

# Better Data Quality In Clinical Trials

Daniel Dekic<sup>1,2\*</sup>

1. Clinical Trials Managment GmbH

2. FH Campus Wien

\*Contact author: [d.dekic@clinicaltrials.at](mailto:d.dekic@clinicaltrials.at)

**Keywords:** clinical trial, allergy, reporting, data quality

The VCC Database contains data of over 70 studies from the last 14 years. The VCC Studycenter specializes in testing different allergens. The Provocation Chamber enables monitoring allergic reactions and potential treatments under realistic and reproducible conditions. The data is divided into subjective data collected by the test participants themselves and machine data from rhinomanometric as well as spirometric equipment.

This poster introduces a small reporting tool utilizing reporting results with the **knitr** [5] package and visualizing results using the **ggplot2** [4] package. The reporting tool provides information about the completeness and consistency of the study data along side range checks and a preliminary test on carryover effects. These help to improve the quality of the conducted studies.

In a second step the data is used to evaluate the currently used *total nasal symptom score (TNSS)* defined as the sum of scores for sneezing, congestion nasal itching and rhinorhea as an effective screening method.

## References

- [1] Michael Benninger, Judith R. Farrar, M. B. B. C. B. F. J. K. B. M. W. S. and M. Kaliner (2010). Evaluating approved medications to treat allergic rhinitis in the united states: an evidence-based review of efficacy for nasal symptoms by class. *Ann Allergy Asthma Immunol.* 104, 13–29.
- [2] P. Stübner, R. Z. and F. Horak (2004). A direct comparison of the efficacy of antihistamines in sar and par: randomised, placebo-controlled studies with levocetirizine and loratadine using an environmental exposure unit - the vienna challenge chamber (vcc). *Curr Med Res Opin* 20(6), 891–902.
- [3] R Core Team (2013). *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing.
- [4] Wickham, H. (2009). *ggplot2: elegant graphics for data analysis*. Springer New York.
- [5] Xie, Y. (2013). *Dynamic Documents with R and knitr*. Chapman and Hall CRC.