**Background:** Interferon beta-1a (IFNβ-1a) is a disease-modifying drug approved in Canada for use in multiple sclerosis (MS). The Multiple Support Program (MSP), an MS patient support program, provides information on MS and specific treatments, as well as injection training and reimbursement support for patients on IFNβ-1a (Rebif). Follow-up data are available for all patients registered with MSP, including some who initiated treatment in clinical trials as early as 1993. **Objectives:** To evaluate treatment persistence and reasons for discontinuation in a Canadian MS patient cohort receiving IFNβ-1a twice weekly. 

**Methods:** Treatment persistence data were analyzed for MSP participants initiating IFNβ-1a between 1993 and October 31, 2008. Persistence was assessed for patients initiating treatment between 2001 and 2008, a cohort receiving consistent follow-ups from MSP. Cohorts initiating earlier (eg, before 1998) were analyzed separately. Patients suspending IFNβ-1a for >6 months (eg, during pregnancy) were considered to have discontinued. **Results:** Overall, 8752 MSP registrants were followed for periods ranging from 1 to 14 years. Of patients initiating IFNβ-1a in clinical trials before 1998, 99 of 136 (72.8%) remained on therapy in October 2009. Of patients initiating IFNβ-1a between 2001 and 2008, 4608 of 6849 (67.3%) persisted on therapy in 2009. Of the 2241 discontinuations recorded in this 8-year period, 66.4% occurred during patients’ first 2 years on treatment. Furthermore, for each of the year-of-start cohorts between 2001 and 2008, annual discontinuation rates ranged from 11.1% to 22.7% in year 1 of treatment, 6.2% to 10.2% in year 2, and 1.4% to 6.3% in subsequent years. The most commonly cited reasons for treatment discontinuation (or suspension for >6 months) were flu-like symptoms, liver enzyme elevation, and pregnancy/desire to conceive. Potential factors influencing persistence will be presented. **Conclusions:** Results from this analysis suggest that treatment with IFNβ-1a in a clinical practice setting is well tolerated during long-term use. Despite expanded therapeutic options for MS since the MSP began, more than two-thirds of patients remained on IFNβ-1a over a period of up to 14 years. Patients persisting at least 2 years on IFNβ-1a had the lowest discontinuation rate.

**Supported by:** EMD Serono, a division of EMD Canada Inc


**Keywords:** disease-modifying treatment in MS