

New reporting guidelines for randomized controlled trial (RCT) studies in livestock

What is this research about?

Randomized controlled trials (RCTs) are the gold standard for both medical (human) and veterinary (animal) research when evaluating the effectiveness of a particular treatment. Although RCTs are accurate and straightforward, over the past ten to fifteen years scientists have noted significant problems in how these studies are reported in scientific journals. This may be due to inadequacies in the design of a study, or to incomplete reporting of the methods for a study. In order to make good decisions regarding which medical or veterinary interventions to use, people who read scientific journals need to be able to judge the quality and reliability of RCT intervention studies. In 2001, the CONSORT statement was published, which established reporting guidelines to improve the accuracy and transparency of RCTs in medical journals. While a few veterinary journals have adopted the CONSORT statement, there are still significant issues with the reporting of veterinary RCTs. There are also unique challenges to designing and reporting production, health, and food safety research conducted in livestock that are not addressed in the CONSORT statement.

Keywords:

Randomized controlled trials, reporting guidelines, livestock, challenge trials

What did the researchers do?

During a two-day consensus meeting, 24 experts met to discuss the CONSORT statement and modify it so that it was more relevant for production, health, and food safety clinical trials conducted in livestock. The group of experts included researchers, statisticians, scientific journal editors, and government officials, and covered all major animal protein industries. Meeting participants voted on each proposed modification to the CONSORT guidelines, and then drafted a new document, the REFLECT statement, which included these modifications. A second document was also created which described why each modification was recommended, and gave examples of how each guideline could be followed.

What you need to know:

The REFLECT statement describes 22 items for reporting randomized controlled trials (RCTs) in livestock, which should improve the transparency and interpretability of production, health, and food safety research published in veterinary medicine journals. These guidelines were adapted from the CONSORT statement on reporting RCTs in humans.

What did the researchers find?

The experts identified several unique challenges in designing and reporting RCTs in livestock, including two types of participants (the owner or manager, and the animal itself) and the common use of clustered study designs (due to group housing or assigning groups of animals to different treatments). Other issues included the use of deliberate challenge trials (purposefully causing an infection or disease in order to study a preventative measure or treatment), the use of non-health related outcomes (for example, animal production measures), and the use of different “units” for assigning treatments and measuring outcomes (for example, giving a medication to a whole barn, but measuring the weight of each individual animal).

How can you use this research?

Livestock researchers can use this research to better report randomized controlled trial (RCT) studies conducted in livestock.

Veterinary research journals can endorse the use of the REFLECT statement as the standard for reporting of clinical trials in livestock species.

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