

## Minimal Clinically Important Difference of Patient Reported Outcome Measures of Lower Extremity Injuries in Orthopedics: Systematic Review

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**Purpose:** MCID scores for outcome measures are frequently used evidence-based guides to gauge meaningful changes. To conduct a systematic review of the quality and content of the the minimal clinically important difference (MCID) relating to 16 patient-rated outcome measures (PROM) used in lower extremity.

**Methods:** We conducted a systematic literature review on articles reporting MCID in lower extremity outcome measures and orthopedics from January 1, 1980, to May 10, 2016. We evaluated MCID of the 16 patient reported outcome measures (PROM) which were Harris Hip Score (HHS), Oxford Hip Score (OHS), Hip Outcome Score (HOS), Hip Disability and Osteoarthritis Outcome Score (HOOS), The International Knee Documentation Committee Subjective Knee Form (IKDC), The Lysholm Scale, The Western Ontario Meniscal Evaluation Tool (WOMET), The Anterior Cruciate Ligament Quality of Life Questionnaire (ACL-QOL), The Lower Extremity Functional Scale (LEFS), The Western Ontario and McMaster Universities Index (WOMAC), Knee Injury And Osteoarthritis Outcome Score (KOOS), Oxford Knee Score (OKS), Kujala Anterior Knee Pain Scale, The Victorian Institute of Sports Assessment Patellar Tendinosis (Jumper's Knee) (VISA-P), Tegner Activity Rating Scale, Marx Activity Rating Scale, Foot And Ankle Outcome Score (FAOS), The Foot Function Index (FFI), Foot And Ankle Ability Measure (FAAM), The Foot And Ankle Disability Index Score and Sports Module, Achill Tendon Total Rupture Score(ATRS), The Victorian Institute Of Sports Assesment Achilles Questionnaire(VISA-A), American Orthopaedic Foot and Ankle Society (AOFAS). A search of the PubMed/MEDLINE, PEDro and Cochrane Central Register of Controlled Trials and Web of Science databases from the date of inception to May 1, 2016 was conducted. The terms "minimal clinically important difference," "minimal clinically important change", "minimal clinically important improvement" "were combined with one of the PROM as mentioned above.

**Results:** A total of 223 abstracts were reviewed and 119 articles chosen for full text review. Thirty articles were included in the final evaluation. The MCID was mostly calculated for WOMAC and frequently reported in knee and hip osteoarthritis, knee and hip athroplasties, femoraasetabular impingement syndrome and focal cartilage degeneration. In addition, Receiver Operating Characteristic (ROC) analysis was the most used method to report MCID.

**Conclusion:** MCID is an important concept used to determine whether a medical intervention improves perceived outcomes in patients. Despite an abundance of methods reported in the literature, little work in MCID estimation has been done in the PRAM related to lower extremity. There is a need for future studies in this regard.

**Keywords:** minimal clinically important difference, lower extremities, patient reported outcomes

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