.
Delitto et al. 2012 American Physical Therapy Association (USA)	EPIDEMIOLOGY: Low back pain (LBP) prevalence appears to vary based on factors like sex, age, education, and occupation; with women having a higher prevalence than men. RISK FACTORS: Risk factors for LBP that relate to the individual include genetics, gender, age, body build, strength and flexibility. Females may have almost three-times the risk of back pain as males.
Hegmann et al. 2016 American College of Occupational and Environmental Medicine (USA)	RISK FACTORS: The factors that predict unresponsiveness to epidural glucocorticosteroid injections include potential sex differences. Male gender is at higher risk for ankylosing spondylitis. Risk factors for spondylolysis include increasing age and male gender. Risk factors for degenerative spondylolisthesis include age and female gender.
Hegmann et al. 2019 American College of Occupational and Environmental Medicine (USA)	RISK FACTORS: Epidemiological studies suggest the risk factors for degenerative back conditions include aging, male sex, obesity, heredity, and systemic arthrosis Risk factors for spondylolysis include increasing age and being of male sex. Risk factors for degenerative spondylolisthesis include age and being of female sex.
Lee et al. 2013 British Pain society (UK)	EPIDEMIOLOGY: The number of people suffering with chronic pain in England varies between 14% of the youngest men and 59% of the oldest women (mean 31% men, 37% women).

Petit et al. 2016 French Society of Occupational Medicine (France)	EPIDEMIOLOGIY: Half of male unskilled workers and one third of female unskilled workers are exposed to manual material handling
Picelli et al. 2016 The Italian Conference on Pain in Neurorehabilitation (Italy)	RISK FACTOR: Demographic risk factors for the onset and the clinical course of LBP include age, gender, body-mass index (BMI), and educational level. A stronger correlation between LBP and a high BMI (>30) has been reported in women than in men.
Staal et al. 2013 Royal Dutch Society for Physical Therapy (Netherlands)	RED FLAGS: (Ankylosing Spondylitis) Onset of low back pain before age 20 years, male sex, iridocyclitis, history of unexplained peripheral arthritis or inflammatory bowel disease, pain mostly nocturnal, morning stiffness > 1 hour, less pain when lying down or exercising, good response to nonsteroidal anti-inflammatory drugs, elevated erythrocyte sedimentation rate

Appendix D – AGREE II

AGREE II scores of the included guidelines for each domain and the overall quality rating

Reference	Domains						OA[g]	Quality[h]
	1[a]	2[b]	3[c]	4[d]	5[e]	6[f]		
Arvin et al. 2016	86	69	80	67	48	100	5.5	H
Brosseau et al. 2012	86	44	36	78	21	21	4	L
Bussieres et al. 2018	94	75	89	86	90	88	6	H
Cheng et al. 2012	42	50	33	78	21	0	4	L
Chenot et al. 2017	22	31	30	61	21	38	3	L
Chiodo et al. 2010	83	28	35	89	19	50	4.5	L
Chou et al. 2018	53	47	23	97	46	92	4	L
Chutkan et al. 2020	92	75	67	94	35	54	5	A
Deer et al. 2019	28	25	29	67	10	58	3	L
Delitto et al. 2012	53	81	47	100	8	0	4.5	L
Globe et al. 2016	83	72	75	78	21	100	5.5	H
Hegmann et al. 2016	72	47	52	89	21	46	4.5	L
Hegmann et al. 2019	83	64	57	67	21	75	5	A
Hussein et al. 2016	11	31	1	53	10	25	2.5	L
Jun et al. 2017	83	47	50	56	2	71	4	L
Kassolik et al. 2017	75	53	14	83	42	75	4	A
Kreiner et al. 2013	86	19	48	94	0	29	4	L
Kreiner et al. 2014	86	25	49	97	15	13	4	L
Kuijer et al. 2014	58	69	47	83	23	83	4.5	A
LBP TOP Group 2017	92	31	28	92	21	0	3.5	L
Lee et al. 2013	39	56	32	72	19	67	3.5	L
Pangarker et al. 2019	75	72	53	86	4	50	4	A
Patel et al. 2016	56	67	58	81	21	67	4	A

Petit et al. 2016	64	50	31	33	2	0	2.5	L
Petit et al. 2016	50	36	26	36	6	54	3	L
Picelli et al. 2016	75	36	39	94	8	75	4	A
Qaseem et al. 2017	100	58	85	94	15	100	5	A
Rached et al. 2013	89	42	39	86	8	75	3.5	A
Sparks et al. 2017	58	36	17	69	29	58	3.5	L
Staal et al. 2013	89	61	5	100	10	0	3	A
Stochkendahl et al. 2017	81	56	77	86	19	88	4.5	A
Thorson et al. 2018	83	78	56	81	48	96	5.5	A
Valdecañas et al. 2017	53	53	55	89	19	46	4	L
Van Wambeke et al. 2017	92	86	86	94	88	96	6	H
Wong et al. 2017	44	19	52	83	4	54	3.5	L
Zhao et al. 2016	69	44	21	50	0	50	2.5	L
Mean	69	51	45	79	22	55	4.08	
Standard deviation	22	19	23	17	21	32	0.94	

[a]Scope and purpose
[b]Stakeholder involvement
[c]Rigour of development
[d]Clarity of presentation
[e]Applicability
[f]Editorial independence
[g]Overall assessment score
[h]The quality was indicated as *H* high, *A* average, and *L* low