

RISK OF BIAS DUE TO THE RANDOMIZATION PROCESS

1.1. Was the allocation sequence random?

Yes: if the study was randomized with a random component in the sequence generation process. (ex: computer generated random numbers, referring to a random number table, minimization, coin tossing, shuffling cards or envelopes, throwing dice or drawing of lots).

No: if the study was not randomized.

Probably Yes: if the study was large, conducted by an independent trials unit or carried out for regulatory purposes, then it may be reasonable to assume that the sequence was random.

No Information: if they said it is random, but did not mention if a random component was not used in the sequence generation process.

1.2. Was the allocation sequence concealed until participants were recruited and assigned to interventions?

Yes: if any form of remote or centrally administered randomization, where the process of allocation is controlled by an outsourced unit or organization, independent of the enrollment personnel (e.g. independent central pharmacy, telephone or internet-based randomization service providers). Or if envelopes or drug containers were used appropriately to conceal the assignment to interventions.

No: if the allocation sequence was not concealed.

No Information: If there is no information that the sequence was concealed or not.

1.3. Were there baseline imbalances that suggest a problem with the randomization process?

No: If the authors reported the baseline and there is no imbalance between groups.

Probably No: If the study is conducted under FDA or Good clinical practices management, group size is > 100 for each site of randomization (not overall), and there is no baseline data for each group. As it is very unlikely that such imbalances would occur.

Yes: If the authors reported the baseline and there is imbalance between groups.

No Information: If the study is conducted under FDA or Good clinical practices management, group size is < 100 each, and no baseline data for each group.

No Information: No baseline data for each group then say regardless of the study size of Q1.1 response.

RISK OF BIAS DUE TO DEVIATIONS FROM INTENDED INTERVENTIONS

2.1. Were participants aware of their assigned intervention during the trial?

No: the participants were pigs and therefore could not be aware of their assigned interventions.

2.2. Were caregivers and trial personnel aware of participants' assigned intervention during the trial?

Yes: If the authors reported that caregivers and trial personnel were aware of participants assigned intervention during the trial.

No: If the authors reported that caregivers and trial personnel were not aware of participants assigned intervention during the trial.

No information: Is the authors did not report any details about this.

2.3. Were there deviations from the intended intervention beyond what would be expected in usual practice?

Yes: If the authors reported deviations from the intended intervention beyond what would be expected in usual practice.

No: If the authors reported no deviations from the intended intervention beyond what would be expected in usual practice.

Probably No: if animals from different treatments were co-mingled in the same housing group (pen or barn). In this case, the potential for differential care was considered minimal i.e., the ration and bedding cannot be modified based on the caregivers' knowledge of the treatment status. Therefore, the potential for bias due to the knowledge of the allocation was also considered minimal.

No information: if the authors did not report any information about deviations from the intended intervention.

RISK OF BIAS DUE TO MISSING OUTCOME DATA

3.1. Were outcome data available for all, or nearly all, participants randomized?

Yes: if at least 90% of the animals enrolled were used in the analysis.

No: if less than 90% of the animals enrolled were used in the analysis.

No information: if the authors did not provide information on losses during the study i.e., they only reported the numbers analyzed.

RISK OF BIAS DUE TO MEASUREMENT OF THE OUTCOME

4.1. Were outcome assessors aware of the intervention received by study participants?

Yes: if even one of the outcome assessors was reported to be aware of the intervention groups.

No: if none of the outcome assessors was reported to be aware of the intervention groups.

Probably No: if the study was an FDA or GCP study.

No Information: if this was not an FDA or GCP study and blinding of the outcome assessors was not mentioned anywhere in the paper.

4.2. Was the assessment of the outcome likely to be influenced by knowledge of intervention received?

No: if the investigators used a quantifiable metric for the outcome, such as rectal temperature AND they specifically reported the cut off value for the outcome criteria (i.e. temperature above which a pig was considered to be sick).

No Information: if the investigators used a quantifiable metric for the outcome, such as temperature, but they did not report the cut-off used to define the outcome.

RISK OF BIAS DUE TO SELECTION OF THE REPORTED RESULT

5.1. Are the reported outcome data likely to have been selected, on the basis of the results, from multiple outcome measurements (e.g. scales, definitions, time points) within the outcome domain?

Probably Yes: if there was a discrepancy between the outcomes reported to have been assessed in the Methods section and the outcome data reported in the Results (e.g. a study reported measurement of efficacy at multiple time points but only reported efficacy results for one time point i.e., ADG or viremia levels might be measured over 7, 14, or 21 days, but results were only reported for Day 7, or a study used a composite metric (a cough, dyspnea, temperature) to create an outcome with no information suggesting the metric was approved prior to data analysis i.e., the definition of swine respiratory disease).

No: if the outcomes reported to have been measured in the Methods section matched the outcomes reported in the Results section.

5.2. Are the reported outcome data likely to have been selected, on the basis of the results, from multiple analyses of the data?

No information: if the study protocol was missing/not available to the reviewers or if there was no discussion of an *a priori* plan in the article.