Cost of Illness of Multiple Sclerosis - A systematic review
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Background
Cost-of-illness (COI) studies of multiple sclerosis (MS) have become a vital component for describing societal costs of MS and are often used in model studies of interventions of MS. Our aim was to identify patterns in the methods used for estimating the COI of MS, compare estimates of costs, and examine cost drivers, through a systematic literature review.

Method
A literature search was performed in PubMed for the period January 1969 to January 2014, resulting in 1326 publications. Of those, 48 were assessed as relevant. A mapping of studies based on bottom-up approach (BU) or top-down (TD) approach was conducted. Also, cost estimates were compared between the 29 studies that presented number of patients included, time-period studied, and year of price level used, and furthermore used a societal perspective on costs and human capital approach for indirect costs.

Results
The mapping showed that BU studies were most common. The second analysis covered 17 countries and 59% of the studies were conducted by two Swedish research centers. Costs based on BU method calculations were, per patient, up to six times higher than the results from the one TD study identified. The main cost drivers were drugs in lower severity level, and production losses and informal care among people with more advanced MS.

Conclusion
Although there are problems with comparing absolute costs across studies, the relative costs comparing different severity levels showed higher resemblance. The main cost drivers were drugs for less severe MS and informal care and production losses for the most severe MS. Our findings add knowledge about patterns in methodology, identify requirements for future research, and can inform future economic models for MS costs and thus aid decision making.

Key message
- Cost increase and cost drivers vary with severity of MS and results regarding COI vary substantially if the study method is bottom up or top down.