

# INPLASY PROTOCOL

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All authors report there are no conflicts of interest related to the present article.

## What is the best management for low back pain? Evidence mapping of recommendations on diagnosis and management for low back pain: an international review of 15 guidelines

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**Review question / Objective:** What is the best management for low back pain? To systematically review clinical practice guidelines (CPGs) on low back pain (LBP) and assess the inconformity and consistency of recommendations, quality of different CPGs and finally to provide an evidence-map for specifically explication of research trends and gaps.

**Condition being studied:** Low back pain (LBP) is a very common condition, especially in aged populations, and one of the most leading causes of disability and loss of human labour capacity in most countries. Approximately 50–85% of the population has LBP for some period in their entire lives. Besides, approximately 2% to 14% population suffer sciatica the annually. The annual cost of treating LBP ranks third behind diabetes and heart disease treatment. Therefore, LBP is a serious public health problem and creates many problems in people's daily lives.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 April 2020 and was last updated on 17 April 2020 (registration number INPLASY202040104).

### INTRODUCTION

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and assess the inconformity and consistency of recommendations, quality of different CPGs and finally to provide an evidence-map for specifically explication of research trends and gaps.

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## METHODS

**Search strategy:** The database search will combine MeSH and key words related to CPGs (eg, exp guideline/OR clinical guideline\*.mp) and the low back pain conditions of interest (eg, exp Back Pain/OR exp Sciatica/). We will search CPGs in PubMed, Embase and Web of Science using medical subject headings (MeSH) and keywords. We also will search some online guideline websites: The National Guideline Clearinghouse of the Agency for Health Care Research and Quality (USA), Guidelines International Network (GIN), National Health and Medical Research Council (NHMRC), Scottish Intercollegiate Guidelines Network (SIGN) and the National Institute for Health and Care Excellence (NICE).

**Participant or population:** Patients with low back pain will be included. There will be no restriction on sex, age or the intensity of symptoms. Patients with acute infection, acute injury, spinal deformity, vertebral compression fractures or tumor will be excluded.

**Intervention:** Not applicable.

**Comparator:** Not applicable.

**Study designs to be included:** Guideline.

**Eligibility criteria:** All clinical practice guidelines (CPGs) meet the following criteria: ① the 1990 IOM definition of a

guideline ② documents developed by a nationally recognized committee, or a medical society that provided recommendations for spinal pain, ③ the most recent version of publications, ④ containing recommendations on management for spinal pain, ⑤ limited to English-language. Inclusion criteria: 1. Published between January 2013 and December 2018. (Updated in December 2019) 2. Focus on LBP or sciatica 3. Relating to diagnosis, treatment, management. 4. For adult populations (aged >18 years). 5. Limited to English-language. 6. the most recent version of publications. Exclusion criteria: 1. CPGs only focused to traditional healing/medicine. 2. CPGs for LBP caused by trauma or a specific disease process (eg. ankylosing spondylitis, rheumatoid arthritis, infection and cancer). 3. CPGs that address care recommendations for specific system/organization. 4. Requiring payment to access.

**Information sources:** We will search clinical practice guidelines in PubMed, Embase and Web of Science using medical subject headings (MeSH) and keywords. We also will search some online guideline websites: The National Guideline Clearinghouse of the Agency for Health Care Research and Quality (USA), Guidelines International Network (GIN), National Health and Medical Research Council (NHMRC), Scottish Intercollegiate Guidelines Network (SIGN) and the National Institute for Health and Care Excellence (NICE).

**Main outcome(s):** Clinical guideline recommendations.

**Additional outcome(s):** None.

**Quality assessment / Risk of bias analysis:** The Appraisal of Guidelines Research and Evaluation (second version) (AGREE II) and Reporting Items for Practice Guidelines in Healthcare (RIGHT) will be used to assess the quality of CPGs. Four independent reviewers will be trained to perform CPG appraisals. They will independently review and score for each eligible CPG. We will

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discusse to reach consensus and final judgment when there was disagreement. Finally, we will also calculate the Intraclass correlation coefficients (ICCs) to assess inter-rater reliability.

**Strategy of data synthesis:** For each CPG, we will calculate the AGREE II score for each domain and overall scores as a percentage of the maximum possible score and standardized range. Then we will calculate the mean and standard deviation (SD) for six main domains. The number of RIGHT checklist items reported in each CPG was presented to assess the reporting quality data. We will calculate the intraclass correlation coefficients (ICCs) with a two-way random effects model for each domain and overall rating scores to assess inter-rater reliability. We will define the level of agreement as very good (0.81–1.00), substantial (0.61–0.80), moderate (0.41–0.60), fair (0.21–0.40) and minor (0.01–0.20). After completing the AGREE II score and RIGHT score. We will summarize this two score to build a bubble diagram to visually show and rank the quality of each CPG by using R software (version 3.3.0; <http://www.r-project.org/>). The color depth of the bubble represented the quality of CPGs (Green: High, Yellow: Middle, Red: Low). Strength of recommendation and level of evidence We will extracte the information about the level of evidence and the strength of recommendation to determine the main gap between different CPGs.

**Subgroup analysis:** None.

**Sensibility analysis:** None.

**Country(ies) involved:** China.

**Keywords:** Low back pain, guideline, evidence map, recommendation.