MedicalXpress

Better use of electronic health records makes clinical trials less expensive

July 11 2014

Using electronic health records to understand the best available treatment for patients, from a range of possible options, is more efficient and less costly for taxpayers than the existing clinical trial process, a new study shows.

Research led by Professor van Staa, carried out while he was a member of the Clinical Practice Research Datalink (CPRD) and who is now based at The University of Manchester's Health eResearch Centre, published in Health Technology Assessment (HTA) today (Friday 11 July) looked at the use of statins in 300 people with high risk of cardiovascular disease by tracking their electronic records.

A second part of the study involved 31 participants and looked at the use of antibiotics in those with chronic obstructive pulmonary disease – where people have difficulty breathing, primarily due to the narrowing of their airways.

Currently, when researchers want to investigate whether one treatment is better than another they need to organise lengthy and expensive trials that require heavy form filling by patients and GP's, additional staff resource, regular attendance at appointments and can create artificial test environments that do not represent the reality of patient's behaviour in regular day-to-day life.

For the purposes of this study, researchers instead installed a new computer programme in 23 approved GP surgeries across England and

Scotland. This programme was able to confidentially identify which patients were eligible to take part and allowed doctors to sign up relevant participants at the click of a button, saving time and money for the public purse.

Researchers then used the patients' electronic health records, as recorded in the Clinical Practice Research Datalink, updated as part of their regular medical appointments, to monitor the impact of the treatments they had been prescribed.

By studying these records, researchers are able to understand health patterns in relation to specific medications with potentially much larger and more diverse members of the public, and to understand which treatment offers the best results. The research is all conducted with minimal impact on the lives of the patients who, after offering their consent are not required to have any active involvement.

Prof van Staa said: "The use of electronic health records in simplifying clinical trials means that we no longer need to remain uncertain about which medicine offers the best health benefits for patients. This study shows that scientists are able to conduct research which will highlight which treatment is best for patients."

Following participation in the study, interviews took place with 27 GPs, 26 of whom expressed strong support for the use of patients' electronic records to support clinical trial. Ten patients were also interviewed who all agreed that discussion of their involvement in the trial as part of a routine health appointment was a wholly acceptable practice.

Future studies regarding the use of electronic records in clinical trials will be delivered as part of the Farr Institute of Health Informatics. A national organisation that encompasses four centres of excellence in the field of eHealth research with Centres based in the North of England,

East of England and Wales, Scotland and London. The Farr Institute exists to understand how – within the highest ethical standards – patients' health information can be used to improve public health services.

More information: "The opportunities and challenges of pragmatic point-of-care randomised trials using routinely collected electronic records: evaluations of two exemplar trials." van Staa T-P, Dyson L, McCann G, Padmanabhan S, Belatri R, Goldacre B, Cassell J, Pirmohamed M, Torgerson D, Ronaldson S, Adamson J, Taweel A, Delaney B, Mahmood S, Baracaia S, Round T, Fox R, Hunter T, Gulliford M, Smeeth L. *Health Technology Assessment* Volume: 18 Issue: 43. Publication date: July 2014. DOI: 10.3310/hta18430

Provided by National Institute for Health Research