Diseases and Geographic Variation: Are we missing the whole picture?

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Background

This paper presents the way the Administrative Data Research Network (ADRN) has incorporated the results of public consultation into the core of its operations and policies.

Administrative data are a rich source of information, but underused in social and economic research. In the past it has been very difficult to gain access to these datasets. The ADRN is a UK-wide initiative, funded by the Economic and Social Research Council (ESRC) in 2013. The Network facilitates secure research access to linked, de-identified administrative data to enable real-world analysis that can benefit society. Administrative data research can provide a solid evidence base for policy makers to evaluate the results of active policies or uncover new ways to tackle social problems.

Method

A solution to this problem possibly lies within administrative sources of data such as the Welsh Demographic Service (WDS), which is accessible to NHS Wales analysts and users of the SAIL databank in a pseudonymised format. The WDS contains the details of all Welsh residents who have been registered with a GP Practice since 1992, including a full history of changes to their addresses and GP practices. This data can be used to easily ascertain an individual's address at any point in time, for example on a particular census date, or within a time period that is relative to a particular event, e.g. 10 years prior to disease registration. However, this research will look at how to incorporate all of an individual's available address information into an epidemiological analysis.

Results

Two main approaches will be demonstrated; the first using a "Person Years at Risk" approach which attempts to apportion numerator and denominator according to the number of previous residences, and the second using a Case Control approach, comparing the geographic spread of addresses in the diseased group of patients versus the non-diseased (control) group, with age and gender matched controls also drawn from the WDS.

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