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LATEST HEALTH SYSTEMS RESEARCH STUDY OF NORTHWEST ILLINOIS MULTIPLE SCLEROSIS PREVALENCE CONFIRMS GENDER, ANCESTRY ASSOCIATIONS, POSSIBLE AGRICULTURAL LINK.

The latest study of multiple sclerosis in northwest Illinois, funded by a State of Illinois Excellence in Academic Medicine grant, sought to determine whether multiple sclerosis prevalence is elevated in a 13-county region of Northwest Illinois, whether MS prevalence varies within the study area and whether certain individual or community factors appear to be associated with elevated prevalence.

Participants totaled 772 persons who self-identified as having MS on July 1, 2008, 605 females and 164 males (three did not designate gender). The female:male ratio of 3.7 was higher than the 2-3:1 ratio usually cited, though not as high as found during prior Health Systems Research MS studies. Participants were dominantly white, non-Hispanic.

Greater than one in five persons with MS also reported that a close relative also has experienced MS, indicative of some genetic role in MS causation.

Northern European ancestry has been hypothesized to be linked to MS and some prior Health Systems Research studies showed the relationship. In this study, almost all (94.3%) participants marked at least one northern European ancestry, 61% choosing German. These levels of northern European ancestry were much higher than local Census figures for ancestry would predict.

Overall study area prevalence was 74.7 persons with MS per 100,000 population, less than the 100 per 100,000 level often cited as the U.S. rate. Exceeding 100 were Jo Daviess (135.0), Lee (114.0), Carroll (107.1), and Stephenson (100.9), all non-metropolitan counties. Lowest were Boone (52.6) and Rock Island (40.1) among the 13 study area counties.

Zip code prevalence was used for the analysis of possible associations with prevalence. Twenty-one zip codes recorded a prevalence of 200 per 100,000 or greater, but many were zip codes with small populations. Notable were Compton (855.9) and Paw Paw (396.5), contiguous zip codes in Lee County, an area previously identified with high MS prevalence.

Demographic, economic, and environmental factors were arrayed by zip code for correlation against MS prevalence. Results indicate significant relationships between MS prevalence and farming and the agricultural industry, German ancestry, and white, non-Hispanic race/ethnic classification. Occupation was not asked on the form. Further research on individual backgrounds may be warranted especially for agricultural exposure.