The Benefits and Challenges of Using Multiple Sources of Information about Clinical Trials

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What was the research about?
Meta-analyses combine the results of many studies to find out how well a treatment or other healthcare intervention works. Most meta-analyses use public sources of data, such as published journal articles, as the main sources of information for study results. But journal articles are not the only sources of study results. Some results appear in other places, such as clinical study reports. Clinical study reports are documents that describe what researchers did and found in much more detail than journal articles. However, these reports may not be available to the public. As a result, meta-analyses may not include all available information about a treatment.

The research team wanted to learn whether adding or replacing public and nonpublic data sources changed the results of meta-analyses. To find out, the research team added and replaced data as they conducted two meta-analyses. The first looked at adult use of a nerve-pain medicine. The second meta-analysis looked at adult use of a medicine to treat bipolar depression.

What were the results?
The research team found that adding nonpublic data sources to public ones provided new details about study methods and results. Using all available data sources changed the size of the effect in the nerve-pain meta-analysis but doing so didn’t change the results for the bipolar-depression meta-analysis.

Nonpublic data sources, such as clinical study reports, often had information that medical journal articles lacked. Based on these results, the research team developed guidance for researchers who want to use different kinds of data sources in meta-analyses.

What did the research team do?
The research team asked patients and doctors to make a list of the health outcomes that matter to patients who take the medicines for nerve pain or bipolar depression. Then, the research team searched for studies about the two medicines. The research team looked at whether changing the sources of data on the outcomes that matter to patients changed the results of the meta-analyses.

The team looked at public and nonpublic data sources for the two meta-analyses. The research team found 80 sources for 21 studies about the nerve-pain medicine. The team found 51 sources for 7 studies about the bipolar-depression medicine.

What were the limits of the study?
The study looked at the effect of adding and replacing data sources in only two meta-analyses. Future research could look at whether adding and replacing data sources changes the results for meta-analyses focusing on other treatments or health problems. Also, future research could look at the effect of using nonpublic data sources on meta-analysis findings about treatment harms.

How can people use the results?
Researchers may want to use the results of this study when they look for data sources for meta-analyses. To learn more about this project, visit pcori.org/Dickersin038.