It has been suggested that prognosis for multiple sclerosis (MS) has improved over time. This may have occurred as an effect of modified phenotype, changing patient demographics, improved case ascertainment or increasing use of therapeutic interventions. However, robust long-term datasets are required to explore these issues definitively, clarify potential temporal trends and define outcomes of contemporary disease management on prevalent populations.

Patients derived from a population-based cohort born between 1940 and 1979 were included. Kaplan Meier survival analysis and Cox proportional hazards regression were employed to assess contribution of decade of birth to the odds of reaching EDSS 6.0, corrected for age at onset and followup duration.

1778 MS patients were included. Mean followup ranged from 10.4 years to 24.8 years. Proportion treated with DMTs was 7% (1940s), 13% (1950s), 32% (1960s) and 45% (1970s). Although time to EDSS 6.0 was shorter with more recent birth, this effect did not remain significant once corrected for age at onset and followup (1950s: hazard ratio (HR) 1.17, p=0.20; 1960s: HR 1.40, p=0.08; 1970s: HR 1.46, p=0.16).

Our data suggests no temporal trend in disability outcomes and no overall impact of DMTs on population outcomes despite increasing penetrance. This has relevance for economic models of drug effectiveness.