Poorly reported placebos could lead to mistaken estimates of benefits and harms

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Researchers at the University of Oxford have found that placebo controls are almost never described according to standard reporting guidelines.

Their findings are published today in the *European Journal of Clinical Investigation*.

Placebo controls are the 'gold' standard against which new treatments are often measured. If a new treatment consistently proves to be better than a placebo treatment, then it is taken to be effective. Otherwise, it isn't.

Co-lead author and Director of the Oxford Empathy Programme, Jeremy Howick, said: 'There is a fundamental problem with this "gold" standard. Different placebos have very different effects, which then lead to (sometimes, mistaken) inferences about a new treatment's effects or harms.'

For example:

Olive oil was previously used in placebo controls for cholesterol-lowering drugs, before it was found that olive oil has cholesterol-lowering properties of its own. It may have explained the lower than anticipated drug effect in the trials. In trials of oseltamivir (Tamiflu) the placebo contained dehydrocholic acid. This mimicked the bitter taste of the active intervention (oseltamivir powder) so was useful to keep trial participants blind as to whether they were receiving a placebo or not. However, dehydrocholic acid can also cause gastrointestinal symptoms, as can oseltamivir.

When the trial reported whether oseltamivir caused gastrointestinal symptoms, they did so by comparing whether it had more of such symptoms than the placebo. This then had the potential to underestimate the true incidence of harm of oseltamivir. It's not possible to know how often these kinds of mistakes occur, because none of the 94 placebo-controlled trials in their sample reported placebo components in the way current guidelines recommend.

Dr. Howick said: 'The idea that we need to report what's in a placebo seems like overkill to many people because they mistakenly believe that placebos are inert, or white noise.

Co-lead author, Dr. Rebecca Webster, from the University of Oxford, said: 'It is impossible to say how often placebo components influence what the apparent benefit of the new treatment is until such components are reported adequately. As this study shows, they rarely are.'

Provided by University of Oxford