Multiple Sclerosis
Quality Measurement Set
2020 Update

Approved by the Multiple Sclerosis Quality Measure Development Work Group on September 1, 2020. Approved by the AANI Quality Measure Subcommittee on September 10, 2020. Approved by AANI Quality Committee on October 13, 2020. Approved by AANI Board of Directors on November 5, 2020.

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Importance and Prevalence

Defining Multiple Sclerosis Quality Measures

The American Academy of Neurology Institute (AANI) has developed quality measures since 2008 based on the belief that specialists should play a major role in selecting and creating measures that will drive performance improvement and possibly be used in accountability programs in the future. In 2014, the AANI developed a set of multiple sclerosis quality measures, which was released in 2015 and reaffirmed on July 29, 2017. In 2019, the AANI formed a standing Multiple Sclerosis (MS) Quality Measurement Set Work Group (work group). The AANI charged this work group with updating existing and developing new quality measures for patients diagnosed with multiple sclerosis.

Additionally, the Work Group is charged with the surveillance of evolving evidence base to determine if future updates are needed, as well as development and release of quality improvement tools to assist in the implementation of the measures in practice. The work group will meet twice yearly to review any new guideline or evidence developments and testing data. This will allow for more timely updates and maintenance of measures for use in public reporting and accountability programs.

Prevalence and Impact

The estimated cumulated prevalence of MS among adults in the United States in 2010 was approximately 727,000. In 2017, that number was substantially higher, approximately 914,000.[1,2] The prevalence is higher among women with a female: male ratio of 2.8.[1]

A recent study found that multiple sclerosis health care spending in the United States was $13.9 billion in 2016.[3] Multiple sclerosis was one of the health conditions with the highest annual spending growth paid by both public and private insurance for the year, which may be correlated with the introduction of specialty drug treatment.[3]

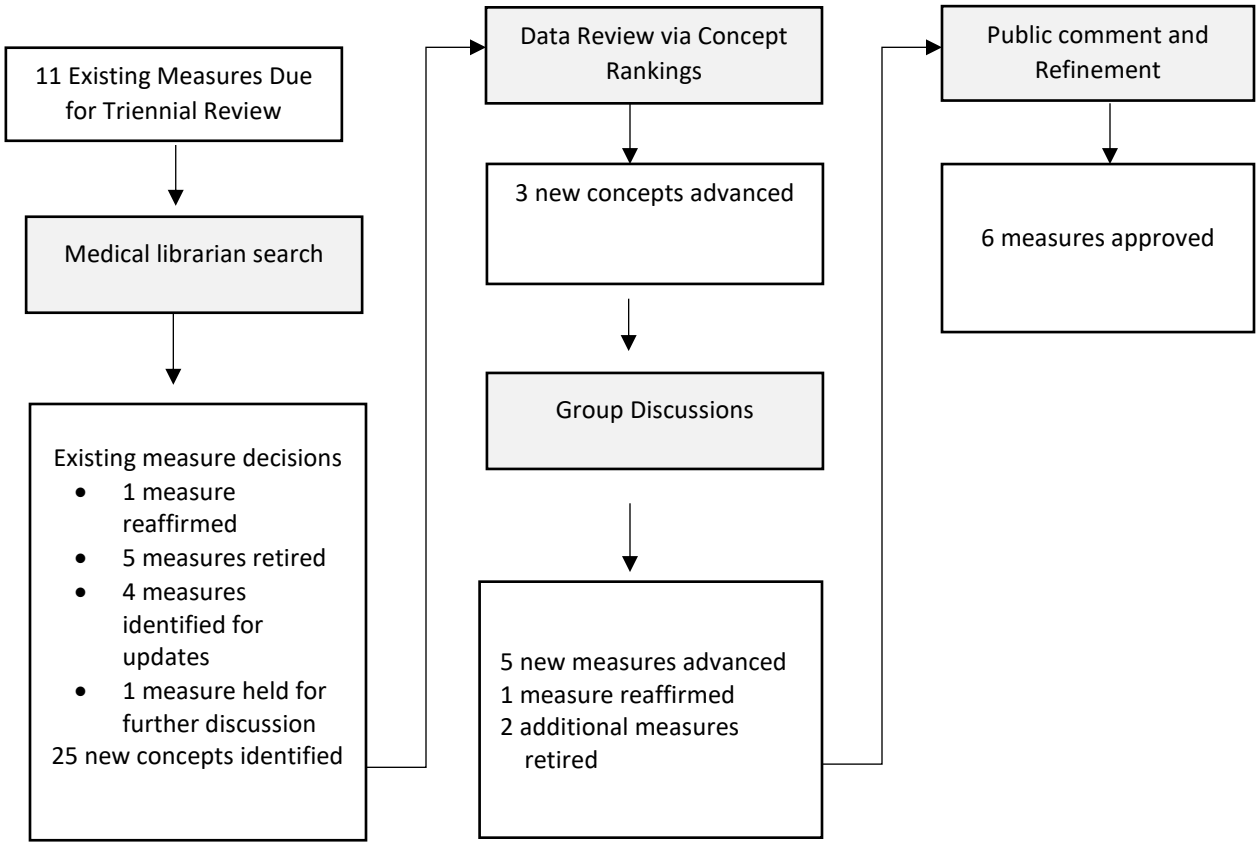
Measure Development Process

The AANI identified non-voting facilitators from the Quality Measure Subcommittee and Quality Committee to provide methodological support and guide the work group to consensus decisions. A call for work group volunteers was made and a subject matter expert Chair was identified. Work group members were selected based on review of disclosure statements, subject matter expertise, and measure development experience. All work group members are required to disclose relationships with industry and other entities to avoid actual, potential, or perceived conflicts of interest. Seated work group members were instructed to abstain from voting on individual measure concepts if a conflict was present. See Appendix A.

The AANI measure development process involves a modified Delphi review by the work group to reach consensus on measures to be developed prior to a 21-day public comment and following the public comment for further refinement.[4]

The measures in this set are being made available without any prior testing. The AAN encourages testing of this measurement set for feasibility and reliability by organizations or individuals positioned to do so. Select measures will be beta tested once the set has been released, prior to submission to the Centers for Medicare & Medicaid Services (CMS) for consideration in Quality Payment Program's (QPP) Merit-based Incentive Payment System (MIPS) and the National Quality Forum for possible endorsement. The measurement set will be reviewed for updates at least every six months by the standing multiple sclerosis measure development work group.

Below is an illustration of the measure development process from proposals, discussion, research, evaluation, to approval.



2020 Multiple Sclerosis (MS) Quality Measurement Set

The work group approved six measures for the 2020 update.

Magnetic Resonance Imaging (MRI) Monitoring for Patients with MS
Disease Modifying Therapies (DMT) Monitoring for Patients with MS
Bladder, Bowel, and Sexual Dysfunction Screening and Follow-up for Patients with MS
Cognitive Impairment Screening and Follow-up for Patients with MS
Fatigue Screening and Follow-up for Patients with MS
Exercise and Appropriate Physical Activity Counseling for Patients with MS

There is no requirement that all the measures in the measurement set be used. Providers and treatment teams are encouraged to identify the one or two measures that would be most meaningful to their patient population and implement those measures to drive performance improvement in practice. Data should be collected for an initial benchmark period, and results used to drive meaningful changes to improve performance and overall care.

2014 Multiple Sclerosis Quality Measures Retired

Seven of the original multiple sclerosis quality measures were retired. Measures may be retired for multiple reasons, and retirement does not reflect a lack of value in quantifying a concept. The work group strongly believes these concepts remain of value, but measures were retired due to feasibility concerns or existence of cross-cutting measures that include patients with MS in the denominator. The AANI is encouraging quality measurement development work groups to reduce the number of measures available for an individual disease topic to reduce clinician burden, focus on fewer meaningful measures for quality improvement, and allow for testing of measures developed. Rationale for individual measure retirement is detailed in the following section:

Multiple Sclerosis (MS) Diagnosis – *Retired in 2020*
Current MS Disability Scale Score – *Retired in 2020*
Fall Risk Screening for Patients with MS – *Retired in 2020*
Fatigue Outcome for Patients with MS - *Retired in 2020*
Clinical Depression Screening for Patients with MS – *Retired in 2020*
Depression Outcome for Patients with MS – *Retired in 2020*
Maintained or Improved Baseline Quality of Life for Patients with MS – *Retired in 2020*

- Multiple Sclerosis (MS) Diagnosis – The work group retired the MS diagnosis measure because the data collection for these measures placed large burden on physicians and care provider teams including potentially modifying their documentation practices.
- Current MS Disability Scale Score – This measure was previously incorporated in the AANI's Axon Registry. Implementation concerns were identified as the data were being collected in the registry. It was noted that some of the disability scales approved for use in the measure would not be collected on the date of the patient visit and collected at a later follow-up visit. CMS had approved the measure for use by a Qualified Clinical Data Registry through 2019 following which, CMS added a modification to include a follow-up component to the collection of the scale score. Adding a follow-up component would add another layer of complexity reducing feasibility further. The work group noted that an outcome measure would be difficult to develop on the topic given the varied scale use by neurologists and by practice settings. Given these concerns, the measure was retired and discussion held on development of a relapse or disability related measure.
- Fall Risk Screening for Patients with MS – The work group retired this measure given the existence of cross-cutting falls measures. The work group encourages providers to utilize one of the below measures to monitor and track falls and fall outcomes in practice. MIPS Quality measure specifications are available at qpp.cms.gov.
    - For patients 65 and older
        - MIPS Quality ID #318 Falls: Screening for Future Fall Risk
        - MIPS Quality ID #154 Falls: Risk Assessment
        - MIPS Quality ID #155 Falls: Plan of Care
    - For patients 64 and younger
        - Axon Registry #45 Falls Outcome
        - Axon Registry #53 Falls Plan of Care
- Fatigue Outcome for Patients with MS – The fatigue outcome measure was retired due to concerns that a physician or MS treatment team has little control over changes in fatigue screening scores that are likely impacted by multiple causes including other co-morbid conditions treated by other specialists. As a result, the measure was changed to a screening and follow-up measure.
- Clinical Depression Screening for Patients with MS & Depression Outcome for Patients with MS – The work group retired the prior depression assessment and outcome measures given the existence of cross-cutting depression measures. The work group encourages providers to utilize one of the below measures to monitor and track depression outcomes in practice:
    - MIPS Quality ID #134 Preventive Care and Screening: Screening for Depression and Follow Up Plan
    - MIPS Quality ID#370 Depression Remission at Twelve Months. Outcome measures at twelve months for patients age 18 years and older diagnosed with major depression or dysthymia utilizing PHQ-9 scores
- Maintained or Improved Baseline Quality of Life for Patients with MS – The work group retired the prior quality of life for patients with MS measure due to the existence of cross-cutting measures addressing quality of life for patients with MS. The work group encourages providers to utilize Axon Registry #54 Quality of Life for Patients with Neurologic Conditions.

Other Potential Measures

The work group proposed 25 measure concepts based on extensive literature search/review. The AANI encourages work groups to focus development of measure concepts that are feasible to collect, do not pose an excessive burden on providers to collect data, meaningful to quality improvement efforts, and address a known treatment or care gap. It is important to recognize the fact that it is not feasible for the work group to develop all the appropriate concepts due to resource limitations and consideration for minimizing provider reporting burden.

Through one round of ranking, work group members prioritized three newer concepts for discussion. Two concepts on disease modifying therapy and fatigue screening were developed for public comment. One concept, relapse or disability monitoring for patients with MS was not. This concept of relapse and disability monitoring is of utmost importance. The determination to not make a measure at this time is detailed below. The work group plans to monitor this space to determine if a measure can be developed during a future update of the measurement set.

Three relapse or disability options were discussed:

- a process measure assessing disability,
- an intermediate patient reported outcome focused on missed work or school days, and
- an intermediate patient reported outcome focused on healthcare utilization for relapses.

The above three concepts were not advanced to public comment due to feasibility concerns. The work group noted the existing disability scale score measure was difficult to collect in practice and a new process measure would have similar issues/limitations. Any intermediate patient reported outcome measure would require substantial practice and documentation changes to implement. These concerns prevent any such measure from being developed at this time. The work group will continue to revisit this concept during biannual reviews.

Measure Harmonization

The AANI encourages work groups to avoid duplication of measures that already exist in the field. Further details on measure harmonization is included in individual measure specifications below.

The measurement set includes measures that require the use of validated screening tools. The work group discussed and determined that multiple tools should be offered to allow providers to determine which tool best meets their individual practice needs. Tools may be subject to copyright and require licensing fees. The work group notes that effective September 2020 that Montreal Cognitive Assessment use requires completion of a proprietary examination and fee.

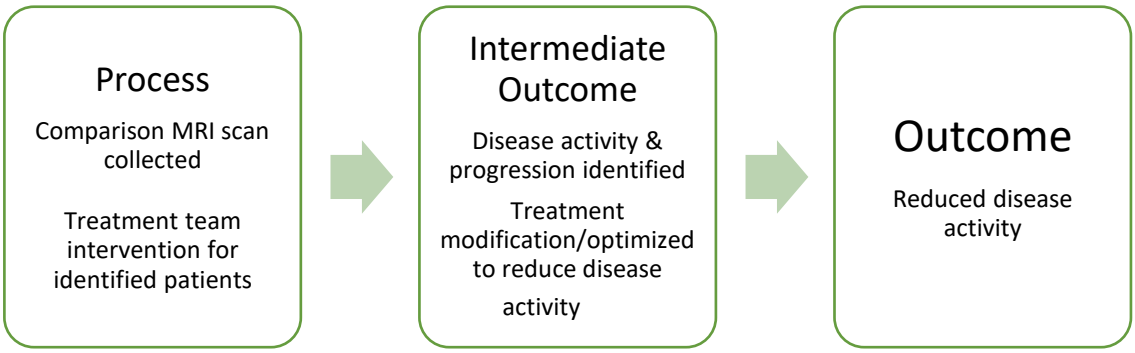
The AANI has developed additional measures that may be of interest to clinicians and teams treating patients with neurologic conditions. All AANI measures are available for free at: https://www.aan.com/policy-and-guidelines/quality/quality-measures2/quality-measures/

Introductory References

1. Wallin MT, Culpepper WJ, Campbell JD, et al. The prevalence of MS in the United States. Neurology. 2019;92(10):e1029-e1040.
2. Nelson LM, Wallin MT, Marrie RA, et al. A new way to estimate neurologic disease prevalence in the United States. Neurology. 2019; 92(10): 469-480.
3. Dieleman JL, Cao J, Chapin A, et al. US Health Care Spending by Payer and Health Condition, 1996-2016. JAMA. 2020; 323(9):863-884.
4. Quality Measure Subcommittee. American Academy of Neurology Quality Measurement Manual 2019 Update. 24p. January 2020. Available at: https://www.aan.com/policy-and-guidelines/quality/quality-measures2/how-measures-are-developed/ Accessed on November 13, 2020.

Magnetic Resonance Imaging (MRI) Monitoring for Patients with Multiple Sclerosis (MS)

Measure Title	MRI Monitoring for Patients with MS	
Description	Percentage of patients who had a brain MRI scan in the last 24 months and care management decisions updated.	
Measurement Period	January 1, 20xx to December 31, 20xx	
Eligible Population	Eligible Providers	Medical Doctor (MD), Doctor of Osteopathy (DO), Pharmacist (PharmD), Physician Assistant (PA), Advanced Practice Registered Nurse (APRN)
	Care Setting(s)	Outpatient Care
	Ages	Any
	Event	Office or telehealth encounter
	Diagnosis	Multiple Sclerosis
Denominator	Patients with a diagnosis of MS	
Numerator	Patients who had a brain MRI scan in the last 24 months and care management decisions updated*. Definition *Care management decisions updated defined as reaffirmation or adjustment to the treatment plan, adjustment or initiation of appropriate medication, or further testing.	
Required Exclusions	• Active diagnosis of Radiologically Isolated Syndrome (RIS) or Clinically Isolated Syndrome (CIS) on date of encounter	
Allowable Exclusions	• Patient declines referral to MRI in the last 24 months • MRI not clinically indicated given patient circumstances on date of encounter • Patient unable to have an MRI and this reason documented during measurement period	
Allowable Exclusion Inclusion Logic	Allowable exclusions can only help measure performance. If a patient has an allowable exclusion but is found to meet the numerator that patient is included in the count to meet the measure.	
Exclusion Rationale	Patients with RIS and CIS are not included in the eligible population given the lack of guidelines on timing of periodic surveillance imaging, as well as diagnostic variability for these conditions. A required exclusion is appropriate as a result. Allowable exclusions are needed for the following reasons: • Patients must agree to undergo an MRI, and it is not appropriate to force a patient to undergo testing they are opposed to having done. There are multiple reasons a patient may decline MRI including claustrophobia, unable to access MRI due to limited MRI availability, religious preference, and cost. • MRI may not be clinically indicated for some patients and physician and treatment team judgement should allow for these patients being excluded. Some examples of where MRI is not clinically indicated include patients who have a 20-year history of MS or current diagnosis of a progressive form of MS. • Patient may meet an exclusion for MRI given a history of trauma or surgery which may have left ferromagnetic material in the body, ferromagnetic implants or pacemakers, and inability to lie still for 1 hour or more. These patients are appropriate to exclude due to the potential harm that may result from undergoing an MRI. Also, if a patient is actively having a clinical relapse, MRI may not add to clinical decision making about changing the treatment regimen.	
Measure Scoring	Percentage	

Interpretation of Score	Higher Score Indicates Better Quality
Measure Type	Process
Level of Measurement	Provider
Risk Adjustment	Not Applicable
Opportunity to Improve Gap in Care	This measure is not intended to monitor baseline or re-baseline activity specifically. The measure is intended to address a gap in care for patients and prompt providers to consider modifying management decisions based on imaging results. The MRI changes may not always prompt treatment modifications, but providers consider the MRI data to assess if they are indicated in an individual patient. There are patients with MS who may require more frequent monitoring such as those prescribed natalizumab to monitor for Progressive Multifocal Leukoencephalopathy (PML) or those switching disease-modifying therapies; these patients should be treated in accordance with current guideline statements.[1] The work group notes this measure may have a positive, unintended consequence of addressing rural disparities by ensuring all patients with MS are provided routine MRI monitoring. Monitoring of measure performance will occur to address any negative, unintended consequences.
For Process Measures Relationship to Desired Outcome	The following evidence statements are quoted verbatim from the referenced clinical guidelines: • "Timing of brain MRI protocol for patients with an established diagnosis of MS: …Every 1-2 years while on disease-modifying therapy to assess for subclinical disease activity (i.e. new T2 lesions or gadolinium enhancing lesions). Less frequent MRI scans required in clinically stable patients after 2-3 years of stable treatment (gadolinium-based contrast optional)"[1] 
Harmonization with Existing Measures	Other draft measures impacting MRI use for patients with multiple sclerosis were reviewed; the draft measures utilize different denominator based on subtypes of multiple sclerosis. The work group developed this measure with a denominator of all patients with MS to address feasibility of data collection in practice, as MS subtypes are not easily identified due to lack of consistent coding practices.
References	1. Consortium of Multiple Sclerosis Centers. Consortium of MS Centers MRI Protocol for the Diagnosis and Follow-up of MS 2018 Revised Guidelines. Available at: https://www.mscare.org/page/MRI_protocol Accessed on November 13, 2020.

Code System	Code	Code Description
Initial Population		
CPT	99201-99205	Office or other outpatient visit, new patient
CPT	99211-99215	Office or other outpatient visit, established patient
CPT	99241-99245	Office or other outpatient consultation, new or established patient
CPT		Telehealth TBD
Denominator		
ICD-10	G35	Multiple Sclerosis
SNOMEDCT	24700007	Multiple sclerosis (disorder)
SNOMEDCT	192929006	Exacerbation of multiple sclerosis (disorder)
SNOMEDCT	230372003	Acute relapsing multiple sclerosis (disorder)
SNOMEDCT	425500002	Secondary progressive multiple sclerosis (disorder)
SNOMEDCT	426373005	Relapsing remitting multiple sclerosis (disorder)
SNOMEDCT	428700003	Primary progressive multiple sclerosis (disorder)
SNOMEDCT	438511000	Benign multiple sclerosis (disorder)
SNOMEDCT	92926004	Multiple sclerosis of the brainstem (disorder)
SNOMEDCT	192927008	Multiple sclerosis of the spinal cord (disorder)
SNOMEDCT	439567002	Malignant multiple sclerosis (disorder)
SNOMEDCT	724778008	Progressive relapsing multiple sclerosis (disorder)
SNOMEDCT	733028000	Multiple sclerosis, ichthyosis, factor VIII deficiency syndrome (disorder)
SNOMEDCT	766246000	Marburg acute multiple sclerosis (disorder)
SNOMEDCT	816984002	Progressive multiple sclerosis (disorder)
Numerator – MRI component		
CPT	70551	Magnetic resonance imaging, brain without contrast material
CPT	70553	Magnetic resonance imaging, brain without contrast material, followed by contrast material and further sequences
SNOMEDCT	241601008	MRI of head
SNOMEDCT	702724004	MRI of head and neck with contrast
SNOMEDCT	29567006	MRI of brain and brain stem (procedure)
SNOMEDCT	395611000119106	MRI of brain and brain stem with contrast
SNOMEDCT	443603002	MRI of brain with contrast using isotropic resolution
SNOMEDCT	698355003	Magnetic resonance imaging for measurement of brain volume with contrast
SNOMEDCT	3313508016	Magnetic resonance imaging of brain and brain stem with contrast (procedure)
SNOMEDCT	3320261014	MRI of brain and brain stem with contrast
SNOMEDCT	3313509012	Magnetic resonance imaging of brain and brain stem with contrast
Numerator – Care management decisions updated component		
SNOMEDCT	1779009018	Development of care plan
SNOMEDCT	1767604017	Development of care plan (procedure)
SNOMEDCT	1196083017	Development of individualized plan of care (procedure)
SNOMEDCT	1209518012	Development of individualized plan of care
SNOMEDCT	1228792012	Develops individualized plan of care
SNOMEDCT	566252018	Change of medication (procedure)
SNOMEDCT	282660014	Change of medication
SNOMEDCT	282659016	Medication changed
SNOMEDCT	750861000124112	Recommendation to change medication to lower cost therapeutic equivalent (procedure)
SNOMEDCT	750871000124117	Recommendation to change medication to lower cost therapeutic equivalent
SNOMEDCT	616161000124116	Recommendation to change medication dose form (procedure)

SNOMEDCT	616171000124111	Recommendation to change medication dose form
SNOMEDCT	616181000124114	Advice to change medication dose form
SNOMEDCT	616281000124118	Recommendation to change medication dose (procedure)
SNOMEDCT	616291000124115	Recommendation to change medication dose
SNOMEDCT	616301000124119	Advice to change medication dose
SNOMEDCT	616161000124116	Recommendation to change medication dose form (procedure)
SNOMEDCT	566927011	Referral for further care (procedure)
SNOMEDCT	283512014	Referral for further care
SNOMEDCT	183444007	Referral for further care (procedure)
SNOMEDCT	709318013	Provision of specialist further education (procedure)
SNOMEDCT	456380014	Provision of specialist further education
SNOMEDCT	706904013	Further opinion sought (finding)
SNOMEDCT	453917017	Further opinion sought

Presence of key phrases in clinical note may meet numerator component for Axon Registry.

Suggested key phrases to locate numerator component via Axon Registry® are included below. This list is not exhaustive and will be updated annually if adopted into the Axon Registry:

- "Treatment plan remains appropriate"
- "No treatment plan changes needed"
- "Treatment plan updated"
- "Treatment plan changed"
- "Further testing conducted"
- "Additional tests ordered"
- "Pharmacological updates made"
- "Initiated Disease Modifying Therapy"
- "Initiated DMT"
- "Adjusted DMT"
- "Medication adjusted"
- "Continue same DMT"

Required Exclusions		
ICD-10	G36.9	Acute disseminated demyelination, unspecified
ICD-10	G37.8	Other specified demyelinating diseases of the central nervous system
ICD-10	G37.9	Demyelinating disease of the central nervous system, unspecified
SNOMEDCT	445967004	Clinically isolated syndrome
SNOMEDCT	2880226016	Clinically isolated syndrome (disorder)
SNOMEDCT	2883049010	Clinically isolated syndrome
SNOMEDCT	633651000124112	Clinically isolated syndrome of brainstem (disorder)
SNOMEDCT	633661000124114	Clinically isolated syndrome of brainstem
SNOMEDCT	3009685011	Monofocal clinically isolated syndrome (disorder)
SNOMEDCT	3009542010	Monofocal clinically isolated syndrome
SNOMEDCT	703622004	Monofocal clinically isolated syndrome
SNOMEDCT	703621006	Multifocal clinically isolated syndrome
SNOMEDCT	3009533015	Multifocal clinically isolated syndrome (disorder)
SNOMEDCT	3009313015	Multifocal clinically isolated syndrome
SNOMEDCT	3009649011	Polysymptomatic clinically isolated syndrome
SNOMEDCT	16415361000119105	Radiologically isolated syndrome
SNOMEDCT	3774704015	Radiologically isolated syndrome (disorder)
SNOMEDCT	3774703014	Radiologically isolated syndrome
Allowable Exclusions		
SNOMEDCT	183932001	Procedure contraindicated (situation)

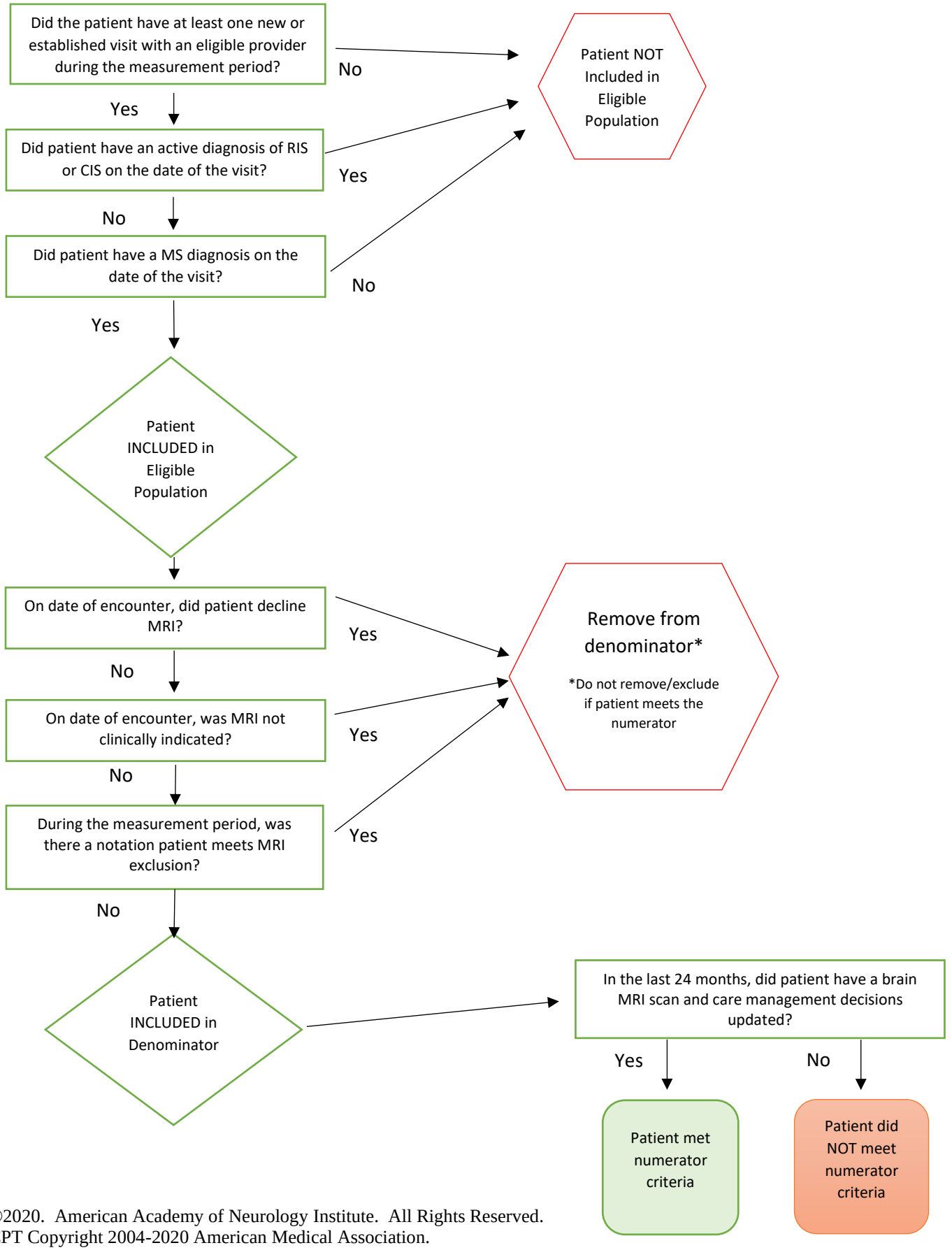
SNOMEDCT	397745006	Medical contraindication (finding)
SNOMEDCT	407563006	Treatment not tolerated (situation)
SNOMEDCT	428119001	Procedure not indicated (situation)
SNOMEDCT	408548005	Magnetic resonance imaging scan declined
SNOMEDCT	2612982013	Magnetic resonance imaging scan declined (situation)
SNOMEDCT	2160098019	Magnetic resonance imaging scan declined
SNOMEDCT	746791000124111	Recommendation refused by patient (situation)
SNOMEDCT	746801000124112	Recommendation refused by patient
SNOMEDCT	2608177018	Refused procedure - after thought (situation)
SNOMEDCT	284171012	Refused procedure - after thought
SNOMEDCT	183947005	Refused procedure - after thought (situation)
SNOMEDCT	2606319010	Refusal of treatment by patient (situation)
SNOMEDCT	169559019	Refusal of treatment by patient
SNOMEDCT	105480006	Refusal of treatment by patient (situation)
SNOMEDCT	2612741019	Refusal of treatment by parents (situation)
SNOMEDCT	1209841012	Refusal of treatment by parents
SNOMEDCT	2608092019	Refused procedure - parent's wish (situation)
SNOMEDCT	284172017	Refused procedure - parent's wish
SNOMEDCT	183948000	Refused procedure - parent's wish (situation)
SNOMEDCT	183944003	Procedure refused (situation)
SNOMEDCT	183945002	Procedure refused for religious reason (situation)
SNOMEDCT	413310006	Patient non-compliant - refused access to services (situation)
SNOMEDCT	413311005	Patient non-compliant - refused intervention / support (situation)
SNOMEDCT	413312003	Patient non-compliant - refused service (situation)
SNOMEDCT	183948000	Refused procedure - parent's wish (situation)
SNOMEDCT	416432009	Procedure not wanted (situation)
SNOMEDCT	443390004	Refused (qualifier value)

Presence of key phrases in clinical note may meet allowable exclusion component for Axon Registry.

Suggested key phrases to locate exclusions via Axon Registry® are included below. This list is not exhaustive and will be updated annually if adopted into the Axon Registry:

- "Patient has clinically evident disease activity."
- "Patient declines referral to MRI."
- "Patient refuses referral to MRI."
- "Patient refuses MRI."
- "Patient declines MRI."
- "MRI not clinically indicated."
- "Patient history prevents MRI."
- "Patient unable to have MRI."
- "MRI contraindicated."
- "Patient meets MRI exclusion."
- "Patient has new Dx of MS; MRI not indicated."
- "MRI not ordered due to patient cost concerns"

Flow Chart Diagram: MRI Surveillance for Patients with MS



Disease Modifying Therapies (DMT) Monitoring for Patients with Multiple Sclerosis (MS)

Measure Title	DMT Monitoring for Patients with MS	
Description	Percentage of patients with MS prescribed a DMT who were screened for side effects and compliance/adherence.	
Measurement Period	January 1, 20xx to December 31, 20xx	
Eligible Population	Eligible Providers	Medical Doctor (MD), Doctor of Osteopathy (DO), Pharmacist (PharmD), Physician Assistant (PA), Advanced Practice Registered Nurse (APRN)
	Care Setting(s)	Outpatient Care
	Ages	Any
	Event	Office or telehealth encounter for patients with a DMT prescription
	Diagnosis	Multiple Sclerosis
Denominator	Patients with a diagnosis of MS who were prescribed a new DMT during the measurement period.	
Numerator	Patients who were screened on date of encounter for: • DMT side effects and • compliance/adherence with DMT	
Required Exclusions	• Patient had a new DMT initiated on date of encounter	
Allowable Exclusions	• Patient declines a discussion on date of encounter	
Allowable Exclusion Inclusion Logic	Allowable exclusions can only help measure performance. If a patient has an allowable exclusion but is found to meet the numerator that patient is included in the count to meet the measure.	
Exclusion Rationale	• Patients with a new DMT initiated on date of encounter should be excluded due to insufficient exposure to drug to necessitate monitoring and may have been switched to a new DMT on the date in which case no need for a full monitoring assessment of the prior DMT. • DMT monitoring requires assessment of subjective symptom that requires patient cooperation to assess.	
Measure Scoring	Percentage	
Interpretation of Score	Higher Score Indicates Better Quality	
Measure Type	Process	
Level of Measurement	Provider	
Risk Adjustment	Not Applicable	
Opportunity to Improve Gap in Care	The work group notes there is limited evidence about gaps in care surrounding DMT monitoring and documentation, but anecdotally believes gaps exist for both. Evidence indicates that patients will self-report adherence and compliance concerns when using DMT for MS.[1] This current measure is focused on monitoring following a new DMT initiation. Future iterations of the measure may evolve over time to include all DMT monitoring. The work group will assess feasibility, documentation burden and unintended consequences during future reviews.	
For Process Measures Relationship to Desired Outcome	By screening and monitoring patients with MS prescribed DMTs, clinicians will be able to identify patients with side effects and patients who are not adhering to treatment. Once these issues are identified, clinicians will be able to modify/alter treatment plans or propose measures to address side effects and compliance/adherence issues to help improve outcomes and quality of life.	

	Following evidence statements are quoted verbatim from the referenced clinical guidelines: • "Level B Clinicians should monitor for medication adherence, AEs, tolerability, safety, and effectiveness of the therapy in people with MS on DMTs."[2] • "Level B Clinicians should follow up either annually or according to medication-specific REMs in people with MS on DMTs."[2] • "Level B Clinicians should discuss a change to noninjectable or less frequently injectable DMTs in people with MS who report intolerable discomfort with the injections or in those who report injection fatigue on injectable DMTs."[2] 
Harmonization with Existing Measures	Other draft measures for patients with multiple sclerosis utilizing DMTs were reviewed; the draft measures utilize different denominator based on subtypes of multiple sclerosis. The work group developed this measure with a denominator of all patients with MS to address feasibility of data collection in practice, as MS subtypes are not easily identified due to lack of consistent coding practices.
References	1. McKay KA, Evans A, Fisk JD, et al. Disease-Modifying Therapies and Adherence in Multiple Sclerosis: Comparing Patient Self-Report with Pharmacy Records. Neuroepidemiology. 2017; 48:124-130. 2. Rae-Grant A, Day GS, Marrie RA, et al. Practice guideline recommendations summary: Disease-modifying therapies for adults with multiple sclerosis. Neurology. 2018; 90(17):777-788.

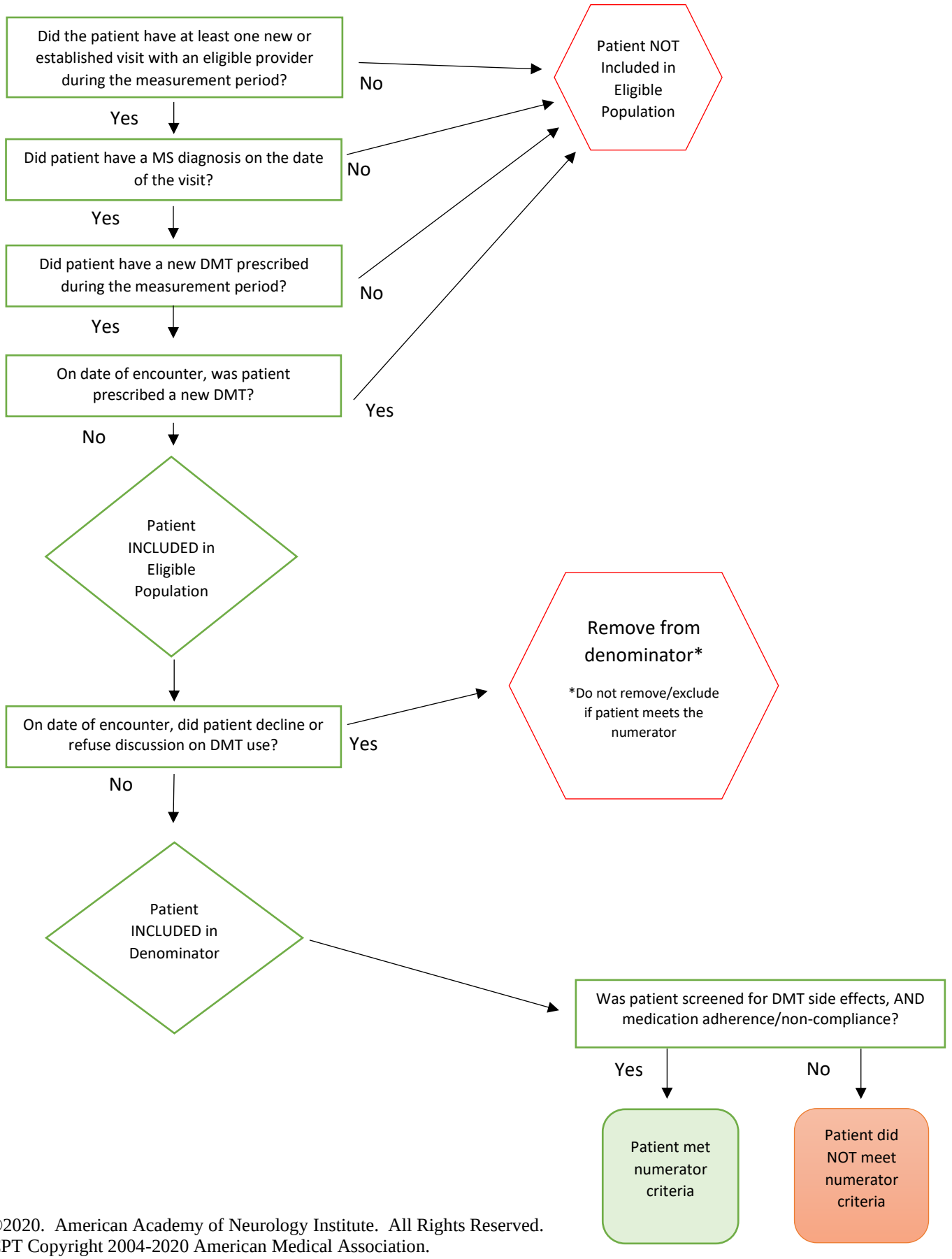
Initial Population		
CPT	99201-99205	Office or other outpatient visit, new patient
CPT	99211-99215	Office or other outpatient visit, established patient
CPT	99241-99245	Office or other outpatient consultation, new or established patient
CPT		Telehealth codes TBD
Denominator		
ICD-10	G35	Multiple Sclerosis
SNOMEDCT	24700007	Multiple sclerosis (disorder)
SNOMEDCT	192929006	Exacerbation of multiple sclerosis (disorder)
SNOMEDCT	230372003	Acute relapsing multiple sclerosis (disorder)
SNOMEDCT	425500002	Secondary progressive multiple sclerosis (disorder)
SNOMEDCT	426373005	Relapsing remitting multiple sclerosis (disorder)
SNOMEDCT	428700003	Primary progressive multiple sclerosis (disorder)
SNOMEDCT	438511000	Benign multiple sclerosis (disorder)
SNOMEDCT	92926004	Multiple sclerosis of the brainstem (disorder)
SNOMEDCT	192927008	Multiple sclerosis of the spinal cord (disorder)
SNOMEDCT	439567002	Malignant multiple sclerosis (disorder)
SNOMEDCT	724778008	Progressive relapsing multiple sclerosis (disorder)
SNOMEDCT	733028000	Multiple sclerosis, ichthyosis, factor VIII deficiency syndrome (disorder)
SNOMEDCT	766246000	Marburg acute multiple sclerosis (disorder)
SNOMEDCT	816984002	Progressive multiple sclerosis (disorder)
AND presence of one of the below RxNorm codes for the first time in the patient record for the first time in the 12 months prior to the date of the encounter.		
RxNorm	Reviewed annually	Glatiramer acetate
RxNorm	Reviewed annually	Interferon b-1a
RxNorm	Reviewed annually	Interferon b-1b
RxNorm	Reviewed annually	Pegylated interferon b-1a
RxNorm	Reviewed annually	Dimethyl fumarate
RxNorm	Reviewed annually	Fingolimod
RxNorm	Reviewed annually	Teriflunomide
RxNorm	Reviewed annually	Siponimod
RxNorm	Reviewed annually	Cladribine
RxNorm	Reviewed annually	Diroximel fumarate
RxNorm	Reviewed annually	Alemtuzumab
RxNorm	Reviewed annually	Natalizumab
RxNorm	Reviewed annually	Ocrelizumab
RxNorm	Reviewed annually	Ofatumumab
Numerator – Side effect component		
SNOMED	2612797016	No drug side effect reported (situation)
SNOMED	1488760019	No drug side effect reported
SNOMED	395061001	No drug side effect reported
SNOMED	1769129019	Medication side effects present (finding)
SNOMED	1780402015	Medication side effects present
SNOMED	1787478017	Has shown side effects from medication
SNOMED	3013779011	Medication side-effect
SNOMED	401207004	Medication side effects present (finding)
SNOMED	2612971017	Medication stopped - side effect (situation)
SNOMED	1488709015	Medication stopped - side effect
SNOMED	395009001	Medication stopped – side effect (finding)
SNOMED	704417003	At risk of medication side effect (finding)

SNOMED	3013270011	At risk of medication side effect (finding)
SNOMED	3013275018	At risk of medication side effect
SNOMED	129850005	At risk for negative response to medication
SNOMED	2608043013	Doctor stopped drugs - side effect (situation)
SNOMED	282667012	Doctor stopped drugs - side effect
SNOMED	282668019	Dr stopped drugs - side effect
SNOMED	182842009	Doctor stopped drugs – side effect (situation)
SNOMED	552913018	High risk drug side effect (finding)
SNOMED	264902014	High risk drug side effect
SNOMED	170909007	High risk drug side effect (finding)
SNOMED	2719553017	Repeat prescription drug side effect (finding)
SNOMED	2770170014	Repeat prescription drug side effect
SNOMED	170926001	Repeat prescription drug side effect (finding)
SNOMED	2152188017	Drug side effect - acceptable to patient (finding)
SNOMED	2159921014	Drug side effect - acceptable to patient
SNOMED	408357000	Drug side effect - acceptable to patient (finding)
Presence of key phrases in clinical note may meet numerator component for Axon Registry. Suggested key phrases to locate numerator components via Axon Registry® are included below. This list is not exhaustive and will be updated annually if adopted into the Axon Registry: • "Patient reports no side effects" • "Patient reports side effects" • "DMT side effects discussed" • "DMT side effects are severe" • "DMT side effects are moderate" • "DMT side effects are mild" • "DMT side effects are minimal" • "DMT side effects reported" • "DMT side effects not reported" • "DMT side effects are tolerable" • "DMT side effects are improving"		
Numerator - Medication adherence/compliance component:		
SNOMED	2788859011	Compliance behavior to prescribed medication (observable entity)
SNOMED	2792744019	Compliance behavior to prescribed medication
SNOMED	2793641011	Compliance behaviour to prescribed medication
SNOMED	439914008	Compliance behavior to prescribed medication (observable entity)
SNOMED	3036826013	Compliance behavior to therapeutic regimen (observable entity)
SNOMED	3036723011	Compliance behavior to therapeutic regimen
SNOMED	3037872015	Compliance behaviour to therapeutic regimen
SNOMED	709007004	Compliance behavior to therapeutic regimen (observable entity)
SNOMED	1768899016	Drug compliance poor (finding)
SNOMED	1780186012	Drug compliance poor
SNOMED	400978007	Drug compliance poor (finding)
SNOMED	2152204014	Drug compliance checked (finding)
SNOMED	2159937015	Drug compliance checked
SNOMED	408373006	Drug compliance checked (finding)
SNOMED	2573535016	Verbalizes medication compliance (finding)
SNOMED	2576832015	Verbalizes medication compliance
SNOMED	2579791015	Verbalizes medication adherence
SNOMED	4190110006	Verbalizes medication compliance (finding)

SNOMED	566303015	Drug compliance good (finding)
SNOMED	282724013	Drug compliance good
SNOMED	182884001	Drug compliance good (finding)
SNOMED	1491000124115	Prescription compliance status (finding)
SNOMED	1501000124111	Prescription compliance status
SNOMED	671000124101	Prescription compliance status (finding)
SNOMED	5631000175104	Patient sequesters unused medication
SNOMED	2834718017	Assessment of compliance with medication regimen (procedure)
SNOMED	2471844010	Assessment of compliance with medication regimen
SNOMED	2477776019	Assess compliance with medication regimen
SNOMED	740391000124114	Assessment of adherence to medication regimen
SNOMED	410122002	Assessment of compliance with medication regimen (procedure)
SNOMED	2529544010	Drug therapy compliance observations (finding)
SNOMED	2576445011	Drug therapy compliance finding
SNOMED	2532949019	Drug therapy compliance observations
SNOMED	414059009	Drug therapy compliance observations (finding)
SNOMED	182884001	Drug compliance good
SNOMED	400978007	Drug compliance poor
SNOMED	408373006	Drug compliance checked
SNOMED	668770011	Drugs - total non-compliance (finding)
SNOMED	411900018	Drugs - total non-compliance
SNOMED	275927006	Drugs - total non-compliance (finding)
SNOMED	668771010	Drugs - partial non-compliance (finding)
SNOMED	411901019	Drugs - partial non-compliance
SNOMED	275928001	Drugs - partial non-compliance (finding)
SNOMED	709008009	Complies with therapeutic regimen
SNOMED	7058009	Noncompliance with treatment
SNOMED	2638881015	Noncompliance with treatment (finding)
SNOMED	2647221012	Noncompliance with treatment
SNOMED	2536432016	Does not comply with treatment
SNOMED	740101000124117	Nonadherence with treatment
SNOMED	734021017	Noncompliance with medication regimen (finding)
SNOMED	208675012	Noncompliance with medication regimen
SNOMED	208676013	Noncompliance: medication regimen
SNOMED	129834002	Noncompliance with medication regimen (finding)
SNOMED	3004395012	Non-compliance of drug therapy (finding)
SNOMED	3004295010	Non-compliance of drug therapy
SNOMED	726441000124114	Drug therapy non adherence
SNOMED	726431000124116	Medication therapy non-adherence
SNOMED	702565001	Non-compliance of drug therapy (finding)
SNOMED	778331000124111	Medication non-adherence due to intolerance (finding)
SNOMED	778341000124118	Medication non-adherence due to intolerance
SNOMED	778321000124113	Medication non-compliance due to intolerance
SNOMED	457621000124107	Medication non-adherence due to intolerance (finding)
SNOMED	3004326019	Suspected non-compliance of drug therapy (situation)
SNOMED	3449739016	Suspected non-adherence of medication therapy
SNOMED	3004393017	Suspected non-compliance of drug therapy
SNOMED	702566000	Suspected non-compliance of drug therapy (situation)
SNOMED	778351000124116	Medication non-adherence due to language barrier (finding)
SNOMED	778361000124119	Medication non-adherence due to language barrier

SNOMED	778371000124114	Medication non-compliance due to language barrier
SNOMED	457631000124105	Medication non-adherence due to language barrier (finding)
SNOMED	778381000124112	Medication non-adherence due to psychosocial issues (finding)
SNOMED	778391000124110	Medication non-adherence due to psychosocial issues
SNOMED	778401000124112	Medication non-compliance due to psychosocial issues
SNOMED	457641000124100	Medication non-adherence due to psychosocial issues (finding)
SNOMED	751831000124111	Medication non-compliance due to excessive pill burden (finding)
SNOMED	751841000124118	Medication non-compliance due to excessive pill burden
SNOMED	751851000124116	Medication non-adherence due to excessive pill burden
SNOMED	454171000124105	Medication non-compliance due to excessive pill burden (finding)
Presence of key phrases in clinical note may meet numerator component for Axon Registry. Suggested key phrases to locate numerator components via Axon Registry® are included below. This list is not exhaustive and will be updated annually if adopted into the Axon Registry: • "Patient taking DMT consistently" • "Patient not taking DMT consistently" • "Patient inconsistently taking DMT" • "Patient not adherent with DMT" • "Patient adherent with DMT" • "Patient unable to afford DMT"		
Required Exclusions		
Presence of one of the above RxNorm codes for the first time in the patient record on the date of the encounter.		
Allowable Exclusions		
SNOMEDCT	2606319010	Refusal of treatment by patient (situation)
SNOMEDCT	169559019	Refusal of treatment by patient
SNOMEDCT	105480006	Refusal of treatment by patient (situation)
SNOMEDCT	2612741019	Refusal of treatment by parents (situation)
SNOMEDCT	1209841012	Refusal of treatment by parents
SNOMEDCT	183945002	Procedure refused for religious reason (situation)
SNOMEDCT	413310006	Patient non-compliant - refused access to services (situation)
SNOMEDCT	413311005	Patient non-compliant - refused intervention / support (situation)
SNOMEDCT	413312003	Patient non-compliant - refused service (situation)
SNOMEDCT	443390004	Refused (qualifier value)
Presence of key phrases in clinical note may meet allowable exclusion component for Axon Registry. Suggested key phrases to locate exclusions via Axon Registry® are included below. This list is not exhaustive and will be updated annually if adopted into the Axon Registry: • "Patient declines to discuss DMT use" • "Patient refuses to discuss DMT use"		

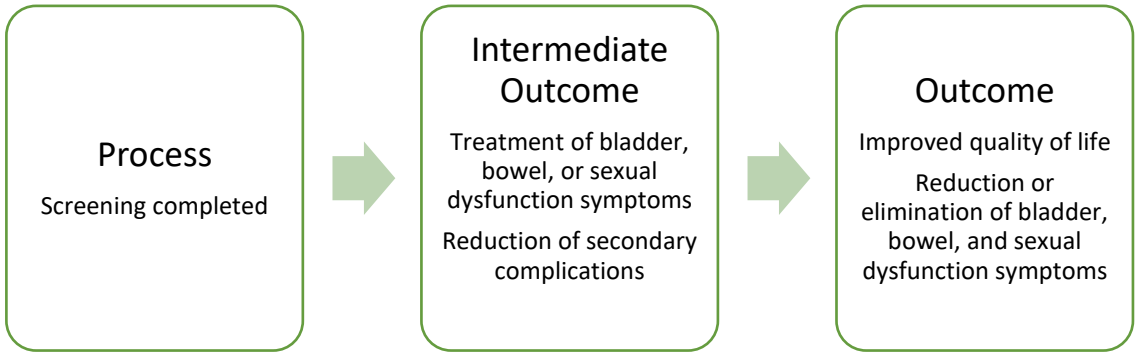
Flow Chart Diagram: DMT Monitoring for Patients with MS



Bladder, Bowel, and Sexual Dysfunction Screening and Follow-Up for Patients with Multiple Sclerosis (MS)

Measure Title	Bladder, Bowel, and Sexual Dysfunction Screening and Follow-Up for Patients with MS	
Description	Percentage of patients with MS who were screened for at least one of three symptoms: bladder, bowel, or sexual dysfunction in the past 12 months, and if screening positive for any one of these symptoms had appropriate follow-up care.	
Measurement Period	January 1, 20xx to December 31, 20xx	
Eligible Population	Eligible Providers	Medical Doctor (MD), Doctor of Osteopathy (DO), Pharmacist (PharmD), Physician Assistant (PA), Advanced Practice Registered Nurse (APRN), Physical Therapy (PT), Occupational Therapy (OT)
	Care Setting(s)	Outpatient Care
	Ages	Any
	Event	Office or telehealth encounter
	Diagnosis	Multiple Sclerosis
Denominator	Patients with a diagnosis of MS.	
Numerator	Patients with MS who were screened* for at least one of three symptoms: bladder, bowel, or sexual dysfunction in the past 12 months, and if screening positive had appropriate follow-up** care. Definitions: * Screened is defined as an assessment of symptoms. **Appropriate follow-up is defined as adjustment to the treatment plan, adjustment or initiation of appropriate medication, further testing, counseling on lifestyle changes, or referral to an appropriate healthcare provider.	
Required Exclusions	None	
Allowable Exclusions	• Patient refuses or patient declines on date of encounter	
Allowable Exclusion Inclusion Logic	Allowable exclusions can only help measure performance. If a patient has an allowable exclusion but is found to meet the numerator that patient is included in the count to meet the measure.	
Exclusion Rationale	• Patients need to be willing to complete the screening for the screening to be valid.	
Measure Scoring	Percentage	
Interpretation of Score	Higher Score Indicates Better Quality	
Measure Type	Process	
Level of Measurement	Provider	
Risk Adjustment	Not Applicable	
Opportunity to Improve Gap in Care	2010 North American Research Committee on Multiple Sclerosis (NARCOMS) Registry data indicated that 91% of 9,341 patients with MS responding were mildly, moderately, or severely bothered by bladder, bowel, or sexual symptoms.[1] Between 50 to 90% of men with MS and 40 to 80% of women with MS experience sexual dysfunction which is significantly more than in general population[2]. Sexual dysfunction symptoms are often overlooked in clinical evaluations of patients with MS.[2] Schairer, et al., found that sexual dysfunction has a larger detrimental impact on the mental health of health-related quality of life for patients with MS than physical disability.[3]	

	For this first iteration of the measure a broad definition of screening was provided; clinicians may use a validated instrument. The work group notes these instruments are not widely used in practice. The measure may be updated in future reviews, to detail specific instruments as they become more widely used in practice.
For Process Measures Relationship to Desired Outcome	By screening annually for bladder, bowel, and sexual dysfunction, clinicians will be able to identify patients needing appropriate treatment to address these issues, leading to improved outcomes and better quality of life. Following evidence statements are quoted verbatim from the referenced clinical guidelines or : • "Ensure all people with MS have a comprehensive review of all aspects of their care at least once a year."[4] • "Tailor the comprehensive review to the needs of the person with MS assessing: o …bladder, bowel, and sexual function…"[4] • "Refer any issues identified during the comprehensive review of the person with MS to members of the MS multidisciplinary team and other appropriate teams so that they can be managed."[4] • "When assessing lower urinary tract dysfunction in a person with neurological disease, take a clinical history, including information about: o urinary tract symptoms o neurological symptoms and diagnosis (if known) o clinical course of the neurological disease o bowel symptoms o sexual function o comorbidities o use of prescription and other medication and therapies."[5] • "Refer people for urgent investigation if they have any of the following 'red flag' signs and symptoms: o haematuria o recurrent urinary tract infections (for example, three or more infections in the last 6 months) o loin pain o recurrent catheter blockages (for example, catheters blocking within 6 weeks of being changed) o hydronephrosis or kidney stones on imaging o biochemical evidence of renal deterioration."[5] o "Be aware that unexplained changes in neurological symptoms (for example, confusion or worsening spasticity) can be caused by urinary tract disease, and consider further urinary tract investigation and treatment if this is suspected."[4] • "Consider pelvic floor muscle training for people with: lower urinary tract dysfunction due to multiple sclerosis…."[5] Fletcher, et al., state, "All MS patients should be specifically queried about sexual function."[6] Further, they noted, "A variety of factors, including MS related disease activity, MS symptoms, depression & effects of pharmacologic therapy can contribute to sexual dysfunction in patients with MS."[6]

	
Harmonization with Existing Measures	No known similar measures
References	1. Wang G, Marrie RA, Fox RJ, et al. Treatment satisfaction and bothersome bladder, bowel, sexual symptoms in multiple sclerosis. Multiple Sclerosis and Related Disorders. 2018; 20: 16-21. 2. Pöttgen J, Rose A, van de Vis W, et al. Sexual dysfunctions in MS in relation to neuropsychiatric aspects and its psychological treatment: A scoping review. PLoS One. 2018;13(2):e0193381. 3. Schairer LC, Foley FW, Zemon V, et al. The impact of sexual dysfunction on health-related quality of life in people with multiple sclerosis. Multiple Sclerosis. 2014; 20(5):610-616. 4. National Clinical Guideline Centre (NICE) (UK). Multiple Sclerosis: Management of Multiple Sclerosis in Primary and Secondary Care. London: National Institute for Health and Care Excellence; 2014 Oct. 2019 update available at: https://www.nice.org.uk/guidance/cg186 Accessed on November 13, 2020. 5. National Clinical Guideline Centre (NICE) (UK). Urinary incontinence in neurological disease: assessment and management. London: National Institute for Health and Care Excellence; 2012 Aug. Available at: https:/www.nice.org.uk/guidance/cg148 Accessed on March 5, 2020. 6. Fletcher SG, Castro-Borrero W, Remington G, et al. Sexual dysfunction in patients with multiple sclerosis: a multidisciplinary approach to evaluation and management. Nature Clinical Practice Urology. 2009; 6: 96-107.

Code System	Code	Code Description
Initial Population		
CPT	99201-99205	Office or other outpatient visit, new patient
CPT	99211-99215	Office or other outpatient visit, established patient
CPT	99241-99245	Office or other outpatient consultation, new or established patient
CPT	97003, 97004	Occupational therapy, evaluation and re-evaluation
CPT	97161-97164	Physical therapy, evaluation and re-evaluation
CPT		Telehealth codes TBD
Denominator		
ICD-10	G35	Multiple Sclerosis
SNOMEDCT	24700007	Multiple sclerosis (disorder)
SNOMEDCT	192929006	Exacerbation of multiple sclerosis (disorder)
SNOMEDCT	230372003	Acute relapsing multiple sclerosis (disorder)
SNOMEDCT	425500002	Secondary progressive multiple sclerosis (disorder)
SNOMEDCT	426373005	Relapsing remitting multiple sclerosis (disorder)
SNOMEDCT	428700003	Primary progressive multiple sclerosis (disorder)
SNOMEDCT	438511000	Benign multiple sclerosis (disorder)
SNOMEDCT	92926004	Multiple sclerosis of the brainstem (disorder)
SNOMEDCT	192927008	Multiple sclerosis of the spinal cord (disorder)
SNOMEDCT	439567002	Malignant multiple sclerosis (disorder)
SNOMEDCT	724778008	Progressive relapsing multiple sclerosis (disorder)
SNOMEDCT	733028000	Multiple sclerosis, ichthyosis, factor VIII deficiency syndrome (disorder)
SNOMEDCT	766246000	Marburg acute multiple sclerosis (disorder)
SNOMEDCT	816984002	Progressive multiple sclerosis (disorder)
Numerator – Screening Component^		
ICD-10	R37	Sexual Dysfunction
ICD-10	K59	Constipation
ICD-10	N32.81	Overactive Bladder
ICD-10	R32	Urinary Incontinence
ICD-10	R35	Nocturia
ICD-10	F52	Erectile Dysfunction
^New ICD-10 diagnostic code may meet the numerator if added on date of encounter		
SNOMEDCT	777147011	Bladder dysfunction (finding)
SNOMEDCT	67519012	Bladder dysfunction
SNOMEDCT	639699011	Must urinate repeatedly to empty bladder (finding)
SNOMEDCT	371974010	Must urinate repeatedly to empty bladder
SNOMEDCT	1765650018	Neurogenic dysfunction of the urinary bladder (finding)
SNOMEDCT	1777342015	Neurogenic dysfunction of the urinary bladder
SNOMEDCT	1765983010	Neurogenic bladder (finding)
SNOMEDCT	1777632010	Neurogenic bladder
SNOMEDCT	624071012	Bowel dysfunction (disorder)
SNOMEDCT	353134013	Bowel dysfunction
SNOMEDCT	353133019	BD - Bowel dysfunction
SNOMEDCT	118202007	Finding of sexual function
SNOMEDCT	697616014	Finding of sexual function (finding)
SNOMEDCT	443249016	Finding of sexual function
SNOMEDCT	1220367013	Observation of sexual function
SNOMEDCT	795491010	Abnormal sexual function (finding)
SNOMEDCT	94664018	Abnormal sexual function
SNOMEDCT	1231659011	Sexual dysfunction

SNOMEDCT	613002013	Decreased sexual function (finding)
SNOMEDCT	339169010	Decreased sexual function
SNOMEDCT	339168019	Impaired sexual function
SNOMEDCT	65210015	Normal sexual function (finding)
SNOMEDCT	19904012	Normal sexual function
SNOMEDCT	788443011	Normal female sexual function (finding)
SNOMEDCT	84366014	Normal female sexual function
SNOMEDCT	823566017	Normal male sexual function (finding)
SNOMEDCT	136328013	Normal male sexual function
SNOMEDCT	758802014	Abnormal female sexual function (finding)
SNOMEDCT	47132019	Abnormal female sexual function
SNOMEDCT	792328019	Abnormal male sexual function (finding)
SNOMEDCT	10048011	Abnormal male sexual function
SNOMEDCT	3035843015	Male sexual dysfunction
Presence of key phrases in clinical note may meet numerator component for Axon Registry. Suggested key phrases to locate numerator components via Axon Registry® are included below. This list is not exhaustive and will be updated annually if adopted into the Axon Registry: • "Screened for GI symptoms; no follow-up needed" • "Screened for GI symptoms; follow-up needed" • "Screened for bladder symptoms; follow-up needed" • "Screened for bladder symptoms; no follow-up needed" • "Screened for bowel symptoms; follow-up needed" • "Screened for bowel symptoms; no follow-up needed" • "Screened for sexual dysfunction; follow-up needed" • "Screened for sexual dysfunction; no follow-up needed"		
Numerator – Follow-Up Component		
SNOMEDCT	1779009018	Development of care plan
SNOMEDCT	1767604017	Development of care plan (procedure)
SNOMEDCT	1196083017	Development of individualized plan of care (procedure)
SNOMEDCT	1209518012	Development of individualized plan of care
SNOMEDCT	1228792012	Develops individualized plan of care
SNOMEDCT	566252018	Change of medication (procedure)
SNOMEDCT	282660014	Change of medication
SNOMEDCT	282659016	Medication changed
SNOMEDCT	750861000124112	Recommendation to change medication to lower cost therapeutic equivalent (procedure)
SNOMEDCT	750871000124117	Recommendation to change medication to lower cost therapeutic equivalent
SNOMEDCT	616161000124116	Recommendation to change medication dose form (procedure)
SNOMEDCT	616171000124111	Recommendation to change medication dose form
SNOMEDCT	616181000124114	Advice to change medication dose form
SNOMEDCT	616281000124118	Recommendation to change medication dose (procedure)
SNOMEDCT	616291000124115	Recommendation to change medication dose
SNOMEDCT	616301000124119	Advice to change medication dose
SNOMEDCT	616161000124116	Recommendation to change medication dose form (procedure)
SNOMEDCT	616171000124111	Recommendation to change medication dose form
SNOMEDCT	616181000124114	Advice to change medication dose form
SNOMEDCT	223415003	Recommendation regarding activity (procedure)
SNOMEDCT	223440005	Recommendation to undertake activity (procedure)
SNOMEDCT	223469001	Discussion about activity (procedure)

SNOMEDCT	223415003	Recommendation regarding activity (procedure)
SNOMEDCT	566927011	Referral for further care (procedure)
SNOMEDCT	283512014	Referral for further care
SNOMEDCT	183444007	Referral for further care (procedure)
SNOMEDCT	709318013	Provision of specialist further education (procedure)
SNOMEDCT	456380014	Provision of specialist further education
SNOMEDCT	706904013	Further opinion sought (finding)
SNOMEDCT	453917017	Further opinion sought
SNOMEDCT	2463898019	Sexual behavior management (regime/therapy)
SNOMEDCT	1477096017	Sexual behavior management
SNOMEDCT	1490387018	Behavior management: sexual
SNOMEDCT	1490158013	Behaviour management: sexual
SNOMEDCT	1476135011	Sexual behaviour management
SNOMEDCT	567047012	Referred to urologist (finding)
SNOMEDCT	283665014	Referred to urologist
SNOMEDCT	705017017	Referral to gastroenterologist (procedure)
SNOMEDCT	451830012	Referral to gastroenterologist
SNOMEDCT	567043011	Referral to gynecology service (procedure)
SNOMEDCT	283659014	Referral to gynecology service
SNOMEDCT	283658018	Gynaecological referral
SNOMEDCT	283656019	Gynecological referral
SNOMEDCT	283657011	Referral to gynaecology service
SNOMEDCT	702506019	Referral to obstetrics and gynecology service (procedure)
SNOMEDCT	449028018	Referral to obstetrics and gynecology service
SNOMEDCT	449029014	Referral to obstetrics and gynaecology service
SNOMEDCT	2572866010	Urinary catheter care education (procedure)
SNOMEDCT	2471974018	Urinary catheter care education
SNOMEDCT	2477933010	Teach urinary catheter care
SNOMEDCT	2572868011	Urinary catheter irrigation education (procedure)
SNOMEDCT	2471980014	Urinary catheter irrigation education
SNOMEDCT	2477939014	Teach urinary catheter irrigation

Presence of key phrases in clinical note may meet numerator follow-up component for Axon Registry.

Suggested key phrases to locate follow-up via Axon Registry® are included below. This list is not exhaustive and will be updated annually if adopted into the Axon Registry:

- "Behavioral modification"
- "Treatment plan updated"
- "Treatment changed"
- "Lifestyle changes"
- "Referral to urologist"
- "Referral to GI specialist"
- "Referral to OB/GYN"
- "Further testing conducted"
- "Additional tests ordered"
- "Pharmacological updates made"
- "Medication adjusted"
- "Catheter guidance provided"
- "Care instructions provided for catheter"
- "Clean intermittent self-catheterization"

Allowable Exclusions

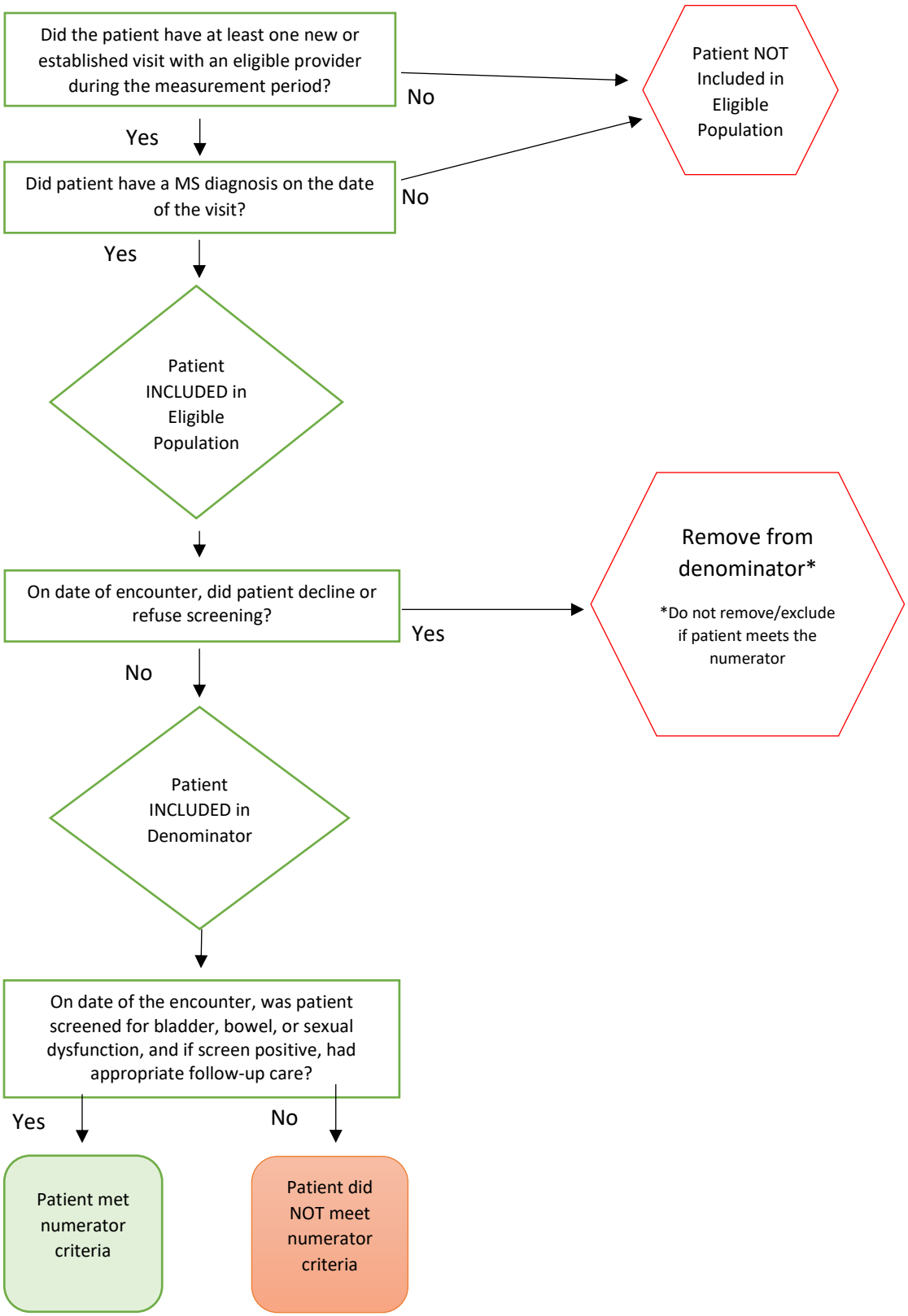
SNOMEDCT	746791000124111	Recommendation refused by patient (situation)
SNOMEDCT	746801000124112	Recommendation refused by patient
SNOMEDCT	2608177018	Refused procedure - after thought (situation)
SNOMEDCT	284171012	Refused procedure - after thought
SNOMEDCT	183947005	Refused procedure - after thought (situation)
SNOMEDCT	2606319010	Refusal of treatment by patient (situation)
SNOMEDCT	169559019	Refusal of treatment by patient
SNOMEDCT	105480006	Refusal of treatment by patient (situation)
SNOMEDCT	2612741019	Refusal of treatment by parents (situation)
SNOMEDCT	1209841012	Refusal of treatment by parents
SNOMEDCT	2608092019	Refused procedure - parent's wish (situation)
SNOMEDCT	284172017	Refused procedure - parent's wish
SNOMEDCT	183948000	Refused procedure - parent's wish (situation)
SNOMEDCT	183944003	Procedure refused (situation)
SNOMEDCT	183945002	Procedure refused for religious reason (situation)
SNOMEDCT	413310006	Patient non-compliant - refused access to services (situation)
SNOMEDCT	413311005	Patient non-compliant - refused intervention / support (situation)
SNOMEDCT	413312003	Patient non-compliant - refused service (situation)
SNOMEDCT	183948000	Refused procedure - parent's wish (situation)
SNOMEDCT	416432009	Procedure not wanted (situation)
SNOMEDCT	443390004	Refused (qualifier value)

Presence of key phrases in clinical note may meet allowable exclusion component for Axon Registry.

Suggested key phrases to locate exclusions via Axon Registry® are included below. This list is not exhaustive and will be updated annually if adopted into the Axon Registry:

- "Patient has declined screening"
- "Patient declines to discuss bladder, bowel, and sexual function"
- "Patient refuses to discuss bladder, bowel, and sexual function"
- "Patient refuses screening"
- "Patient declines screening"

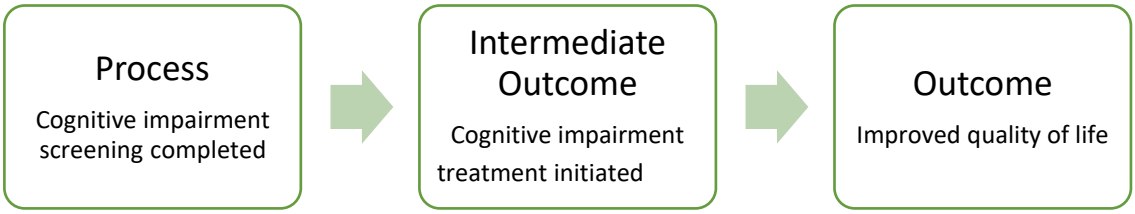
Flow Chart Diagram: Bladder, Bowel, and Sexual Dysfunction Screening and Follow-Up for Patients with MS



Cognitive Impairment Screening and Follow-Up for Patients with Multiple Sclerosis (MS)

Measure Title	Cognitive Impairment Screening and Follow-Up for Patients with MS	
Description	Percentage of patients with MS who were screened* for cognitive impairment in the past 12 months and if screening positive, patient was referred appropriately for further evaluation and management.	
Measurement Period	January 1, 20xx to December 31, 20xx	
Eligible Population	Eligible Providers	Medical Doctor (MD), Doctor of Osteopathy (DO), Pharmacist (PharmD), Assistant (PA), Advanced Practice Registered Nurse (APRN), Physical Therapy (PT), Occupational Therapy (OT)
	Care Setting(s)	Outpatient Care
	Ages	Any
	Event	Office or telehealth encounter
	Diagnosis	Multiple Sclerosis
Denominator	All patients with a diagnosis of MS.	
Numerator	Patients with MS were screened* for cognitive impairment in past 12 months, and if screening positive, patient was referred appropriately for further evaluation and management**. Definitions: * Screened is defined as administering any one of the following tools: • Brief International Assessment of Cognition for MS (BICAMS),[1] • Symbol Digit Modalities Test (SDMT),[2] • MS Neuropsychological Screening Questionnaire (MSNQ) Observer version,[3] • Computerized Speed Cognitive Test (CST),[3] • Processing Speed Test (PST), [3] • Verbal fluency (phonemic and semantic),[4] • Paced Auditory Serial Addition Test (PASAT),[5] • Rao Brief Repeatable Neuropsychological Battery (BRNB),[5] • Minimal Assessment of Cognitive Function in MS (MACFIMS),[5] • PROMIS,[6] or • Montreal Cognitive Assessment (MoCA).[7-9] **Further evaluation and management is defined as referral to: • MS neuropsychological rehabilitation • Neuropsychologist or psychologist, • Speech/language pathologist, or • Occupational therapist. Neuropsychological evaluation in the past 12 months, may be used to meet the numerator for screening and evaluation and management.	
Required Exclusions	• Patient not seen in past 12 months	
Allowable Exclusions	• Patient declines to complete a cognitive assessment on date of encounter. • Patient is not able to complete a cognitive assessment on date of encounter. • Patient currently receiving treatment to address cognitive impairment.	
Allowable Exclusion Inclusion Logic	Allowable exclusions can only help measure performance. If a patient has an allowable exclusion but is found to meet the numerator that patient is included in the count to meet the measure.	
Exclusion Rationale	• Patients who have not been seen in the past 12 months are appropriate to exclude as cognitive screening could not be completed in the required timeframe.	

	• Patients need to be willing to complete the screening tool for the screening scores to be valid. • Patients may be unable to meaningfully participate in a cognitive assessment and exclusion is appropriate for those in a coma, delirious, or severely cognitively impaired. • Screening would not be needed for those currently receiving treatment for a cognitive impairment previously identified.
Measure Scoring	Percentage
Interpretation of Score	Higher Score Indicates Better Quality
Measure Type	Process
Level of Measurement	Provider
Risk Adjustment	Not applicable
Opportunity to Improve Gap in Care	43-70% of people with MS have reported cognitive impairments.[10] Clinicians cannot detect cognitive impairment unless there is regular assessment. Clinical interview and standard neurological examination is not sufficiently sensitive to detect cognitive impairment in multiple sclerosis, and suggests need for a brief, accurate cognitive screening.[11] Screening should start early, given the potential for cognitive impairment to start early for patients with MS and appropriate referrals provided for positive results or changes.[11, 3] The Mini Mental Status Exam was not included in the list of screening tools due to concerns the tool is not sufficiently sensitive to the most common cognitive deficits seen in patients with MS.[12]
For Process Measures Relationship to Desired Outcome	Cognitive functioning impacts life satisfaction and health-related quality of life. It is anticipated that if assessed on an ongoing basis, cognitive deficits may be identified and addressed in a timely manner. Once identified, such deficits could be treated (or patients referred to appropriate resources) and thereby improve individuals' quality of life. Following evidence statements are quoted verbatim from the referenced clinical guidelines: • For adults and children (8+ years of age) with clinical or magnetic resonance imaging (MRI) evidence of neurologic damage consistent with MS: As a minimum, early baseline screening with the Symbol Digit Modalities Test (SDMT) or similarly validated test, when the patient is clinically stable" (Consensus statement)[3] • For adults and children (8+ years of age) with clinical or magnetic resonance imaging (MRI) evidence of neurologic damage consistent with MS: Annual re-assessment with the same instrument, or more often as needed to (1) detect acute disease activity; (2) assess for treatment effects (e.g. starting/changing a disease modifying therapy) or for relapse recovery; (3) evaluate progression of cognitive impairment; and/or (4) screen for new-onset cognitive problems." (Consensus statement)[3] • For adults (18+ years): more comprehensive assessment for anyone who tests positive on initial cognitive screening or demonstrates significant cognitive decline, especially if there are concerns about comorbidities or the individual is applying for disability due to cognitive impairment." (Consensus statement)[3] • "Appropriate management of cognitive dysfunction in MS includes education for people with MS and their family members, early screening and ongoing monitoring throughout the disease course, and interventions to remediate dysfunction and provide compensatory strategies to optimize function and participation."(Consensus statement)[3] • "…is recommended to assess areas of cognitive deficit and strength, as well as to evaluate all factors that could be impacting cognitive functioning, such as cognitive reserve, depression and/or anxiety fatigue, co-morbid health conditions, and medications."(Consensus statement)[3]

	• Patients who require rehabilitation to address cognitive changes impacting their functioning at home or at work should be referred to a specialist. The optimal referral is to a specialist in MS neuropsychological rehabilitation (neuropsychologist, speech/language pathologist or occupational therapist)… ."(Consensus statement)[3] • "Tailor the comprehensive review to the needs of the person with MS assessing: MS symptoms: …cognitive symptoms…"[13] • "Be aware that the symptoms of MS can include cognitive problems, including memory problems that the person may not immediately recognise or associate with their MS."[13] • "Talk to people with MS and their family members or carers about the possibility that the condition might lead to cognitive problems."[13] • "Consider referring people with MS and persisting memory or cognitive problems to both an occupational therapist and a neuropsychologist to assess and manage these symptoms."[13] 
Harmonization with Existing Measures	There are no known cognitive impairment quality measures that incorporate patients with MS in the denominator. A measure is needed to address the opportunity for improvement specific to the cognitive impairments faced by the MS population.
References	1. Benedict RHB, Amato MP, Boringa J, et al. Brief International Cognitive Assessment for MS (BICAMS): international standards for validation. BMC Neurology. 2012;12:55. 2. Smith A. The symbol-digit modalities test: a neuropsychologic test of learning and other cerebral disorders. J. Helmuth (Ed.) Learning disorders, Special Child Publications, Seattle (1968), pp. 83-91. 3. Kalb R, Beier M, Benedict RH, et al. Recommendations for cognitive screening and management in multiple sclerosis care. Multiple Sclerosis. 2018; 24(13):1665-1680. 4. Connick P, Kolappan M, Bak TH, et al. Verbal fluency as a rapid screening test for cognitive impairment in progressive multiple sclerosis. J Neurol Neurosurg Psychiatry. 2012;83(3):346-347. 5. Foley FW, Benedict RHB, Gromisch ES, et al. The Need for Screening, Assessment, and Treatment for Cognitive Dysfunction in Multiple Sclerosis. Results of a Multidisciplinary CMSC Consensus Conference, September 24, 2010. Int J MS Care. 2012;14:58–64. 6. Becker H, Stuifbergen A, Lee H, et al. Reliability and Validity of PROMIS Cognitive Abilities and Cognitive Concerns Scales Among People with Multiple Sclerosis. Int J MS Care. 2014;16(1):1-8. 7. Freitas S, Batista S, Afonso A, et al. The Montreal Cognitive Assessment (MoCA) as a screening test for cognitive dysfunction in MS. Appl Neuropsychol Adult. 2018;25(1):57-70. 8. Dagenais E, Roulou I, Demers M, et al. Value of the MoCA as a screening instrument in multiple sclerosis. Can J Neurol Sci. 2013; 40(3):410-415. 9. Kaur D, Kumer G, Singh A. Quick screening of cognitive function in Indian multiple sclerosis patients using Montreal cognitive assessment test-short version. Ann Indian Acad Neurol. 2013;16(4);585-589. 10. Langdon DW, Amato MP, Boringa J, et al. Recommendations for a Brief International Cognitive Assessment for Multiple Sclerosis (BICAMS). Multiple Sclerosis. 2012;0(0);1-8. 11. Romero K, Shammi P, Feinstein A. Neurologist Accuracy and Predicting Cognitive Impairment in Multiple Sclerosis. Multiple Sclerosis and Related Disorders. 2015;15(4):291–295.

12. Beatty WW and Goodkin DE. Screening for Cognitive Impairment in Multiple Sclerosis: An Evaluation of the Mini-Mental State Examination. Arch Neurol. 1990;47(3):297-301.
13. National Clinical Guideline Centre (NICE) (UK). Multiple Sclerosis: Management of Multiple Sclerosis in Primary and Secondary Care. London: National Institute for Health and Care Excellence; 2014 Oct. 2019 update available at: https://www.nice.org.uk/guidance/cg186 Accessed on November 13, 2020.

Code System	Code	Code Description
Initial Population		
CPT	99201-99205	Office or other outpatient visit, new patient
CPT	99211-99215	Office or other outpatient visit, established patient
CPT	99241-99245	Office or other outpatient consultation, new or established patient
CPT	97003, 97004	Occupational therapy, evaluation and re-evaluation
CPT	97161-97164	Physical therapy, evaluation and re-evaluation
CPT		Telehealth codes TBD
Denominator		
ICD-10	G35	Multiple Sclerosis
SNOMEDCT	24700007	Multiple sclerosis (disorder)
SNOMEDCT	192929006	Exacerbation of multiple sclerosis (disorder)
SNOMEDCT	230372003	Acute relapsing multiple sclerosis (disorder)
SNOMEDCT	425500002	Secondary progressive multiple sclerosis (disorder)
SNOMEDCT	426373005	Relapsing remitting multiple sclerosis (disorder)
SNOMEDCT	428700003	Primary progressive multiple sclerosis (disorder)
SNOMEDCT	438511000	Benign multiple sclerosis (disorder)
SNOMEDCT	92926004	Multiple sclerosis of the brainstem (disorder)
SNOMEDCT	192927008	Multiple sclerosis of the spinal cord (disorder)
SNOMEDCT	439567002	Malignant multiple sclerosis (disorder)
SNOMEDCT	724778008	Progressive relapsing multiple sclerosis (disorder)
SNOMEDCT	733028000	Multiple sclerosis, ichthyosis, factor VIII deficiency syndrome (disorder)
SNOMEDCT	766246000	Marburg acute multiple sclerosis (disorder)
SNOMEDCT	816984002	Progressive multiple sclerosis (disorder)
Numerator – Screened component		
LOINC	81529-0	PROMIS short form - cognitive function 6a - version 2.0
LOINC	81532-4	PROMIS short form - cognitive function 6a - version 2.0 raw score
LOINC	81530-8	PROMIS short form - cognitive function 8a - version 2.0
LOINC	81531-6	PROMIS short form - cognitive function 8a - version 2.0 raw score
LOINC	81534-0	PROMIS short form - cognitive function - abilities subset 4a - version 2.0 raw score
LOINC	81526-6	PROMIS short form - cognitive function - abilities subset 6a - version 2.0
LOINC	81535-7	PROMIS short form - cognitive function - abilities subset 6a - version 2.0 raw score
LOINC	81527-4	PROMIS short form - cognitive function - abilities subset 8a - version 2.0
LOINC	81536-5	PROMIS short form - cognitive function - abilities subset 8a - version 2.0 raw score
LOINC	81528-2	PROMIS short form - cognitive function 4a - version 2.0
LOINC	81525-8	PROMIS short form - cognitive function - abilities subset 4a - version 2.0
LOINC	72172-0	Total score [MoCA]
LOINC	72133-2	Montreal Cognitive Assessment [MoCA]
LOINC	84436-5	Pattern Comparison Processing Speed Test [NIH Toolbox]
LOINC	84483-7	Pattern Comparison Processing Speed Test - national percentile [NIH Toolbox]
LOINC	84486-0	Pattern Comparison Processing Speed Test - raw score [NIH Toolbox]
LOINC	84484-5	Pattern Comparison Processing Speed Test - scale score age adjusted [NIH Toolbox]
LOINC	84485-2	Pattern Comparison Processing Speed Test - scale score fully adjusted [NIH Toolbox]
LOINC	84487-8	Pattern Comparison Processing Speed Test - unadjusted scale score [NIH Toolbox]

SNOMEDCT	666547011	Symbol digit modalities test (assessment scale)
SNOMEDCT	409521019	Symbol digit modalities test
SNOMEDCT	409522014	SDMT - Symbol digit modalities test
SNOMEDCT	3310099013	Symbol Digit Modalities Test score (observable entity)
SNOMEDCT	3310105010	Symbol Digit Modalities Test score
SNOMEDCT	3311106017	SDMT (Symbol Digit Modalities Test) score
SNOMEDCT	3305110019	Assessment using Symbol Digit Modalities Test (procedure)
SNOMEDCT	3305111015	Assessment using Symbol Digit Modalities Test
SNOMEDCT	3307589015	Assessment using SDMT (Symbol Digit Modalities Test)
SNOMEDCT	708044014	Paced auditory serial addition test (assessment scale)
SNOMEDCT	455064017	Paced auditory serial addition test
SNOMEDCT	455063011	PASAT - Paced auditory serial addition test
SNOMEDCT	1785144016	PASAT - Paced auditory stimulation test
SNOMEDCT	1785145015	Paced auditory stimulation test
SNOMEDCT	3725598019	Paced Auditory Serial Addition Test score (observable entity)
SNOMEDCT	3725600013	Paced Auditory Serial Addition Test score
SNOMEDCT	3725752017	PASAT-Paced Auditory Serial Addition Test score
SNOMEDCT	3725599010	Paced Auditory Stimulation Test score
SNOMEDCT	3725598019	Paced Auditory Serial Addition Test score (observable entity)
SNOMEDCT	790891000124112	Assessment using Montreal cognitive assessment (procedure)
SNOMEDCT	790901000124111	Assessment using Montreal cognitive assessment
SNOMEDCT	790871000124111	MoCA Assessment
SNOMEDCT	790911000124114	Montreal cognitive assessment
SNOMEDCT	790831000124113	Montreal cognitive assessment score (observable entity)
SNOMEDCT	790821000124110	Montreal cognitive assessment score
SNOMEDCT	790841000124115	MoCA score
SNOMEDCT	1460984013	Impaired cognition (finding)
SNOMEDCT	1480926019	Impaired cognition
SNOMEDCT	1491798012	Cognitive decline
SNOMEDCT	3289770014	Cognitive deficit
SNOMEDCT	1491796011	Cognitive disturbance
SNOMEDCT	1491797019	Cognitive dysfunction
SNOMEDCT	1491795010	Cognitive impairment
SNOMEDCT	621379018	Minimal cognitive impairment (finding)
SNOMEDCT	175146011	Minimal cognitive impairment
SNOMEDCT	3006637011	Moderate cognitive impairment (finding)
SNOMEDCT	3006646017	Moderate cognitive impairment
SNOMEDCT	3006674010	Severe cognitive impairment (finding)
SNOMEDCT	3006632017	Severe cognitive impairment
SNOMEDCT	751741000124113	Cognitive impairment due to multiple sclerosis (disorder)
SNOMEDCT	751781000124119	Cognitive impairment due to multiple sclerosis
SNOMEDCT	751811000124117	Cognitive deficit due to multiple sclerosis

Presence of key phrases in clinical note may meet numerator screening component for Axon Registry.

Suggested key phrases to locate screening component via Axon Registry® are included below. This list is not exhaustive and will be updated annually if adopted into the Axon Registry:

- "Brief International Assessment of Cognition for MS completed and f/u needed"
- "BICAMS completed and f/u needed"
- "Brief International Assessment of Cognition for MS completed and f/u not needed"
- "BICAMS completed and f/u not needed"

- "Symbol Digit Modalities Test completed and f/u needed"
- "SDMT completed and f/u needed"
- "Symbol Digit Modalities Test completed and f/u not needed"
- "SDMT completed and f/u not needed"
- "MS Neuropsychological Screening Questionnaire - Observer version completed and f/u needed"
- "MSNQ completed and f/u needed"
- "MS Neuropsychological Screening Questionnaire - Observer version completed and f/u not needed"
- "MSNQ completed and f/u not needed"
- "Computerized Speed Cognitive Test completed and f/u needed"
- "CST completed and f/u needed"
- "Computerized Speed Cognitive Test completed and f/u not needed"
- "CST completed and f/u not needed"
- "Processing Speed Test completed and f/u needed"
- "PST completed and f/u needed"
- "Processing Speed Test completed and f/u not needed"
- "PST completed and f/u not needed"
- "Verbal fluency completed and f/u needed"
- "Verbal fluency completed and f/u not needed"
- "Paced Auditory Serial Addition Test completed and f/u needed"
- "PASAT completed and f/u needed"
- "Paced Auditory Serial Addition Test completed and f/u not needed"
- "PASAT completed and f/u not needed"
- "Rao Brief Repeatable Neuropsychological Battery completed and f/u needed"
- "BRNB completed and f/u needed"
- "Rao Brief Repeatable Neuropsychological Battery completed and f/u not needed"
- "BRNB completed and f/u not needed"
- "Minimal Assessment of Cognitive Function in MS completed and f/u needed"
- "MACFIMS completed and f/u needed"
- "Minimal Assessment of Cognitive Function in MS completed and f/u not needed"
- "MACFIMS completed and f/u not needed"
- "PROMIS completed and f/u needed"
- "PROMIS completed and f/u not needed"
- "Montreal Cognitive Assessment completed and f/u needed"
- "Montreal Cognitive Assessment completed and f/u not needed"
- "Neuropsychological exam results reviewed"

Numerator – Follow-up component		
CPT	99483	Cognitive Impairment and Care Plan Assessment
CPT	96136, 96138, 96146	Neuropsychological testing
CPT	96116	Neurobehavioral status exam
SNOMEDCT	308459004	Referral to psychologist (procedure)
SNOMEDCT	308477009	Referral to psychiatrist (procedure)
SNOMEDCT	81294000	Patient referral for psychotherapy (procedure)
SNOMEDCT	88848003	Psychiatric follow-up (procedure)
SNOMEDCT	309627007	Child referral - clinical psychologist (procedure)
SNOMEDCT	2546404011	Referral for neuropsychological testing (procedure)
SNOMEDCT	2548695019	Referral for neuropsychological testing
SNOMEDCT	704991010	Referral to speech and language therapist (procedure)
SNOMEDCT	451792012	Referral to speech and language therapist
SNOMEDCT	451791017	Refer to speech therapist

SNOMEDCT	702758011	Referral to community-based speech and language therapist (procedure)
SNOMEDCT	449359011	Referral to community-based speech and language therapist
SNOMEDCT	449360018	Referral to community speech and language therapist
SNOMEDCT	702551019	Referral to speech and language therapy service (procedure)
SNOMEDCT	449090019	Referral to speech and language therapy service
SNOMEDCT	702552014	Referral to community-based speech and language therapy service (procedure)
SNOMEDCT	449091015	Referral to community-based speech and language therapy service
SNOMEDCT	449092010	Referral to community speech and language therapy service
SNOMEDCT	750281000124115	Referral for occupational therapy (procedure)
SNOMEDCT	750291000124117	Referral for occupational therapy
SNOMEDCT	702543017	Referral to occupational therapy service (procedure)
SNOMEDCT	449079012	Referral to occupational therapy service
SNOMEDCT	2788042017	Referral to pediatric occupational therapy service (procedure)
SNOMEDCT	2792715016	Referral to pediatric occupational therapy service
SNOMEDCT	2792714017	Referral to paediatric occupational therapy service
SNOMEDCT	702544011	Referral to community-based occupational therapy service (procedure)
SNOMEDCT	449080010	Referral to community-based occupational therapy service
SNOMEDCT	449081014	Referral to community occupational therapy service
Presence of key phrases in clinical note may meet numerator follow-up component for Axon Registry. Suggested key phrases to locate follow-up component via Axon Registry® are included below. This list is not exhaustive and will be updated annually if adopted into the Axon Registry: • "Referral to MS neuropsychological rehabilitation" • "Referral to neuropsychologist" • "Referral to psychologist" • "Referral to speech pathologist" • "Referral to speech/language pathologist" • "Referral to occupational therapist" • "Referred to MS neuropsychological rehabilitation" • "Referred to neuropsychologist" • "Referred to psychologist" • "Referred to speech pathologist" • "Referred to speech/language pathologist" • "Referred to occupational therapist" • "Neuropsychological exam results reviewed"		
Required Exclusions		
A required exclusion for patient not seen in prior 12 months before encounter would be calculated using CPT codes above in initial population.		
Allowable Exclusions		
SNOMEDCT	746791000124111	Recommendation refused by patient (situation)
SNOMEDCT	746801000124112	Recommendation refused by patient
SNOMEDCT	2608177018	Refused procedure - after thought (situation)
SNOMEDCT	284171012	Refused procedure - after thought
SNOMEDCT	183947005	Refused procedure - after thought (situation)
SNOMEDCT	2606319010	Refusal of treatment by patient (situation)
SNOMEDCT	169559019	Refusal of treatment by patient
SNOMEDCT	105480006	Refusal of treatment by patient (situation)
SNOMEDCT	2612741019	Refusal of treatment by parents (situation)
SNOMEDCT	1209841012	Refusal of treatment by parents

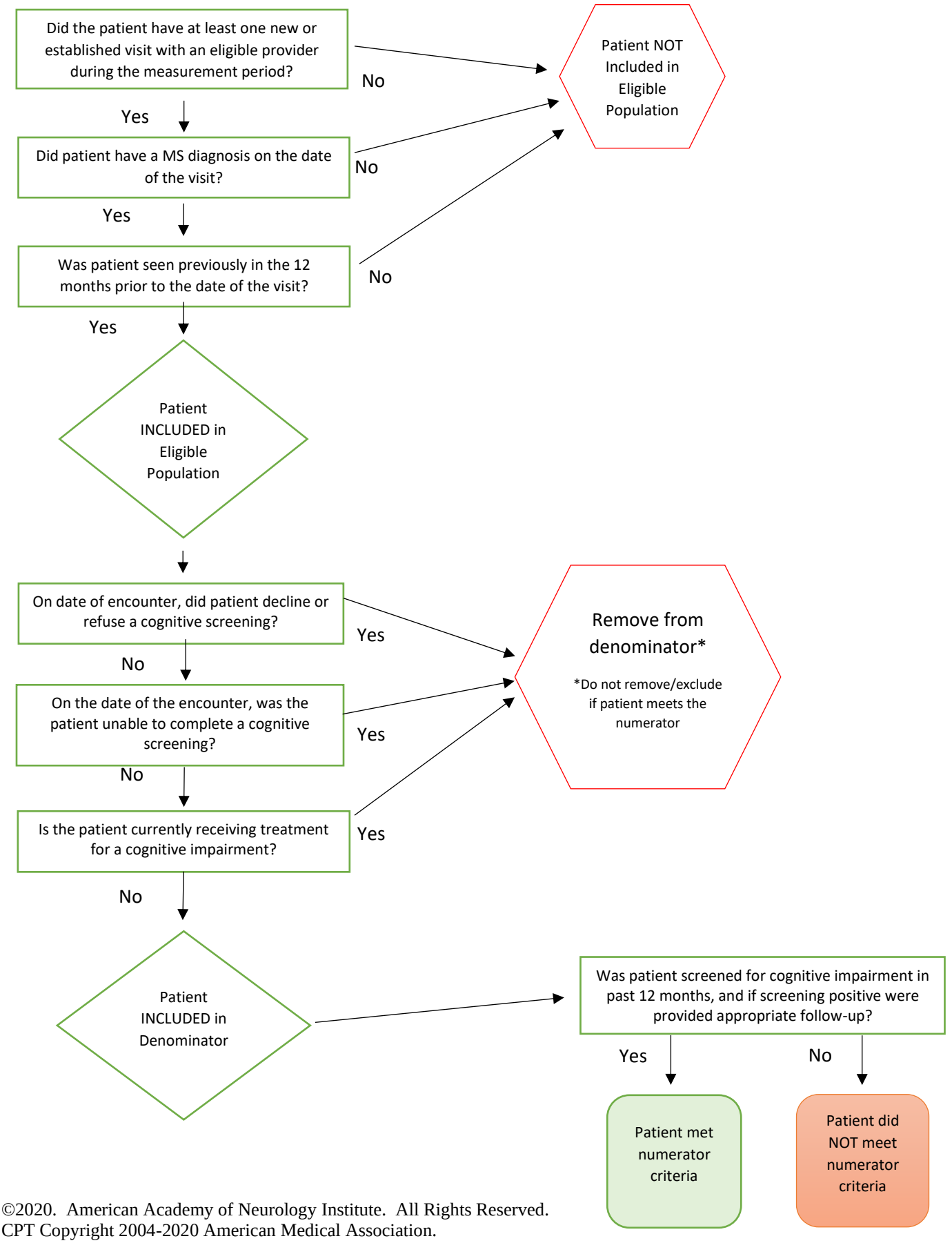
SNOMEDCT	2608092019	Refused procedure - parent's wish (situation)
SNOMEDCT	284172017	Refused procedure - parent's wish
SNOMEDCT	183948000	Refused procedure - parent's wish (situation)
SNOMEDCT	183944003	Procedure refused (situation)
SNOMEDCT	183945002	Procedure refused for religious reason (situation)
SNOMEDCT	413310006	Patient non-compliant - refused access to services (situation)
SNOMEDCT	413311005	Patient non-compliant - refused intervention / support (situation)
SNOMEDCT	413312003	Patient non-compliant - refused service (situation)
SNOMEDCT	183948000	Refused procedure - parent's wish (situation)
SNOMEDCT	416432009	Procedure not wanted (situation)
SNOMEDCT	443390004	Refused (qualifier value)

Presence of key phrases in clinical note may meet allowable exclusion for Axon Registry.

Suggested key phrases to locate allowable exclusions via Axon Registry® are included below. This list is not exhaustive and will be updated annually if adopted into the Axon Registry:

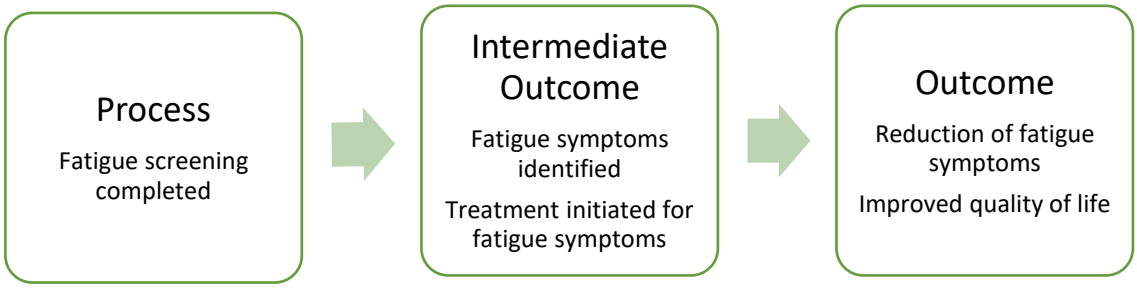
- "Patient declines cognitive assessment"
- "Patient is not able to complete a cognitive assessment"
- "Patient unable to complete cognitive assessment"
- "Patient currently receiving treatment to address cognitive impairment."
- "Patient currently receiving treatment for cognitive impairment"
- "Patient receiving cognitive impairment care from other provider"

Flow Chart Diagram: Cognitive Impairment Screening and Follow-Up for Patients with MS



Fatigue Screening and Follow-Up for Patients with Multiple Sclerosis (MS)

Measure Title	Fatigue Screening and Follow-Up for Patients with MS	
Description	Percentage of patients 18 years and older with diagnosis of MS who were screened for fatigue in past 12 months, and if screening positive were provided appropriate follow-up.	
Measurement Period	January 1, 20xx to December 31, 20xx	
Eligible Population	Eligible Providers	Medical Doctor (MD), Doctor of Osteopathy (DO), Pharmacist (PharmD), Physician Assistant (PA), Advanced Practice Registered Nurse (APRN), Physical Therapy (PT), Occupational Therapy (OT)
	Care Setting(s)	Outpatient Care
	Ages	18 and older
	Event	Office or telehealth encounter
	Diagnosis	Multiple Sclerosis
Denominator	Patients 18 years and older with a diagnosis of MS.	
Numerator	Patients with MS who were screened* for fatigue in past 12 months, and if screening positive were provided appropriate follow-up.** Definitions *Screened is defined as use of one of the following validated fatigue rating instruments: • the Fatigue Severity Scale (FSS)[1-4] or • Modified Fatigue Impact Scale[5,6] or • Shortened Modified Fatigue Impact Scale[6] **Follow-up for this measure is defined as adjustment to the treatment plan, adjustment or initiation of appropriate medication, further testing, referral to PT/OT, exercise program, lifestyle modification program, or referral to an appropriate healthcare provider.	
Required Exclusions	None	
Allowable Exclusions	• Patients unable to complete a fatigue screening on date of encounter • Patient declines to complete a fatigue screening on date of encounter	
Allowable Exclusion Inclusion Logic	Allowable exclusions can only help measure performance. If a patient has an allowable exclusion but is found to meet the numerator that patient is included in the count to meet the measure.	
Exclusion Rationale	• Fatigue is a subjective symptom that requires patient cooperation to assess.	
Measure Scoring	Percentage	
Interpretation of Score	Higher Score Indicates Better Quality	
Measure Type	Process	
Level of Measurement	Provider	
Risk Adjustment	Not Applicable	
Opportunity to Improve Gap in Care	Fatigue occurs in about 80% of patients with MS reducing physical activity and level of daily functioning.[7] It is anticipated that by addressing fatigue, quality of life will improve as individuals have decreased fatigue and increased ability to function at work and home.	
For Process Measures Relationship to Desired Outcome	The desired outcome is to reduce or eliminate fatigue in MS patients. The measure will provide an incentive for providers to identify and manage fatigue in MS patients. The following evidence statements are quoted verbatim from the referenced clinical guidelines:	

	• "Assess and offer treatment to people with MS who have fatigue for anxiety, depression, difficulty in sleeping, and any potential medical problems such as anaemia or thyroid disease."[8] • "Explain that MS-related fatigue may be precipitated by heat, overexertion and stress or may be related to the time of day."[8] • "Advise people that aerobic, balance and stretching exercises including yoga may be helpful in treating MS-related fatigue."[8] 
Harmonization with Existing Measures	There are currently no other comparable fatigue measures in national measurement programs or endorsed by the National Quality Forum.
References	[1] Krupp LB, LaRocca NG, Nuir-Nash J, et al. The Fatigue Severity Scale: Application to Patients with Multiple Sclerosis and Systemic Lupus Erythematosus. Arch Neurol. 1989;46(10):1121-1123. [2] Christodoulou C, MacAllister WS, Krupp LB: Psychiatry for Neurologists: Fatigue 295-306 Philadelphia: Elsevier Science; 2003. [3] Schwartz JE, Jandorf L, Krupp LB. The measurement of fatigue: A new instrument. Journal of Psychosomatic Research. 1993; 37(7):753-762. [4] Téllez N, Río J, Tintoré M, et al. Does the Modified Fatigue Impact Scale offer a more comprehensive assessment of fatigue in MS? Mult Scler. 2005 11: 198. 5 Fisk JD, Pontefract A, Ritvo PG, Archibald CJ, Murray TJ. The impact of fatigue on patients with multiple sclerosis. Can J Neurol Sci. 1994; 21: 9-14. [6] Ritvo PG, Fischer JS, Miller DM, et al. Multiple Sclerosis Quality of Life Inventory (MSQLI): A User's Manual. New York: The Consortium of Multiple Sclerosis Centers Health Services Research Subcommittee, National Multiple Sclerosis Society, New York, 1997. [7] Meads DM, Doward LC, McKenna SP, et al. The development and validation of the Unidimensional Fatigue Impact Scale (U-FIS). Multiple Sclerosis. 2009; 15(10):1228-1238. [8] National Clinical Guideline Centre (NICE) (UK). Multiple Sclerosis: Management of Multiple Sclerosis in Primary and Secondary Care. London: National Institute for Health and Care Excellence; 2014 Oct. 2019 update available at: https://www.nice.org.uk/guidance/cg186 Accessed on November 13, 2020.

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SNOMEDCT	425500002	Secondary progressive multiple sclerosis (disorder)
SNOMEDCT	426373005	Relapsing remitting multiple sclerosis (disorder)
SNOMEDCT	428700003	Primary progressive multiple sclerosis (disorder)
SNOMEDCT	438511000	Benign multiple sclerosis (disorder)
SNOMEDCT	92926004	Multiple sclerosis of the brainstem (disorder)
SNOMEDCT	192927008	Multiple sclerosis of the spinal cord (disorder)
SNOMEDCT	439567002	Malignant multiple sclerosis (disorder)
SNOMEDCT	724778008	Progressive relapsing multiple sclerosis (disorder)
SNOMEDCT	733028000	Multiple sclerosis, ichthyosis, factor VIII deficiency syndrome (disorder)
SNOMEDCT	766246000	Marburg acute multiple sclerosis (disorder)
SNOMEDCT	816984002	Progressive multiple sclerosis (disorder)
Numerator -Screened component		
LOINC	28100-6	Fatigue
SNOMEDCT	3039531019	Assessment of fatigue (procedure)
SNOMEDCT	3039553017	Assessment of fatigue
SNOMEDCT	2879783014	Fatigue impact scale score (observable entity)
SNOMEDCT	2883110010	Fatigue impact scale score
Presence of key phrases in clinical note may meet numerator component for Axon Registry. Suggested key phrases to locate numerator component via Axon Registry® are included below. This list is not exhaustive and will be updated annually if adopted into the Axon Registry: • "FSS results indicate f/u needed" • "FSS results indicate no f/u needed" • "Modified Fatigue Impact Scale results indicate f/u needed" • "Modified Fatigue Impact Scale results indicate no f/u needed" • "MFIS results indicate f/u needed" • "MFIS results indicate no f/u needed" • "MFIS-5 results indicate f/u needed" • "MFIS-5 results indicate no f/u needed"		
Numerator -Follow-up needed for positive screening component Follow-up is required when the FSS score is greater than or equal to 5 and when the MFIS score is greater than or equal to 39. The work group will evaluate adding future cutoffs for the SMFIS should this data be published.		
SNOMEDCT	826028019	Fatigue (finding)
Presence of key phrases in clinical note may meet numerator component for Axon Registry. Suggested key phrases to locate numerator component via Axon Registry® are included below. This list is not exhaustive and will be updated annually if adopted into the Axon Registry: • "FSS results indicate f/u needed"		

• "FSS score is 5 [or greater]" • "Modified Fatigue Impact Scale results indicate f/u needed" • "MFIS results indicate f/u needed" • "MFIS score is 39 [or greater]" • "Shortened Modified Fatigue Impact Scale results indicate f/u needed" • "MFIS-5 indicates f/u needed"		
Numerator -Follow-up component		
SNOMEDCT	1779009018	Development of care plan
SNOMEDCT	1767604017	Development of care plan (procedure)
SNOMEDCT	1196083017	Development of individualized plan of care (procedure)
SNOMEDCT	1209518012	Development of individualized plan of care
SNOMEDCT	1228792012	Develops individualized plan of care
SNOMEDCT	566252018	Change of medication (procedure)
SNOMEDCT	282660014	Change of medication
SNOMEDCT	282659016	Medication changed
SNOMEDCT	750861000124112	Recommendation to change medication to lower cost therapeutic equivalent (procedure)
SNOMEDCT	750871000124117	Recommendation to change medication to lower cost therapeutic equivalent
SNOMEDCT	616161000124116	Recommendation to change medication dose form (procedure)
SNOMEDCT	616171000124111	Recommendation to change medication dose form
SNOMEDCT	616181000124114	Advice to change medication dose form
SNOMEDCT	616281000124118	Recommendation to change medication dose (procedure)
SNOMEDCT	616291000124115	Recommendation to change medication dose
SNOMEDCT	616301000124119	Advice to change medication dose
SNOMEDCT	616161000124116	Recommendation to change medication dose form (procedure)
SNOMEDCT	616171000124111	Recommendation to change medication dose form
SNOMEDCT	616181000124114	Advice to change medication dose form
SNOMEDCT	223415003	Recommendation regarding activity (procedure)
SNOMEDCT	223440005	Recommendation to undertake activity (procedure)
SNOMEDCT	223469001	Discussion about activity (procedure)
SNOMEDCT	223415003	Recommendation regarding activity (procedure)
SNOMEDCT	566927011	Referral for further care (procedure)
SNOMEDCT	283512014	Referral for further care
SNOMEDCT	183444007	Referral for further care (procedure)
SNOMEDCT	709318013	Provision of specialist further education (procedure)
SNOMEDCT	456380014	Provision of specialist further education
SNOMEDCT	706904013	Further opinion sought (finding)
SNOMEDCT	453917017	Further opinion sought
SNOMEDCT	223415003	Recommendation regarding activity (procedure)
SNOMEDCT	223440005	Recommendation to undertake activity (procedure)
SNOMEDCT	223469001	Discussion about activity (procedure)
SNOMEDCT	390893007	Referral to physical activity program (procedure)
SNOMEDCT	410289001	Exercises education, guidance, and counseling (procedure)
SNOMEDCT	223415003	Recommendation regarding activity (procedure)
SNOMEDCT	762227003	Provision of advice about aerobic exercise (procedure)
SNOMEDCT	710138000	Promotion of adherence to exercise regime (procedure)
SNOMEDCT	410335001	Exercises case management (procedure)
SNOMEDCT	410289001	Exercises education, guidance, and counseling (procedure)
SNOMEDCT	386292004	Exercise promotion: stretching (procedure)

SNOMEDCT	386291006	Exercise promotion: strength training (procedure)
SNOMEDCT	370873006	Ambulation therapy management (procedure)
SNOMEDCT	370872001	Ambulation therapy education (procedure)
SNOMEDCT	370870009	Ambulation therapy assessment (procedure)
SNOMEDCT	304549008	Giving encouragement to exercise (procedure)
SNOMEDCT	304507003	Exercise education
SNOMEDCT	308477009	Referral to psychiatrist (procedure)
SNOMEDCT	703978000	Referral to primary care service (procedure)
SNOMEDCT	183851006	Referral to clinic (procedure)
SNOMEDCT	81294000	Patient referral for psychotherapy (procedure)
SNOMEDCT	88848003	Psychiatric follow-up (procedure)
SNOMEDCT	309627007	Child referral - clinical psychologist (procedure)
SNOMEDCT	444831000124102	Referral for physical therapy (procedure)
SNOMEDCT	444911000124101	Referral for office-based physical therapy (procedure)
SNOMEDCT	416790000	Referral for home physical therapy (procedure)
SNOMEDCT	750281000124115	Referral for occupational therapy (procedure)
SNOMEDCT	750291000124117	Referral for occupational therapy
SNOMEDCT	702543017	Referral to occupational therapy service (procedure)
SNOMEDCT	449079012	Referral to occupational therapy service
SNOMEDCT	2788042017	Referral to pediatric occupational therapy service (procedure)
SNOMEDCT	2792715016	Referral to pediatric occupational therapy service
SNOMEDCT	2792714017	Referral to paediatric occupational therapy service
SNOMEDCT	702544011	Referral to community-based occupational therapy service (procedure)
SNOMEDCT	449080010	Referral to community-based occupational therapy service
SNOMEDCT	449081014	Referral to community occupational therapy service

Presence of key phrases in clinical note may meet numerator follow-up component for Axon Registry.

Suggested key phrases to locate follow-up via Axon Registry® are included below. This list is not exhaustive and will be updated annually if adopted into the Axon Registry:

- "Behavioral modification"
- "Treatment plan updated"
- "Treatment changed"
- "Lifestyle changes"
- "Referral to physical therapy"
- "Referral to occupational therapy"
- "Referral to exercise program"
- "Referral to sleep study"
- "Referral to polysomnography"
- "Further testing conducted"
- "Additional tests ordered"
- "Pharmacological updates made"
- "Medication adjusted"

Allowable Exclusions		
SNOMEDCT	746791000124111	Recommendation refused by patient (situation)
SNOMEDCT	746801000124112	Recommendation refused by patient
SNOMEDCT	2608177018	Refused procedure - after thought (situation)
SNOMEDCT	284171012	Refused procedure - after thought
SNOMEDCT	183947005	Refused procedure - after thought (situation)
SNOMEDCT	2606319010	Refusal of treatment by patient (situation)
SNOMEDCT	169559019	Refusal of treatment by patient

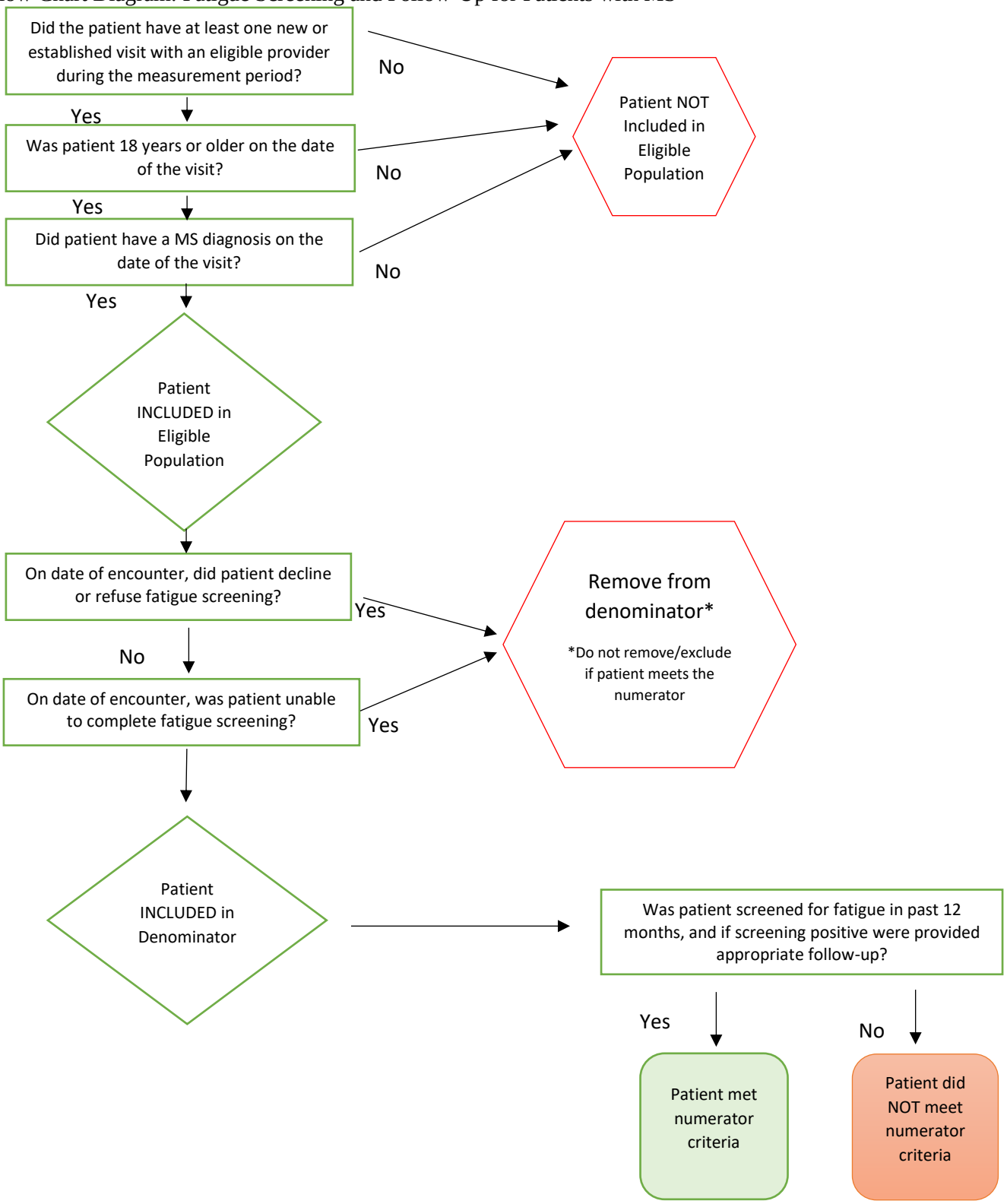
SNOMEDCT	105480006	Refusal of treatment by patient (situation)
SNOMEDCT	2612741019	Refusal of treatment by parents (situation)
SNOMEDCT	1209841012	Refusal of treatment by parents
SNOMEDCT	2608092019	Refused procedure - parent's wish (situation)
SNOMEDCT	284172017	Refused procedure - parent's wish
SNOMEDCT	183948000	Refused procedure - parent's wish (situation)
SNOMEDCT	183944003	Procedure refused (situation)
SNOMEDCT	183945002	Procedure refused for religious reason (situation)
SNOMEDCT	413310006	Patient non-compliant - refused access to services (situation)
SNOMEDCT	413311005	Patient non-compliant - refused intervention / support (situation)
SNOMEDCT	413312003	Patient non-compliant - refused service (situation)
SNOMEDCT	183948000	Refused procedure - parent's wish (situation)
SNOMEDCT	416432009	Procedure not wanted (situation)
SNOMEDCT	443390004	Refused (qualifier value)

Presence of key phrases in clinical note may meet allowable exclusion for Axon Registry.

Suggested key phrases to locate allowable exclusions via Axon Registry® are included below. This list is not exhaustive and will be updated annually if adopted into the Axon Registry:

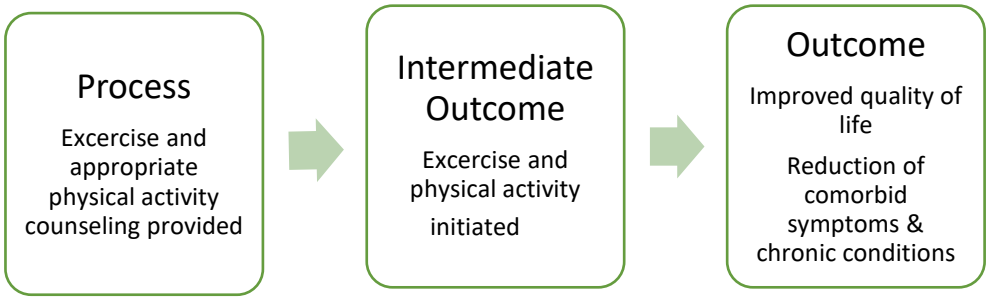
- "Patient unable to complete a fatigue screening"
- "Patient declines to complete a fatigue screening"

Flow Chart Diagram: Fatigue Screening and Follow-Up for Patients with MS



Exercise and Appropriate Physical Activity Counseling for Patients with Multiple Sclerosis (MS)

Measure Title	Exercise and Appropriate Physical Activity Counseling for Patients with MS	
Description	Percentage of patients with MS who are counseled* on the benefits of exercise and appropriate physical activity for patients with MS in the past 12 months.	
Measurement Period	January 1, 20xx to December 31, 20xx	
Eligible Population	Eligible Providers	Medical Doctor (MD), Doctor of Osteopathy (DO), Clinical Psychologist (PhD & PsyD), Physician Assistant (PA), Advanced Practice Registered Nurse (APRN), Physical Therapy (PT), Occupational Therapy (OT)
	Care Setting(s)	Outpatient Care
	Ages	Any
	Event	Office or telehealth encounter
	Diagnosis	Multiple Sclerosis
Denominator	Patients with a diagnosis of MS.	
Numerator	Patients with MS counseled* on the benefits of exercise and appropriate physical activity for patients with MS in past 12 months. *Counseled: to advise seriously and formally after consultation[1-2]	
Required Exclusions	None	
Allowable Exclusions	None** **All patients including those unable to exercise should be provided information on appropriate range of motion and activity.	
Exclusion Rationale	Not Applicable	
Measure Scoring	Percentage	
Interpretation of Score	Higher Score Indicates Better Quality	
Measure Type	Process	
Level of Measurement	Provider	
Risk Adjustment	Not Applicable	
Opportunity to Improve Gap in Care	CMS utilized Axon Registry data to establish benchmarks for this measure in 2019. Average performance for 2019 Axon Registry users reporting on the measure for Merit-based Incentive Payment System reporting was 73.063%.[3] Despite known benefits of exercise and physical activity, persons with MS remain inactive. [4-5] The Work Group encourages referral to rehabilitation services, including physical therapy, when clinically appropriate given the evidence supporting improved outcomes for patients.[6-8]	
For Process Measures Relationship to Desired Outcome	Increased rates of physical activity and exercise improve the physical functioning levels and quality of life for patients with MS.[2,9-10] Therefore, healthcare providers should encourage patients with MS to perform ⩾150 min/week of exercise or lifestyle physical activity.[2] The following evidence statements are quoted verbatim from the referenced clinical guidelines: o "Evidence-based treatment interventions for mobility optimization include exercise promotion (Level 1)." [11] o "Encourage participation in a regular pattern of exercise to improve mood, fatigue, quality of life (Level 1)."[2,9,11] o "Encourage people with MS to exercise. Advise them that regular exercise have beneficial effects on their MS and does not have any harmful effects on their MS." [2, 9, 12]	

	○ "Encourage to perform ⩾150 min/week of exercise and/or lifestyle physical activity"[2] ○ "Healthcare providers should endorse & promote the benefits/safety of exercise & lifestyle physical activity for every person with MS."[2] ○ "Ensure all people with MS have a tailored comprehensive review of all aspects of their care at least once a year." [12] 
Harmonization with Existing Measures	There are currently no other comparable measures in national measurement programs or endorsed by the National Quality Forum.
References	1. Merriam Webster. Available at: http://www.merriam-webster.com/medical/counsel Accessed on November 13, 2020. 2. Kalb R, Brown T, Coote S, et al. Exercise and lifestyle physical activity recommendations for people with multiple sclerosis throughout the disease course. Mult Scler. 2020;26(12):1459-1469. 3. CMS 2020 MIPS Historical Quality Benchmarks. AAN8 Exercise and Appropriate Physical Activity counseling for Patients with MS. Available at: https://qpp.cms.gov/about/resource-library Accessed on November 13, 2020. 4. Mayo NE, Bayley M, Duquette P, et. Al. The role of exercise in modifying outcomes for people with multiple sclerosis: a randomized trial. BMC Neurology. 2013;13:69. 5. Motl RW, McAuley E, Snook EM. Physical activity and multiple sclerosis: a meta-analysis. Mult Scler. 2005; 11(4):459-463. 6. Khan F, Turner-Stokes L, Ng L, et al. Multidisciplinary rehabilitation for adults with multiple sclerosis. Cochrane Database of Systematic Reviews. 2007, Issue 2. Art. No.: CD006036. 7. Rietberg MB, Brooks D, Uitdehaag BMJ, et al. Exercise therapy for multiple sclerosis. Cochrane Database of Systematic Reviews. 2004, Issue 3. Art. No.: CD003980. 8. Döring A, Caspar FP, Friedemann P, et al. Exercise in multiple sclerosis – an integral component of disease management. The EPMA Journal. 2012;3:2-13. 9. Mayo C, Miksche K, Atwell-Pope K, et al. The relationship between physical activity and symptoms of fatigue, mood, and perceived cognitive impairment in adults with multiple sclerosis. J Clin Exp Neuropsychol. 2019 Sep;41(7):715-722. 10. American College of Sports Medicine: ACSM's Resource Manual for Guidelines for Exercise Testing and Prescription, 6th edition edn. Baltimore, MD: Lippincott Williams & Wilkins; 2010. 11. American Association of Neuroscience Nurses (AANN), Association of Rehabilitation Nurses (ARN), International Organization of Multiple Sclerosis Nurses (IOMSN). Nursing management of the patient with multiple sclerosis. Glenview (IL): American Association of Neuroscience Nurses (AANN); 2011. 49 p. 12. National Clinical Guideline Centre (NICE) (UK). Multiple Sclerosis: Management of Multiple Sclerosis in Primary and Secondary Care. London: National Institute for Health and Care Excellence; 2014 Oct. 2019 update available at: https://www.nice.org.uk/guidance/cg186 Accessed on November 13, 2020.

Code System	Code	Code Description
Initial Population		
CPT	99201-99205	Office or other outpatient visit, new patient
CPT	99211-99215	Office or other outpatient visit, established patient
CPT	99241-99245	Office or other outpatient consultation, new or established patient
CPT	97003, 97004	Occupational therapy, evaluation and re-evaluation
CPT	97161-97164	Physical therapy, evaluation and re-evaluation
CPT	96156, 96158, 96164, 96167, 96170	Health and behavior visit
CPT		Telehealth codes TBD
Denominator		
ICD-10	G35	Multiple Sclerosis
SNOMEDCT	24700007	Multiple sclerosis (disorder)
SNOMEDCT	192929006	Exacerbation of multiple sclerosis (disorder)
SNOMEDCT	230372003	Acute relapsing multiple sclerosis (disorder)
SNOMEDCT	425500002	Secondary progressive multiple sclerosis (disorder)
SNOMEDCT	426373005	Relapsing remitting multiple sclerosis (disorder)
SNOMEDCT	428700003	Primary progressive multiple sclerosis (disorder)
SNOMEDCT	438511000	Benign multiple sclerosis (disorder)
SNOMEDCT	92926004	Multiple sclerosis of the brainstem (disorder)
SNOMEDCT	192927008	Multiple sclerosis of the spinal cord (disorder)
SNOMEDCT	439567002	Malignant multiple sclerosis (disorder)
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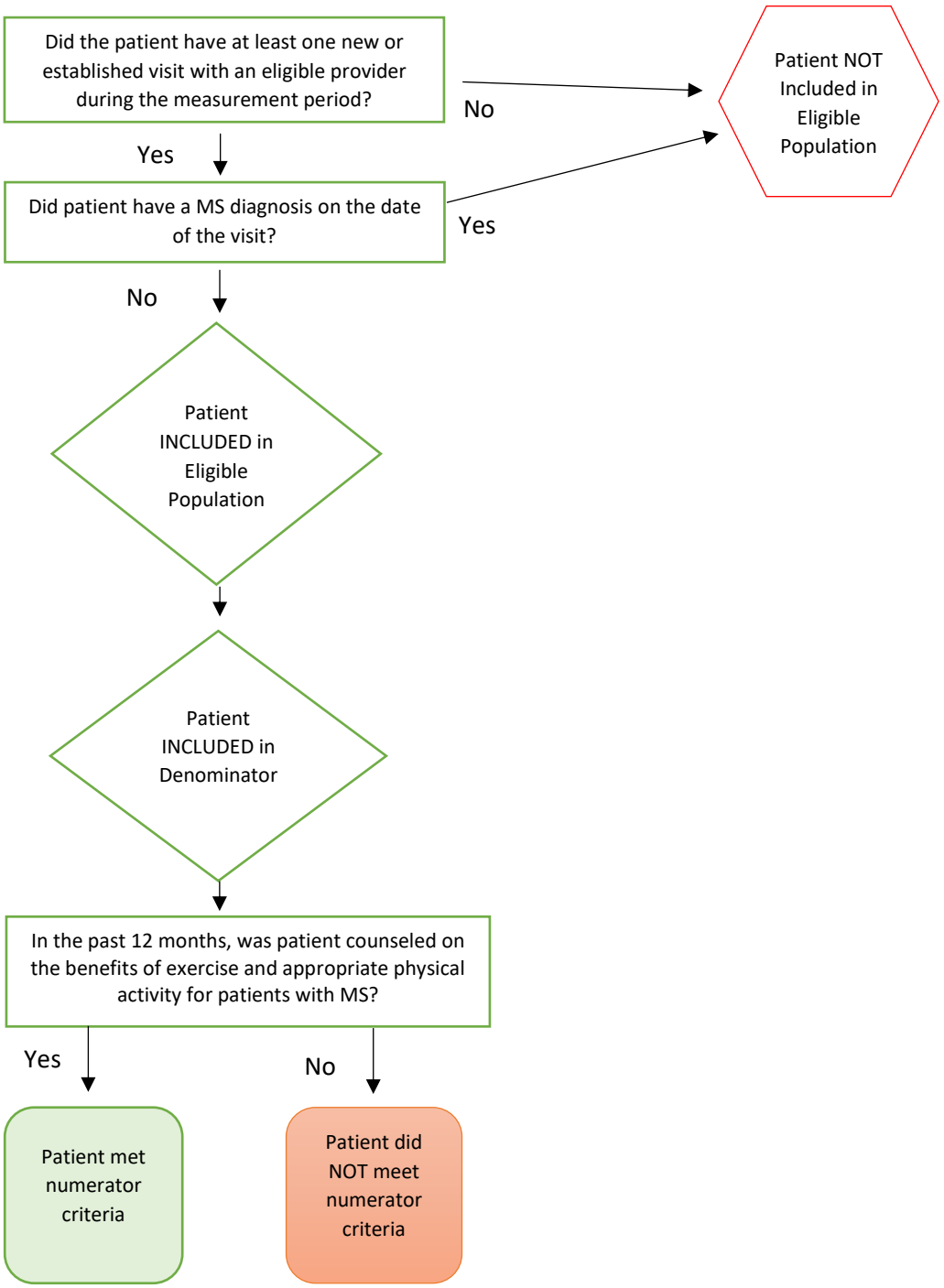
SNOMEDCT	733028000	Multiple sclerosis, ichthyosis, factor VIII deficiency syndrome (disorder)
SNOMEDCT	766246000	Marburg acute multiple sclerosis (disorder)
SNOMEDCT	816984002	Progressive multiple sclerosis (disorder)
Numerator		
SNOMEDCT	281090004	Recommendation to exercise (procedure)
SNOMEDCT	304549008	Giving encouragement to exercise (procedure)
SNOMEDCT	304558001	Reassuring about exercise (procedure)
SNOMEDCT	310882002	Exercise on prescription (regime/therapy)
SNOMEDCT	386291006	Exercise promotion: strength training (procedure)
SNOMEDCT	386292004	Exercise promotion: stretching (procedure)
SNOMEDCT	386463000	Prescribed activity/exercise education (procedure)
SNOMEDCT	390893007	Referral to physical activity program (procedure)
SNOMEDCT	429778002	Patient given written advice on benefits of physical activity (situation)
SNOMEDCT	710138000	Promotion of adherence to exercise regime (procedure)
SNOMEDCT	710883002	Education about increasing activity tolerance (procedure)
SNOMEDCT	410289001	Exercises education, guidance, and counseling (procedure)
SNOMEDCT	304507003	Exercise education (procedure)
SNOMEDCT	762227003	Provision of advice about aerobic exercise (procedure)
SNOMEDCT	819961005	Physical activity guidance (procedure)
SNOMEDCT	435551000124105	Counseling about physical activity (procedure)
SNOMEDCT	183073003	Patient advised about exercise (situation)
SNOMEDCT	386463000	Prescribed activity/exercise education (procedure)
ICD10CM	Z71.89	Exercise counseling
Exclusions		

None

Chart Diagram: Exercise and Appropriate Physical Activity Counseling for Patients with MS



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Appendix A: Disclosures

Work Group Member	Disclosures
Lilyana Amezcua, MD, MS, FAAN	Reports active research support from the National MS Society, NIH NINDS, Bristol Myers Squibb Foundation, and Biogen Idec.; has served as a consultant to Biogen Idec, Novartis, Alexion Pharmaceuticals, Genentech, EMD Serono and AbbVie; has served as primary investigator for clinical trials with MedDay, Genenetch and PCORI.
Tracie Caller, MD (non-voting member)	Reports no relevant disclosures for this project.
Jeffrey English, MD	Reports serving as a Board of Directors for the Consortium of Multiple Sclerosis Centers; has served as consultant to Biogen-Idec, Novartis, Sanofi-Genzyme, Genetech, EMD-Serono, Teva, Raptor, Abbvie; served as speaker consultant for the MS Association of America and National MS Society; is a founding member of Healthcare Impact Partners and HIP Nation.
Neeta Garg, MD	Reports no disclosures.
Barbara Giesser, MD, FAAN	Reports royalties from 2 multiple sclerosis publications and has received a consulting fee from Greenwich Biosciences.
Adam G. Kelly, MD, FAAN (non-voting member)	Reports no relevant disclosures for this project.
Iris Vanessa Marin Collazo, MD	Reports no relevant disclosures for this project.
Amanda Montague, EdM	Reports no disclosures.
Michael Olek, DO	Reports no disclosures.
Elizabeth Page	Reports no disclosures.
Alex Rae-Grant, MD, FRCPC, FAAN (Chair)	Reports currently serving as neurology editor for DynaMed a subscription based point of care tool for clinicians with no industry support or advertising; royalties from 2 textbooks he has published, 1 on neurology and 1 on multiple sclerosis; organizes neurology review courses.