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Multiple Sclerosis and ethnicity in Wales: a SAIL Databank study

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Introduction

Multiple Sclerosis (MS) is the commonest non-traumatic cause of disability in younger people. Prevalence of MS by deprivation and ethnicity is rarely reported, as ethnicity is not accurately or consistently recorded in national datasets. Ethnicity data within the Secure Anonymised Information Linkage (SAIL) Databank is stored in clinical datasets that are linkable to the Welsh Demographic Service (WDS) but data collection is variable. We linked WDS to data from the Office of National Statistics (ONS) which has complete ethnicity and birthplace data from the most recent 2021 census.

Methods

WDS and ONS data were merged to determine census age, sex, birthplace, ethnicity and Welsh Index of Multiple Deprivation (WIMD). An algorithm (Nicholas, 2024) identified people with MS (pwMS) in Wales.

Results

3.1M ONS and 3.2M WDS were linked producing 2.5M unique records of whom 5934 had MS. MS prevalence (per 100,000) was highest aged 51-60 (445.9 [424.6-467.9]); higher in females than males (325.2 [315.6-335] versus 131.7 [125.3-138.3]) and significantly lower in Asian (58.2 [41-80.3]) or Black (126.8 [80.3-190.2]) ethnicity versus white (240 [233.9-246.3]). PwMS in Wales were less likely to be born outside of the UK (96.4%) versus the Welsh population (93.9%). 853 pwMS (14.9%) were in the most deprived WIMD quintile, compared to 18.8% of the Welsh population ($p<0.001$).

Conclusion

Linkage of population-wide datasets enables an overview of MS prevalence by age, sex, ethnicity and social deprivation. Further work is needed to improve linkage between datasets.

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