



National Imaging Associates, Inc.	
Clinical guidelines MEASUREABLE PROGRESSIVE IMPROVEMENT	Original Date: November 2, 2015
Physical Medicine – Clinical Decision Making	Last Revised Date: January 2020
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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.

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.

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 (McGorry 2000). After a review of the scientific evidence, this organization 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 2006)
 - SEM Older people with limited mobility: 21 m (Perera 2006)
 - Older people with stroke: 22 m (Perera 2006)
 - Alzheimer’s Disease: 33.47 m (Ries 2009)
- Activities of Daily Living Scale of the Knee Outcome Survey
 - 10 - 30% reduction in the global score
 - MCID = 7.1% (Piva 2009)
- Activity-Specific Balance Confidence Scale (ABC)
- Berg Balance Scale
 - MDC = 6.5 points (Romero 2011)
- Bournemouth – Back Questionnaire
 - A change of 26 points in acute conditions and 18 points in subacute/chronic conditions. (Newell 2010). It is recommended that the Bournemouth be used at baseline and for every 2 - 4 weeks or 6 - 12 visits thereafter within the treatment program to measure progress.
- Bournemouth – Neck Questionnaire
 - A change of 13 points or 36% is considered clinically significant improvement (Bolton 2004). It is recommended that the Bournemouth be used at baseline and for every 2 - 4 weeks or 6 - 12 visits thereafter within the treatment program to measure progress.
- Disability of Arm, Shoulder, and Hand (DASH, qDASH)
 - DASH MCID = 11-15 points
 - QuickDASH MCID = 11-15 points
- Dizziness Handicap Inventory
 - MDC = 17.18 points (Yorke 2013)
- Dynamic Gait Index
 - MDC = 2.9 points (Romero 2011)
- Falls Self Efficacy Scale
 - MDC = 8.2 points
- Foot and Ankle Ability Measures (FAAM)
 - ADL subscale MCID = 8 points
 - Sport subscale MCID = 9 points
- Fear Avoidance Belief Questionnaire (FAB-Q)
- Functional Gait Assessment
 - MCID = 4 points
- Functional Rating Index
 - A 10% absolute change represents minimal clinically important change (Feise 2010)
 - MCID = 8.4%
 - It is recommended that for acute and subacute conditions the FRI be used at baseline and every 1 week or 3 visits thereafter. It is recommended that for chronic conditions the FRI be used at baseline and every 2 weeks or 6 visits thereafter. If the score does not improve by at least 10% (absolute change) in any two successive two-week periods, you should pursue a change in management.
- 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 2006)
 - Substantial meaningful change=.10m/sec (Perera 2006)
 - Meaningful change for those with stroke undergoing rehab = .175 m/sec
- Global Rating of Change (GRoC)
 - MDC 0.45 points on 11 point scale
 - MCIC 2 points on 11 point scale
- Headache Disability Inventory (HDI)
 - Authors of the index have determined that a decrease of 29 points or more is considered clinically significant (Jacobson 1994).
- Keele STarT Back Screening Tool
 - No MDC or MCID established.
 - Low, Medium and High risk categories established for subscales and overall score
- Knee Injury and Osteoarthritis Outcome Score (KOOS)
 - Extension of the WOMAC assessment
 - Pain subscale MDC = 22 points
 - Stiffness subscale MDC = 29 points
 - Physical Functional subscale MDC = 13 points
 - Other subscale MDC: 14 points
- Knee Outcome Survey
 - MDC = 9 points
 - MCID = 7 points
- Lower Extremity Functional Scale (LEFS)
 - MDC = 9 points.
 - MCID = 9 points. (Brinkley 1999). It is recommended that the LEFS be used at baseline and for every 2 - 4 weeks or 6 - 12 visits thereafter within the treatment program to measure progress.
- Lysholm Knee Rating System
 - MDC = 10 points
- Neck Disability Index
 - MDC = 10 points (Young 2009) or 20%. It is recommended that the Neck Disability Index be used at baseline and for every 2 weeks thereafter within the treatment program to measure progress. A score of 0% - 20% represents a minimal disability. Usually no treatment is indicated, apart from advice on posture, physical fitness, and diet. Patients often do not score the Neck Disability items as zero, once they are in treatment. The practitioner should consider the patient's prior level of function when goal writing (for example, if the patient's prior level of function would place them in the minimal disability category, their goal should not be to obtain a zero score).
- Numeric Pain Rating Scale
 - MCID = 2 points. (Childs 2005)
- Oswestry Disability Index
 - The Minimal Important Change is 10 points or a 20% improvement (Smeets 2011). It is recommended that the Oswestry Disability Index be used at baseline and for every 2 weeks thereafter within the treatment program to measure progress. A score of 0% - 20% represents a minimal disability. Usually no treatment is indicated, apart from advice

on lifting, sitting posture, physical fitness, and diet. Patients often do not score the Oswestry items as zero once they are in treatment. The practitioner should consider the patient's prior level of function when goal writing (for example, if the patient's prior level of function would place them in the minimal disability category, their goal should not be to obtain a zero score).

- Pain Disability Index
 - A decrease of 8.5 - 9.5 points is considered clinically important
- Patient Specific Functional Scale
 - MDC (90% CI) for average score = 2 points
 - MDC (90% CI) for single activity score = 3 points (Stratford 1995). It is recommended that the PSFS be used at baseline and for every 2 - 4 weeks or 6 - 12 visits thereafter within the treatment program to measure progress.
- Roland-Morris Disability Questionnaire
 - MDC = 7.6 points (Froud 2010) or a 30% improvement from baseline (Smeets 2011). It is recommended that the RMDQ be used at baseline and for every 2 - 4 weeks or 6 - 12 visits thereafter within the treatment program to measure progress.
- Shoulder Pain and Disability Index
 - The smallest detectable change is 19.7 points and the minimal important change is 20 points (Thoomes-de Graff 2017). It is recommended that the SPADI be used at baseline and for every 2 - 4 weeks or 6 - 12 visits thereafter within the treatment program to measure progress.
- Timed Up and Go (TUG)
 - Cut-off score of 13.5 sec or longer is predictive of falls; however, the Timed Up and Go test has limited ability to predict falls in community dwelling elderly and should not be used in isolation to identify individuals at high risk of falls in this setting (Barry 2014).
- Tinetti (POMA)
 - MDC= 5 Points (Faber 2006)
- VAS scores
 - Minimum of a 2 point change on a 0 - 10 pain scale
- Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC)

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:

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

BACKGROUND

Definitions

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. 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. Also, 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. Most individuals can expect to notice measurable improvement in pain and/or disability within 2 to 6 weeks after beginning treatment. If improvement has not occurred with 6 weeks of treatment, it is highly unlikely that continuing treatment will be helpful. When initial improvement did occur, many studies showed no additional lasting improvement beyond 6 to 12 weeks of treatment. Most flare-ups resolve quickly – within a few days to 3 weeks. The timelines for improvement may not be applicable to some types of post-surgical care (Axen 2005, Leboeuf 2005, Kohlbeck 2005, Hurwitz 2006, Newell 2007, Bove 1998, Moraska 2007, Borman 2008, Thiel 2008).

Patient Acceptable Symptom State (PASS):

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

POLICY HISTORY:

Review Date: July 30, 2019

Review Summary:

- Definitions moved to the background
- Minor grammar and format edits
- Check validity of references with one addition – some references are from older sources however the information is still relevant

Review Date: January 2020

Review Summary:

- Under the sub-head Acceptable Thresholds of Measurable Improvement Activity-Specific Balance Confidence Scale was added:
 - Activities of Daily Living Scale of the Knee Outcome Survey
 - Activity-Specific Balance Confidence Scale (ABC)
 - Disability of Arm, Shoulder, and Hand (DASH, qDASH)
 - DASH MCID = 11-15 points
 - QuickDASH MCID = 11-15 points
 - Falls Self Efficacy Scale
 - MDC = 8.2 points
- Foot and Ankle Ability Measures (FAAM)
 - ADL subscale MCID = 8 points
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- Fear Avoidance Belief Questionnaire (FAB-Q)
- Global Rating of Change (GRoOC)
 - MDC .45 points on 11 point scale
 - MCIC 2 points on 11 point scale
- Knee Injury and Osteoarthritis Outcome Score (KOOS)
 - Extension of the WOMAC assessment
 - Pain subscale MDC = 22 points
 - Stiffness subscale MDC = 29 points
 - Physical Functional subscale MDC = 13 points
 - Other subscale MDC: 14 points
- Knee Outcome Survey
 - MDC = 9 points
 - MCID = 7 points
- Lysholm Knee Rating System
 - MDC = 10 points
- Oswestry Disability Index: The Minimal Important Change is 10 points or a 20% improvement (Previously 30% improvement)

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