Feasibility of Using a Nationally Representative Telephone Survey to Monitor Multiple Sclerosis Prevalence in the United States.


Abstract
BACKGROUND: Multiple sclerosis (MS) is the most common chronic neurologic disease of young adults, placing a heavy burden on patients, families, and the healthcare system. Ongoing surveillance of the incidence and prevalence of MS is critical for health policy and research, but feasible options are limited in the United States and many other countries. We investigated the feasibility of monitoring the prevalence of MS using a large national telephone survey of the adult US population.

METHODS: We developed questions to estimate the lifetime prevalence and age of onset of MS using the US-based Behavioral Risk Factor Surveillance System (BRFSS) and piloted these questions in 4 states (MN, RI, MD, and TX). There was a total of 45,198 respondents aged 18 years and above. Analyses investigated individual state and combined prevalence estimates along with health-related comorbidities and limitations. MS prevalence estimates from the BRFSS were compared to estimates from multi-source administrative claims and traditional population-based methods.

RESULTS: The estimated lifetime prevalence of self-reported MS (per 100,000 adults) was 682 (95% CI 528–836); 384 (95% CI 239–529) among males and 957 (95% CI 694–1,220) among females. Estimates were consistent across the 4 states but much higher than recently published estimates using population-based administrative claims data. This was observed for both national results and for MS prevalence estimates from other studies within specific states (MN, RI, and TX). Prevalence estimates for Caucasian, African American, and Hispanic respondents were 824, 741, and 349 per 100,000 respectively. Age and sex distributions were consistent with prior epidemiologic reports. Comorbidity and functional limitations were more pronounced among female than male respondents.

CONCLUSIONS: While yielding higher overall MS prevalence estimates compared to recent studies, this large-scale self-report telephone method yielded relative prevalence estimates (e.g., prevalence patterns of MS by sex, age, and race-ethnicity) that were generally comparable to other surveillance approaches. With certain caveats, population-based telephone surveys may eventually offer the ability to investigate novel disease correlates and are relatively feasible, and affordable. Further work is needed to create a valid question set and methodology for case ascertainment before this approach could be adopted to accurately estimate MS prevalence.

Incidence and prevalence of multiple sclerosis in persian gulf area: A systematic review and meta-analysis.

Authors: Etemadifar M, Nikanpour Y, Neshatfar A, Mansourian M, Fitzgerald S

Abstract
BACKGROUND: There is an unapprehended diversity in the epidemiology of multiple sclerosis (MS) in different geographical regions. In this study, for the first time, we systematically review the studies estimating the incidence and/or prevalence of MS in the Persian Gulf area. The goal is to obtain the overall incidence and prevalence of MS and elucidate the reasons for the geographical variation.

METHODS: A comprehensive literature search was carried out using MEDLINE and EMBASE through articles published between January 1985 and December 2018 on MS epidemiology in Persian Gulf countries including Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. Search terms included ‘Multiple sclerosis’, ‘Incidence’, ‘Prevalence’, ‘Epidemiology’, ‘Persian Gulf’, ‘Arabian Gulf’ and name of each country. Only full-text articles published in English were included. All abstracts were considered and two trained reviewers evaluated the study quality using an assessment tool specifically designed for this study.

RESULTS: 39 studies met the inclusion criteria. The mean age at disease onset varied in each country and the pooled mean age of
onset was 23.11. The overall pooled MS incidence was 5.03/100,000 person-years (95% CI: 0.04 — 10.02). Prevalence was 39.31/100,000 (95% CI: 29.12 — 49.50) and the result of the meta-regression method showed that prevalence increased by 2.3% per year between 1985-2018 (p = 0.04). Quality scores ranged from 4/7 to 8/8.

CONCLUSION: The prevalence and incidence of MS in the Persian Gulf region has gone through significant changes during the past decades. This study highlights the need for future studies of MS prevalence and incidence, which will further elucidate the possible etiologies leading to periodical and geographical variations in MS incidence.

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## Rituximab in multiple sclerosis at general hospital level.

### Related Articles

**Rituximab in multiple sclerosis at general hospital level.**

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Authors: Hellgren J, Risedal A, Källén K

**Abstract**

OBJECTIVES: The use of Rituximab (RTX) in multiple sclerosis (MS) is a rapidly increasing choice of disease modifying therapy. Efficacy outside specialized university hospital-based care is not yet systematically investigated. Our aim was to evaluate off-label RTX treatment for MS at a general hospital in Sweden.

MATERIALS AND METHODS: Subjects with definite MS with at least one rituximab infusion were eligible for inclusion in this retrospective, observational study. Effect was evaluated by monitoring clinical disability, annual relapse rate, new lesions on MRI, and safety by the incidence and severity of adverse events.

RESULTS: Among the 83 included subjects, 15 had clinical worsening of disease during the median 23.5 (1–76) months of follow-up after RTX initiation: 7/66 with relapsing-remitting multiple sclerosis (RRMS) and 8/17 with progressive subtypes (PMS). Cumulative survival without worsening was 86% in RRMS and 30% in PMS. The annual relapse rate before RTX versus follow-up dropped from 0.38 to 0.05 (p