OPTIMISING CARE AND LONG-TERM HEALTH FOR PEOPLE WITH HEART DISEASE

How electronic healthcare records can improve and safeguard public health
How research using anonymised healthcare records can improve patient health: a case study from Clinical Practice Research Datalink (CPRD)

Diseases of the heart and blood vessels affect around 3 million people in the UK, leading to thousands of hospital admissions each year. Once individuals leave hospital, it is important to stop heart problems from recurring and to reduce the number of people being readmitted to hospital. As such, some patients are prescribed anti-clotting (blood-thinning) medications, which help the heart and blood vessels to stay healthy.

Anti-clotting medications have known health benefits for people with heart disease. However, they are sometimes associated with certain side-effects, such as an increased risk of bleeding. General practitioners (GPs) will always, therefore, consider both the risks and benefits of prescribing this medication for their patients. In order to help GPs decide whether or not this medication is right for an individual, it is necessary to perform research studies involving large numbers of different people who take this medication.

Using CPRD to answer important medical questions

Using electronic healthcare records from CPRD, a research study was carried out to assess the benefits and risks of a commonly prescribed anti-clotting medication. Researchers identified anonymised health records of over 7,500 people who were admitted to hospital due to heart disease, and who later returned home. By examining the primary care records of these individuals, using anonymised data, they could see whether GPs prescribed the anti-clotting medication and, if they did, whether this was associated with greater or fewer numbers of heart problems later on.

Why is this study important?

By performing this comprehensive analysis, researchers found that:

- Many people did not receive a prescription for anti-clotting medication from their GP within 3 months of leaving hospital.
- Individuals who received a prescription for anti-clotting medication from their GP were less likely to suffer a heart attack later on than those who did not.
- Stopping anti-clotting medication within 1 year of leaving hospital had a negative impact on heart health.
Factors associated with later heart problems in individuals returning home from hospital

<table>
<thead>
<tr>
<th>Factor</th>
<th>✓</th>
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<tbody>
<tr>
<td>Not receiving a prescription from GP after discharge from hospital</td>
<td></td>
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<tr>
<td>Stopping medication within 1 year of leaving the hospital</td>
<td>✓</td>
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<tr>
<td>Older age</td>
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Benefits of using CPRD data for this research

- By linking healthcare records from multiple sources (e.g. hospital and GP records), researchers could establish whether prescribing of an anti-clotting medication by GPs was associated with more or fewer subsequent heart problems.
- A large number of patient records were available for inclusion in this study. The more times an observation is made, the more confident we can be that the observation is true.
- Records from real life users of the heart medication, with different characteristics and lifestyle habits, were analysed. This means that a whole range of individuals are likely to experience similar benefits.

This research highlights the positive health benefits of continued prescribing of a common anti-clotting medication, by GPs, for people with heart disease

'Boggon R et al. Eur Heart J 2011; 32:2376-2386. 'Data that is anonymised does not contain personal information such as patients’ names, addresses, date of birth or other pieces of information. This means you cannot easily identify patients by looking at their records.'
What is CRPD?

CRPD collects anonymised records about an individual’s medical history, health and lifestyle. These are updated every time you receive medical care. CRPD can link National Health Service (NHS)† healthcare information available for millions of individuals, so enabling researchers to better understand the factors that cause particular illnesses. By including your records in CRPD, you are helping to answer important medical questions, as illustrated by this case study.

†England

Using very large numbers of patient records for health research means:

✔️ It is possible to answer important questions about the risks and benefits of treatments.

✔️ We can look at almost every disease and medicine and how they work in everyday situations.

✔️ We can even carry out research on rare conditions and look for rare side-effects of treatment.

How does CRPD benefit you?

Research using CRPD data helps your doctor to optimise treatment for you and your family, so that you receive the most appropriate therapy for your personal circumstances.

What about security and confidentiality?

- CRPD uses only anonymised data, operating in strict accordance with UK and European laws. This means that the information cannot be traced back to you.

- Safeguards, including approvals for ethics and governance surrounding confidentiality, are in place to protect your privacy and the security of all data.

- All research that uses CRPD data must be approved by an independent scientific advisory committee.

Want to find out more? Visit http://www.cprd.com for further information.