



<b>Magellan Healthcare</b>	
<b>Clinical guidelines</b> <b>MEASUREABLE PROGRESSIVE</b> <b>IMPROVEMENT</b>	<b>Original Date:</b> November 2, 2015 <b>Page 1 of 11</b>
<b>Physical Medicine – Clinical Decision Making</b>	<b>Last Review Date:</b> June 2017
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<b>Responsible Department:</b> <b>Clinical Operations</b>	<b>Implementation Date:</b> January 2018

### **Policy Statement**

Outcome measures and/or pre-determined treatment goals that are specific, measurable, and/or functional must be used with each patient. These goals and outcome measures must be clearly defined in the patient record to ascertain the amount or degree of change over time. The documentation must also provide evidence of lasting, sustainable progress with treatment.

Initial Clinical Reviewers (ICRs) and Physician Clinical Reviewers (PCRs) must be able to apply criteria based on individual needs and based on an assessment of the local delivery system.

### **Purpose**

This policy will be used to provide minimal clinical thresholds using specific, measurable, and functional treatment goals and/or outcome measures in the determination of improved, lasting and sustained outcomes. These thresholds will assist in medical necessity reviews of billed clinical services by network practitioners.

### **Scope**

Physical medicine practitioners, including chiropractors, physical therapists, occupational therapists, and speech language pathologists.

### **Definition**

#### **Treatment Goals:**

Determined with the patient and clinician at the initial encounter for each episode of care. Unique for each patient's clinical presentation based on the evaluation/examination findings, outcome assessment tool results, and personal preferences.

#### **Episode of Care:**

Consultation or treatment preceded and followed by at least 3 months without treatment for the same complaint

#### **Specific, Measurable, and Functional Goals:**

Clearly defined goals of treatment that allow measurement of the amount and/or degree of meaningful change over time. These goals are often determined by the use of functional outcome assessment tools, as defined in Clinical Guideline, Plan of Care

#### **Outcome Measures:**

Objective, measurable assessments by the clinician to determine patient progress with treatment. The use of standardized tests and measures at the onset of care establishes the baseline status of the patient, providing a means to quantify change in the patient's functioning. Outcome measures, along with other standardized tests and measures used throughout the episode of care, as part of periodic reexamination, provide information about whether predicted outcomes are being realized. Outcomes measurement refers to "...the systematic collection and analysis of information that is used to evaluate the efficacy of an intervention" (Clark & Girona, 2002). Systematic collection means that data are gathered at multiple time points using the same methods or instruments. Analysis refers to the process of condensing and examining the data to identify meaningful trends or changes. The World Health Organization defines an outcome measure as a "change in the health of an individual, group of people, or population that is attributable to an intervention or series of interventions."

**Lasting, Sustainable Progress:**

Documentation must provide evidence to support that progress made by the patient has been maintained at a reasonable level over a reasonable period of time.

**Minimally Clinically Important Change (MCIC):**

The smallest change in the outcome assessment score that the patient perceives as beneficial i.e. clinically meaningful improvement.

**Minimal Detectable Change-MDC:**

The minimal detectable change is the smallest change in score than can be detected beyond random error and is dependent upon sample distribution.

**Minimal Clinically Important Difference-MCID:**

MCID is the smallest change in an outcome that a patient would identify as important.

**Maximum Therapeutic Benefit-MTB:**

Maximum Therapeutic Benefit (MTB) is determined following a sufficient course of care, where demonstrable improvement would be expected in a patient's health status and one or more of the following are present:

- The patient has returned to pre-clinical/pre-onset health status
- Meaningful improvement has occurred; however, there is no basis for further meaningful improvement
- Meaningful improvement has occurred and there is no basis for further in-office treatment
- The patient no longer demonstrates meaningful clinical improvement, as measured by standardized outcome assessment tools
- Meaningful improvement, as measured by standardized outcome assessment tools, has not been achieved
- There is insufficient information documented in the submitted patient record to reliably validate the response to treatment

It is the responsibility of the treating practitioner to maintain a patient record that includes periodic measures of treatment response by employing valid, reliable and relevant outcome assessment tools. Further, it is the responsibility of the treating practitioner to include

sufficient clinical documentation, so that a peer reviewer can render a reasonable determination on baseline functional status and/or treatment response. Further meaningful improvement can occur only when there is a potential for MCIC. When progress towards goals is such that outcome measures approximate normative data for asymptomatic populations or are indicative of mild deficits, which can typically be managed through home exercise or other self-care, then a determination of MTB is appropriate.

**Patient Acceptable Symptom State (PASS):**

Defined as the point at which the patient considers themselves well, recovered and satisfied with treatment.

**Acceptable Thresholds of Measurable Improvement:**

Meaningful clinical change (Minimal Clinically Important Change-MCIC; Minimal Clinically Important Differences-MCID; Minimal Detectable Change-MDC) has been calculated for most common standardized outcome assessment tools. The application of valid and reliable outcome assessment tools in the management of neuromusculoskeletal disorders is generally considered as “best practice”.

In order to make a valid and reliable determination of meaningful progress toward goals (MCIC) and/or Maximum Therapeutic Benefit-MTB, it is essential that the record include a relevant standardized outcome assessment tool. Progress towards goals should be assessed at predetermined time periods, supported by anticipated meaningful clinical change based on treatment plan goals. Typically, recovery patterns for neuromusculoskeletal conditions involving the low back, neck, and headache disorders show that >50% of the overall improvement with care occurs within 4-6 weeks. When patients are categorized via predictive modeling, the percentage of those showing significant improvement within 6 weeks rises considerably. Studies have consistently shown that short term treatment response is predictive of long term outcomes. McGorry showed that exacerbations of LBP resolved within a few days (52%); within a week (16%); within two-three weeks (26%); even severe flare-ups usually resolved within nine days. After a review of the scientific evidence Magellan Healthcare has concluded all practitioner records must evaluate and document whether treatment is resulting in progressive and sustained improvement.

The practitioner records must demonstrate clear, specific and measurable improvement in the patient’s pain and function every two weeks, or at regular intervals as appropriate for the documented condition, as measured by one or more of the following examples of methods for each anatomic region. If no functional tool is available for the patient’s condition it is expected the practitioner will develop specific, measurable, and functional goals:

- 6-Minute Walk test (6MWT) for Older Adults
  - MDC (calculated from standard error of measurement (SEM)) = 58.21 m (190.98 ft) (Perera et al, 2006)
  - SEM Older people with limited mobility: 21 m (Perera et al, 2006)
  - Older people with stroke: 22 m (Perera et al, 2006)
- Activities of Daily Living Scale of the Knee Outcome Survey
  - 10-30% reduction in the global score
- Berg Balance Scale

- MDC=4-7 points
  - MDC=6.5 points
- Bournemouth – Back Questionnaire
  - A change of 17 points or 47% is considered clinically significant improvement.
- Bournemouth – Neck Questionnaire
  - A change of 13 points or 34% is considered clinically significant improvement.
- Dizziness Handicap Inventory
  - MDC = 17.18 points
- Dynamic Gait Index
  - MDC=2.9 points
  - Score of 19 or less found to be predictive of falls
- Functional Gait Assessment
  - MCID=4 points
- Functional Rating Index
  - A 10% absolute change represents minimal clinically important change
  - MCIC = 8.4%
- FOTO or Functional Status (FS) measure:
  - The MCII (Minimally Clinically Important Improvement) and MDC (Minimal Detectable Change) are stated on the assessment report. For significant, minimal improvement, the patient status should increase by the MDC value. FOTO summary report is available upon request.
- Gait Speed for Older Adults
  - Small meaningful change=.5m/sec (Perera et al, 2006)
  - Substantial meaningful change=.10m/sec (Perera et al, 2006)
  - Meaningful change for those with stroke undergoing rehab=.175 m/sec
- Headache Disability Inventory (HDI)
  - Authors of the index have determined that a decrease of 29 points or more is considered clinical significant
- LEFS
  - 10% improvement on the global score
- Neck Disability Index
  - The minimal detectable change is 10% (approximately 5 points). Clinically meaningful change is considered to be 30-50% (approximately 15 points).
- Oswestry Disability Index
  - The minimal detectable change is 10.5 points. Clinically meaningful change is considered to be 30-50%.
- Pain Disability Index
  - A decrease of 8.5-9.5 points is considered clinically important
- Patient Specific Functional Scale
  - Minimum detectable change (90%CI) for average score = 2 points
  - Minimum detectable change (90%CI) for single activity score = 3 points
- Roland-Morris Disability Questionnaire
  - Minimal Important Change=5pts
  - A 30% change in RMQ score is considered meaningful with 50% considered substantial.
- Keele STarT Back Screening Tool
  - No MDC or MCID established.

- Low, Medium and High risk categories established for subscales and overall score
- Shoulder Pain and Disability Index
  - 10-30% reduction on the global score
- Timed Up and Go (TUG)
  - Cut-off score of 13.5 sec or longer is predictive of falls
- Tinetti (POMA)
  - MDC= 5 Points
- VAS scores
  - Minimum of a 2 point change on a 0-10 pain scale

The records must compare baseline measures to updated measures and document progress toward measurable goals as defined in Clinical Guideline, Plan of Care.

**NOTE: Questionable Outcome tool: Global Rating of Change (GRoC)**

Further work is needed to determine the true value of the GRoC as an outcome measure and in turn as an anchor measure. Several key points have been identified:

1. There is fluctuant temporal stability of the GRoC from week to week.
2. There is poor correlation between the GRoC and functional measures.
3. The GRoC is only correlated to functional measures up to 3 weeks.

## REFERENCES

- Amy Yorke, PT, NCS, Irene Ward, PT, DPT, NCS, Salomi Vora, PT, Stephanie Combs, PT, PhD, NCS, Tammie Keller-Johnson, PT, DPT, MS. Measurement Characteristics and Clinical Utility of the Dizziness Handicap Inventory Among Individuals With Vestibular Disorders. *Archives of Physical Medicine and Rehabilitation* 2013;94:2313-4.
- Angst F, Goldhahn J, Drerup S, Aeschlimann A, Schwyzer HK, Simmen BR: Responsiveness of six outcome assessment instruments in total shoulder arthroplasty. *Arthritis Rheum* 2008, 59:391-398.
- Axen I, et al. The Nordic Back Pain Subpopulation Program: Can Patient Reactions to the First Chiropractic Treatment Predict Early Favorable Treatment Outcome in Non-persistent Low Back Pain? *JMPT*, 2005; 28(3):153-158
- Axen I, et al. The Nordic Back Pain Subpopulation Program: Can Patient Reactions to the First Chiropractic Treatment Predict Early Favorable Treatment Outcome in Persistent Low Back Pain? *JMPT*, 2002; 25(7):450-454
- Axen I, et al. The Nordic Back Pain Subpopulation Program: Validation and Improvement of a Predictive Model for Treatment Outcome in Patients With Low Back Pain Receiving Chiropractic Treatment. *JMPT* 2005; 28(6):381-5
- Beaton DE, Richards RR: Assessing the reliability and responsiveness of 5 shoulder questionnaires. *J Shoulder Elbow Surg* 1998, 7:565-572.
- Beninato M, Fehandez A, Plummer LS. Minimal Clinically Important Difference of the Functional Gait Assessment in Older Adults, *J Geriatr Phys Ther.*2014; 11:1594-1603.
- Binkley JM, Stratford PW, Lott SA, Riddle DL. The Lower Extremity Functional Scale (LEFS): scale development, measurement properties, and clinical application. *Phys Ther* 1999 Apr;79(4):371-83.
- Bombardier C, Hayden J, Beaton DE. Minimal clinically important difference. Low back pain: outcome measures. *J Rheumatol* 2001;28:431– 8.
- Borman P, et al. The efficacy of intermittent cervical traction in patients with chronic pain. *Clinical Rheumatology* 2008; 27:1249-1253]
- Bove G, Niels Nilsson. Spinal Manipulation in the Treatment of Episodic Tension-Type Headache. *JAMA* 1998; 280(18):1576-1579
- Brennan GP, et al. Identifying Subgroups of Patients With Acute/Subacute “Nonspecific” Low Back Pain. *Spine* 2006; 31(6):623-631
- Bronfort G, et al. A Randomized Clinical Trial of Exercise and Spinal Manipulation for Patients with Chronic Neck Pain. *Spine* 2001; 26(7):788-799

- Cai C, et al. A clinical prediction rule for classifying patients with low back pain who demonstrate short-term improvement with mechanical lumbar traction. *European Spine Journal* 2009; doi: 10.1007/s00586-009-0909-9
- Childs JD, et al. A Clinical Prediction Rule to Identify Patients with Low Back Pain Most Likely to Benefit from Spinal Manipulation: A Validation Study. *Annals of Internal Medicine* 2004; 141(12):920-928
- Childs JD, Piva SR, Fritz JM. Responsiveness of the numeric pain rating scale in patients with low back pain. *Spine* 2005;30(11):1331-1334.
- Cleland JA, et al. Development of a clinical prediction rule for guiding treatment of a subgroup of patients with neck pain: use of thoracic spine manipulation, exercise, and patient education. *Physical Therapy* 2007; 87:9-23
- Cloke DJ, Lynn SE, Watson H, Steen IN, Purdy S, Williams JR: A comparison of functional, patient-based scores in subacromial impingement. *J Shoulder Elbow Surg* 2005, 14:380-384.
- Craig Garrison, Chad Cook. Clinimetrics corner: the Global Rating of Change Score (GRoC) poorly correlates with functional measures and is not temporally stable. *J Man Manip Ther*. 2012 Nov; 20(4): 178–181.
- Currier LL, et al. Development of a clinical prediction rule to identify patients with knee pain and clinical evidence of knee osteoarthritis who demonstrate a favorable short-term response to hip mobilization. *Physical Therapy* 2007; 87:1106-1119
- Davidson M & Keating J. A comparison of five low back disability questionnaires: reliability and responsiveness. *Physical Therapy* 2002;82:8-24.
- DohahueD., Stokes, EK. How much change is true change? The minimal detectable change of the Berg Balance Scale in elderly people. *JRehab Med*.2009;41:343-346.
- Evans R, et al. A Pilot Study for a Randomized Clinical Trial Assessing Chiropractic Care, Medical Care and Self-Care Education for Acute and Subacute Neck Pain Patients. *JMPT* 2003; 26(7):403-411
- Evans R, et al. Two-Year Follow-up of a Randomized Clinical Trial of Spinal Manipulation and Two Types of Exercise for Patients With Chronic Neck Pain. *Spine* 2002; 27(21):2383-2389
- Faber MJ, Bosscher RJ, van Wieringen PC. Clinimetric properties of the psrtformance-oriented mobility assessment. *Phys Ther*.2006;86:944-954.
- Fairbank JCT & Pynsent, PB (2000) The Oswestry Disability Index. *Spine*, 25(22):2940-2953.
- Farrar J, Berlin J, Strom B. Clinically important changes in acute pain outcome measures: A validation study. *Journal of Pain and Symptom Management* 2003;25:406-411.

- Farrar J, Portenoy R, Berlin J, et al. Defining clinically important difference in pain outcome measures. *Pain* 2000;88(3):287-294.
- Feise RJ, Menke JM. Functional rating index: literature review. *Med Sci Monit*, 2010 Feb;16:RA25-36.
- Flynn TW, et al. A Clinical Prediction Rule for Classifying Patients With Low Back Pain Who Demonstrate Short-Term Improvement With Spinal Manipulation. *Spine* 2002; 27(24):2835-2843
- Fritz JM, et al. Pragmatic Application of a Clinical Prediction Rule in Primary Care to Identify Patients With Low Back Pain With a good Prognosis Following a Brief Spinal Manipulation Intervention. *BMC* 2005; 6(29): [www.biomedcentral.com/1471-2296/6/29](http://www.biomedcentral.com/1471-2296/6/29)
- Fritz JM, Hebert J, Koppenhaver S, Parent E. Beyond minimally important change: defining a successful outcome of physical therapy for patients with low back pain. *Spine* 2009;34(25):2803-9.
- Grotle M, Brox JI, Vollestad NK. Concurrent comparison of responsiveness in pain and functional status measurements used for patients with low back pain. *Spine* 2004;29:E492–E501.
- Haas M, et al. Dose Response for Chiropractic Care of Chronic Cervicogenic Headache and Associated Neck Pain: A Randomized Pilot Study. *JMPT* 2004; 27(9):547-553
- Heald SL, Riddle DL, Lamb RL: Heald SL, Riddle DL, Lamb RL: The Shoulder Pain and Disability Index: the construct validity and responsiveness of a region- specific disability measure. *Phys Ther* 1997, 77:1079-1089.
- Hicks GE, et al. Preliminary Development of a Clinical Prediction Rule for determining Which Patients With Low Back Pain Will Respond to a Stabilization Exercise Program. *Arch Phys Med Rehabil* 2005; 86(9):1753-1762
- Hinton P, McLeod R, Broker B, MacLellan C. Outcome measures and their everyday use in chiropractic practice. *J Can Chiropr Assoc*. 2010 Jun; 54(2): 118–131. <http://www.ncbi.nlm.nih.gov/pubmed/16696738>
- Hurst H, Bolton J. Assessing the clinical significance of change scores recorded on subjective outcome measures. *J Manipulative Physiol Ther* 2004;27(1):26-35.
- Hurwitz EL, et al. A Randomized Trial of Chiropractic Manipulation and Mobilization for Patients With Neck Pain: Clinical Outcomes From the UCLA Neck-Pain Study. *Am J Public Health* 2002; 92:1634-1641
- Irrgang JJ, Snyder-Mackler L, Wainner RS, Fu SH, Harner CD. Development of a patient-reported measure of function of the knee. *J Bone Joint Surg Am* 1998;80(80):1132-45.



- Iverson CA, et al. Lumbopelvic manipulation for the treatment of patients with patellofemoral pain syndrome: development of a clinical prediction rule. *Journal of Orthopaedic & Sports Physical Therapy* 2008; 38:297-312
- Jacobson GP, Newman CW. The development of the dizziness handicap inventory. *Arch Otolaryngol Head Neck Surg.* 1990;116:424–427.
- Jacobson, G.P., et al. Headache Disability Inventory (HDI). *Neurology*, 1994. 44(5):837-42.
- Jordan K, Dunn KM, Lewis M, Croft P. A minimal clinically important difference was derived for the Roland-Morris Disability Questionnaire for low back pain. *J Clin Epidemiol.* 2006 Jan;59(1):45-52. Epub 2005 Nov 4.
- Jordan K, Dunn KM, Lewis M, et al. A minimal clinically important difference was derived for the Roland-Morris Disability Questionnaire for low back pain. *J Clin Epidemiol* 2006;59:45–52.
- Kvien TK, Heiberg T, Hagen KB. Minimally clinically important improvement/difference (MCII/MCID) and patient acceptable symptom state (PASS): What do these concepts mean? *Ann Rheum Dis* 2007;66:iii40-iii41.
- Lauridsen HH, Hartvigsen J, Manniche C, Korsholm L, Grunnet-Nilsson N. Responsiveness and minimal clinically important difference for pain and disability instruments in low back pain patients. *BMC Musculoskelet Disord* 2006;7:82.
- Lauridsen HK, Hartvigsen J, Mannich C, et al. Responsiveness and minimally clinically important difference for pain and disability instruments in low back pain patients. *BMC Musculoskeletal Disorders* 2006;7:82-99.
- Leshner JD, et al. Development of a clinical prediction rule for classifying patients with patellofemoral pain syndrome who respond to patellar taping. *Journal of Orthopaedic & Sports Physical Therapy* 2006; 36:854-866
- Liebenson C. *Rehabilitation of the Spine: A Practitioner's Manual* 2nd ed. Baltimore, MD; Lippincott Williams & Wilkins 2007:146-182
- McGorry R, et al. The Relation Between Pain Intensity, Disability, and the Episodic Nature of Chronic and Recurrent Low Back Pain. *Spine*, 2000; 25(7):834-841
- Michael J. Menke, Ronald J. Feise. Functional Rating Index: literature review. *Med Sci Monit* 2010; 16(2): RA25-36
- Moraska A, Chandler C. Changes in clinical parameters in patients with tension-type headache following massage therapy: a pilot study. *Journal of Manual & Manipulative Therapy* 2008; 16:106-112
- Muller U, Duetz MS, Roeder C, Greenough CG. Condition-specific measures for low back pain: Part 1:Validation. *Eur Spine J* 2004;13:301-313.

- Newell D1, Bolton JE. Responsiveness of the Bournemouth questionnaire in determining minimal clinically important change in subgroups of low back pain patients. [Spine \(Phila Pa 1976\)](#). 2010 Sep 1;35(19):1801-6. doi: 10.1097/BRS.0b013e3181cc006b.
- Not consistently predictive of falls in community dwelling older adults using cut-off score of 45. Fabre J, Ellis R, Kosma M, Wood, Robert. Falls Risk Factors and a Compendium of Falls Risk Screening Instruments, *J Geriatr Phys Ther*. 2010; 33:184-197.
- Ostelo RW, Deyo RA, Stratford P, Waddell G, Croft P, Von Korff M, Bouter LM, de Vet HC. Interpreting change scores for pain and functional status in low back pain: towards international consensus regarding minimal important change. *Spine* 2008;33(1):90-4.
- Perera S, Mody S, Woodman RC, Studenski SA. Meaningful change and responsiveness in common physical performance measures in older adults. *J Am Geriatr Soc*. 2006;54:743-749.
- R Froud, S Eldridge, M Underwood. Minimally Important Change on the Roland Morris Disability Questionnaire. *J Bone Joint Surg Br* 2010 vol. 92-B no. SUPP I 233.
- Rob Smeets, Albere Köke, Chung-Wei Lin, Manuela Ferreira, Christopher Demoulin. Measures of function in low back pain/disorders: Low Back Pain Rating Scale (LBPRS), Oswestry Disability Index (ODI), Progressive Isoinertial Lifting Evaluation (PILE), Quebec Back Pain Disability Scale (QBPS), and Roland-Morris Disability Questionnaire (RDQ). *Arthritis Care and Research* Volume 63, Issue Supplement S11, pages S158–S173, November 2011.
- Roland M, Fairbank J. The Roland-Morris Disability Questionnaire and the Oswestry Disability Questionnaire. *Spine* 2000; 25(24):3115-3124
- Romero S, Bishop M, Velozo C, Light, Kathye. Minimum Detectable Change of the Berg Balance Scale and the Dynamic Gait Index in Older Persons at Risk for Falling, *J Geriatr Phys Ther*. 2011;34:131-137.
- Schmitt J, Abbott JH. Global Ratings of Change Do Not Accurately Reflect Functional Change Over Time in Clinical Practice. *J Orthop Sports Phys Ther*. 2015 Feb;45(2):106-11, D1-3. doi: 10.2519/jospt.2015.5247. Epub 2015 Jan 8.
- Schmitt J, Di Fabio RP: Reliable change and minimum important difference (MID) proportions facilitated group responsiveness comparisons using individual threshold criteria. *J Clin Epidemiol* 2004, 57:1008-1018.
- Schoffermann J, Wasserman S. Successful treatment of low back pain and neck pain after a motor vehicle accident despite litigation. *Spine* 1994;19(9):1007-1010.
- Shumway-Cook A, Woollacot, M. *Motor Control-Theory and Applications*. Baltimore, MD:Williams and Wilkins; 1995.

Soer R, Reneman MF, Vroomen PC, et al. Responsiveness and minimal clinically important change of the Pain Disability Index in patients with chronic back pain. *Spine (Phila Pa 1976)*2012; 37: 711–5.

Stratford PW, Binkley J, Solomon P, Finch E, Gill C, Moreland J. Defining the minimal level of detectable change for the Roland-Morris Questionnaire. *Physical Therapy (Impact Factor: 3.25)*. 05/1996; 76(4):359-65; discussion 366-8.


Thiel HW, Bolton JE. Predictors of immediate and global responses to chiropractic manipulation of the cervical spine. *Journal of Manipulative and Physiological Therapeutics* 2008; 31:172-183

Tseng YL, et al. Predictors for the immediate responders to cervical manipulation in patients with neck pain. *Manual Therapy* 2005; doi: 10.1016/j.math.2005.08.009

Tuchin PJ, et al. A Randomized Controlled Trial of Chiropractic Spinal Manipulative Therapy for Migraine. *JMPT* 2000; 23(2):91-95

Tveita EK, Ekenberg OM, Juel NG, Bautz-Holter E. Responsiveness of the shoulder pain and disability index in patient's with adhesive capsulitis. *BMC Musculoskeletal Disorders* 2008;9:161

Vianin M. Psychometric properties and clinical usefulness of the Oswestry Disability Index. *J Chiropr Med* 2008;7(4):161-3.

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