Adherence and healthcare costs in relapsing-remitting multiple sclerosis patients treated with intramuscular interferon-beta-1a: impact of the MS-CARE patient program

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**Introduction**

Relapsing-remitting multiple sclerosis (RRMS) is a chronic disease associated with considerable disability, health-related quality of life (HRQOL), and high costs. The importance of adherence to treatment in relapsing-remitting multiple sclerosis (RRMS) is widely recognized. Adherence to treatment is a major factor in achieving the clinical benefits of a treatment, and it is also crucial in determining treatment costs. However, adherence rates for the most commonly used disease-modifying therapies (DMTs) in RRMS are low, with rates reported to be as low as 61-75%.

**Patient population**

The key characteristics of the study population (n=731) are shown in Table 1. Patients were mostly female, with a median age of 38.2 years. The majority of patients (88%) completed the investigation. The rates for discontinuation were highest in the first half of the year after beginning therapy (12). The mean adherence rating documented by the treating physician over all patients was 1.9 (“good”) at visit 2 after 3 months of therapy. The mean adherence rating in the PMP group was higher at visit 2 after 3 months of therapy (2.2 “very good”). The health care costs from the payer perspective and also the total health care costs from societal perspective were significantly higher in the time period 6 months before therapy compared to 6 months as well as 12 months after start of therapy. The differences in health care costs between the time period of visit 1 and visit 2 were not statistically significant (Table 4).

**Results**

The health care costs from the payer perspective and also the total health care costs from societal perspective were significantly higher in the first and second 6 months of study compared to 6 months before baseline (Figure 4). The differences were predominantly due to reductions in hospitalization costs. The total health care costs from societal perspective were primarily due to delayed in-patient costs related to hospitalization costs (Figure 5).

**Association of PMP participation with cost**

Absolute reduction of total health care costs from societal perspective (patients/patient, indirect costs) was 142 (€256, 95% CI: 12 to 249, p = 0.028) and 369 (€615, 95% CI: 24 to 638, p = 0.002) in the first and second 6 months of study versus 6 months before baseline (Figure 4). The differences were predominantly due to reductions in hospitalization costs.

**Conclusion**

The health care costs from the payer perspective and also the total health care costs from societal perspective were significantly lower in the first and second 6 months of study compared to 6 months before baseline. The differences were predominantly due to reductions in hospitalization costs. The total health care costs from societal perspective were primarily due to delayed in-patient costs related to hospitalization costs.

**Disclosure**

All authors declare no conflicts of interest.