

# National Essential Medicine List

## Tertiary/Hospital Medication Review Process

### Component: Neurology

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**Medication Name:** Interferon Beta or teriflunomide

**Indications:** Relapsing and remitting multiple sclerosis (G-35)

**Prescriber level:** Specialist Neurologist

**Context:**

Multiple sclerosis (MS) is the most common immune-mediated inflammatory demyelinating disease of the central nervous system. MS begins as an inflammatory immune-mediated disorder characterized by several different MS phenotypes although relapsing remitting MS (RRMS) comprises 85 to 90% of cases.

The presentation may be mono- or multifocal and the disease usually targets the optic nerve (25% of cases), brainstem (15%) or spinal cord (50%). In a 10-year follow-up of clinically isolated syndrome (CIS) in patients with an abnormal MRI, over 80% converted to clinically definite MS (CDMS), while only 11% with a normal MRI progressed to CDMS. Fifty percent are wheelchair-bound in 15 yrs. Dementia occurs in 50% of patients and may be of earlier onset than previously recognized.

Very little published epidemiological information is available on the disease in South Africa but it is estimated that there are 4500 to 5000 MS patients with 300 of those managed at tertiary institutions in South Africa.

The goal of treatment is to prevent relapses and thereby secondary progression of the disease, which is measured on the expanded disability severity scale (EDSS).

**Quality of evidence:**

There is moderate evidence that interferon beta reduces relapse rate and prevents disability progression in Multiple Sclerosis.

**Clinical efficacy:**

Numbers needed to treat to prevent one relapse

IFN Beta 1b	6
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IFN Beta 1a	6
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teriflunomide 14mg	6
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Numbers needed to treat to prevent one disability progression on the EDSS.

IFN Beta 1b	16
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IFN Beta 1a	19
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teriflunomide 14mg	20
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The annualized relapse rate for IFN Beta 1b is 0.65 (CI 0.55 to 0.76) and for IFN Beta 1a is 0.66 (CI 0.57 to 0.74) which is equivalent to teriflunomide 14mg (0.66, CI 0.57 to 0.74). The relative risk of disability progression for IFN Beta 1b is 0.64 (CI 0.4 to 1) and for IFN Beta 1a is 0.7 (CI 0.5 to 0.98). IFN Beta 1b is superior to teriflunomide RR 0.71 (CI 0.51 to 0.97) in terms of disease progression.

**Recommendation:**

It is recommended that interferon beta 1a and/or 1b be included on the Essential Medicines List for the specialist management of patients with relapsing remitting multiple sclerosis, to prevent further relapses and secondary progression.

**Date:** September 2019

**Review indicators:** Reduction in cost of other disease modifying agents, evidence of superiority.

## **References:**

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