

How do you interpret a billion primary care records?

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Background

Research into General Practitioner (GP) records is relatively straightforward when it comes to establishing the prescribing of a particular drug or a specific disease group, but what if you want to use it to make more general inferences about health service utilisation?

Supporting People is a project that is examining GP recorded activity for a cohort of people around a known crisis point in their lives - a time when they were at risk of becoming homeless. Examining GP recorded data prior to and post this crisis point revealed a definite pattern in the volume of recording activity by the GPs. Records increased over the year leading up to the crisis date and then reduced in the year following the crisis date.

Objectives

To understand what we were observing in this group of patients required a much deeper understanding of the GP event database available in the SAIL Databank at Swansea University. What is included and what do the associated dates relate to? Were some categories of GP recording, such as prescribing, tests, diagnostics, or signs and symptom recordings, more stable than others in establishing the time trend, and could we identify and eliminate noise? Can a suitable control population be constructed from the data, and if so, how?

Approach

To establish this we explored just over 1 billion unique Read coded records generated in the time period 1999 to 2015 by GP practices participating in the provision of anonymised records to SAIL, aligning, filtering and summarising the data in a series

of observational exercises to generate hypotheses related to the capture and recording of the data.

Results

A fascinating journey through 1 billion GP practice generated pieces of information, embarked upon to aid interpretation of our Supporting People results, and providing insights into the patterns of recording within GP data.

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