



## MEDICAL COVERAGE POLICY

**SERVICE:** Neutralizing Antibody Testing in Multiple Sclerosis Patients

**Policy Number:** 067

**Effective Date:** 03/01/2024

**Last Review:** 12/18/2023

**Next Review:** 12/18/2024

**Important note:** Unless otherwise indicated, medical policies will apply to all lines of business.

Medical necessity as defined by this policy does not ensure the benefit is covered. This medical policy does not replace existing federal or state rules and regulations for the applicable service or supply. In the absence of a controlling federal or state coverage mandate, benefits are ultimately determined by the terms of the applicable benefit plan documents. See the member plan specific benefit plan document for a complete description of plan benefits, exclusions, limitations, and conditions of coverage. In the event of a discrepancy, the plan document always supersedes the information in this policy.

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**PRIOR AUTHORIZATION:** Not applicable.

**POLICY:** Please review the plan's EOC (Evidence of Coverage) or Summary Plan Description (SPD) for details.

**Note:** Unless otherwise indicated (see below), this policy will apply to all lines of business.

**For Medicare plans,** please refer to appropriate Medicare NCD (National Coverage Determination) or LCD (Local Coverage Determination). Medicare NCD or LCD specific InterQual criteria may be used when available. If there are no applicable NCD or LCD criteria, use the criteria set forth below.

**For Medicaid plans,** please confirm coverage as outlined in the [Texas Medicaid Provider Procedures Manual | TMHP](#) (TMPPM). If there are no applicable criteria to guide medical necessity decision making in the TMPPM, use the criteria set forth below.

**BSWHP considers testing for neutralizing antibodies against interferon beta** not medically necessary. There is insufficient evidence that such testing is clinically useful in guiding the management of members with Multiple Sclerosis (MS).

### BACKGROUND:

Interferon beta is the first-line treatment for relapsing-remitting multiple sclerosis because it has been shown to reduce the frequency and severity of clinical relapses, slow the progression of disability, and suppress signs of disease activity on MRI. But the drug can induce neutralizing antibodies against itself, which may reduce effectiveness. In clinical trials of various interferon beta preparations, the frequencies of neutralizing antibodies varied widely. Subcutaneous administration induced antibodies more frequently than intramuscular administration.

Assays of neutralizing antibodies (NABs) against interferon beta have not been proven to be useful in MS. About 1/3 of individuals develop NABs against interferon beta. Several technologies have been developed to assay these NABs. However, according to the peer-reviewed medical literature, the



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clinical utility of these assays has not been established.

**MANDATES:** There are no mandated benefits or regulatory requirements for coverage for this service.

### CODES:

**Important note:**

*CODES: Due to the wide range of applicable diagnosis codes and potential changes to codes, an inclusive list may not be presented, but the following codes may apply. Inclusion of a code in this section does not guarantee that it will be reimbursed, and patient must meet the criteria set forth in the policy language.*

CPT Not Covered:	83520 - Immunoassay, analyte quantitative; not otherwise specified [if reported for neutralizing antibodies against interferon beta] 87253 - Virus isolation; tissue culture, additional studies or definitive identification (eg, hemabsorption, neutralization, immunofluorescence stain), each isolate 86382 - Neutralization test, viral
ICD-10 Codes	B35 – Multiple Sclerosis

### POLICY HISTORY:

Status	Date	Action
New	12/28/2010	New policy
Reviewed	12/6/2011	Reviewed
Reviewed	11/15/2012	Reviewed
Reviewed	10/24/2013	No changes
Reviewed	08/21/2014	No changes
Reviewed	08/11/2015	No changes
Reviewed	09/08/2016	Minor updates
Reviewed	08/22/2017	No changes
Reviewed	06/19/2018	No changes
Reviewed	09/26/2019	No changes
Reviewed	10/24/2020	No changes
Reviewed	11/24/2021	No changes
Reviewed	12/01/2022	No changes
Reviewed	12/18/2023	Formatting changes, added hyperlink TMPPM, beginning and ending note sections updated to align with CMS requirements and business entity changes

### REFERENCES:

The following scientific references were utilized in the formulation of this medical policy. BSWHP will continue to review clinical evidence related to this policy and may modify it at a later date based upon the evolution of the published clinical evidence. Should additional scientific studies become available, and they are not included in the list, please forward the reference(s) to BSWHP so the information can



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be reviewed by the Medical Coverage Policy Committee (MCPC) and the Quality Improvement Committee (QIC) to determine if a modification of the policy is in order.

1. Sorensen PS, Ross C, Clemmesen KM et al. Clinical importance of neutralising antibodies against interferon beta in patients with relapsing-remitting multiple sclerosis. *Lancet*. 2003; 362(9391):1184-91.
2. Sorensen PS, Koch-Henriksen N, Ross C et al. Appearance and disappearance of neutralizing antibodies during interferon-beta therapy. *Neurology*. 2005;65(1):33-9.
3. Gneiss C, Reindl M, Lutterotti A et al. Interferon-beta: the neutralizing antibody (NAb) titre predicts reversion to NAb negativity. *Mult Scler*. 2004;10(5):507-10.
4. Giovannoni G, Goodman, A. Neutralizing anti-IFN-beta antibodies: how much more evidence do we need to use them in practice? *Neurology*. 2005;65(1):6-8.
5. Hemmer B, Stuve O, Kieseier B et al. Immune response to immunotherapy: the role of Neutralising antibodies to interferon beta in the treatment of multiple sclerosis. *Lancet Neurol*. 2005;4(7):403-12.
6. Petkau AJ, White RA, Ebers GC et al. Longitudinal analyses of the effects of neutralizing antibodies on interferon beta-1b in relapsing-remitting multiple sclerosis. *Mult Scler*. 2004;10(2):126-38.
7. Vartanian T, Solberg Sorensen P, Rice G. Impact of neutralizing antibodies on the clinical efficacy of interferon beta in multiple sclerosis. *J Neurol*. 2004;251 Suppl 2:II25-30.
8. Panitch H, Miller a, Paty D et al. Interferon beta-1b in secondary progressive MS: results from a 3-year controlled study. *Neurology*. 2004;63(10):1788-95.
9. Sorenson PS, Deisenhammer F, Duda P et al. Guidelines on the use of anti-IFN-13 antibody measurements in multiple sclerosis: report of an EFNS Task Force on INF-13 antibodies in multiple sclerosis. *European Journal of Neurology* 2005;12:817-827.
10. Goodin DS, Frohman EM, Hurwitz B et al. Neutralizing antibodies to interferon beta: Assessment of their clinical and radiographic impact: An evidence report. Report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology. *Neurology* 2007;68:977-984
11. Hurwitz BJ Important sources of variability in clinical studies of neutralizing antibodies against interferon beta. *J Neurol Sci*. 2008 Sep 15;272(1-2):8-19. Epub 2008 Jul 11.
12. Wingerchuk DM. Current evidence and therapeutic strategies for multiple sclerosis. *Semin Neurol*. 2008 Feb;28(1):56-58.
13. Creeke PI, Farrell RA. Clinical testing for neutralizing antibodies to interferon-B in Multiple Sclerosis. *Ther Adv Neurol Disord*. 2013 Jan 6(1): 3-17.

#### Note:

Health Maintenance Organization (HMO) products are offered through Scott and White Health Plan dba Baylor Scott & White Health Plan, and Scott & White Care Plans dba Baylor Scott & White Care Plan. Insured PPO and EPO products are offered through Baylor Scott & White Insurance Company. Scott and White Health Plan dba Baylor Scott & White Health Plan serves as a third-party administrator for self-funded employer-sponsored plans. Baylor Scott & White Care Plan and Baylor Scott & White Insurance Company are wholly owned subsidiaries of Scott and White Health Plan. These companies are referred to collectively in this document as Baylor Scott & White Health Plan.

RightCare STAR Medicaid plans are offered through Scott and White Health Plan in the Central Managed Care Service Area (MRSA) and STAR and CHIP plans are offered through SHA LLC dba FirstCare Health Plans (FirstCare) in the Lubbock and West MRSA.