The Challenge

Research using one the NHS’ greatest assets – its data – is vital to prevent diseases, ensure patients are diagnosed early and are given the best treatments. The UK has the world’s best and most complete health care data, but we don’t know how we can deliver benefits to patients by bringing together GP care and hospital records.

Heart disease is the most common cause of early death in the UK. Researchers at the Farr Institute in London looked at how well information about heart attacks is recorded by comparing patients’ electronic records in GP practices, patients’ hospital records and national registers of data that record information on all patients who have a heart attack and everyone who dies.

The Research

Researchers wanted to see how well each source recorded that a heart attack had occurred, how well each source recorded that the heart attack was fatal, and how confident they could be that the heart attack recorded was not actually due to something else. They compared their findings to heart attack information recorded in the national heart attack registry which uses blood tests and a test called an ECG (which gives an electrical trace of heart activity) to determine whether a heart attack has taken place, and which are viewed as the best way of diagnosing a heart attack.

The Results

Researchers found that each source (GP records, hospital records and the national disease registry database) missed a substantial proportion of heart attack events. For example, only a third of patients who had a non-fatal heart attack were recorded in all three sources, and just less than two-thirds of patients were recorded in at least two sources. Reassuringly, however, researchers were confident that the heart attacks that were identified in each source were recorded correctly.

The Impact

These findings show that using just one source of data for research may lead to a considerable amount of missing data, and supports the wider use of linked multiple record sources for research to ensure all patients who should be included in the study are included. More studies are needed to look at how complete information for other diseases is in the health record.

For more information about heart attacks visit: [www.nhs.uk/conditions/Heart-attack](http://www.nhs.uk/conditions/Heart-attack)

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